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Unknown Title

40-51 minutes

Introduction

Death and damnation awaited the loser

(Pages from the history of space rivalry)



Russia is advancing

Ill.1.

The first satellite of the Earth (USSR, 1957)

The first astronaut of the Earth

(USSR, 1961)

On October 4, 1957, the Soviet Union launched the world's first artificial Earth satellite and thus opened the space era in the history of mankind (Fig. 1). The Americans took this event hard.

“The first Soviet satellite shocked millions of Americans to their foundations, as it for the first time questioned their confidence in the complete superiority of the United States. The technical victory of Soviet scientists led the United States to a political defeat, ” recalled one of the editors of the New York Times. ^{one)}

"A country that is leading in space will be judged as the most technologically advanced, with the best education and the best impact of the political and economic system as a whole ," wrote the New York Herald Tribune.

"We unreservedly condemn President Eisenhower for his inability to use the enormous technical capabilities of the country, as a result of which the Soviet

Union was able to launch its satellite before the United States," ex-President Truman shouted, glasses flashing. "

"The satellite revealed the psychological vulnerability of our ideas," admitted the then US President D. Eisenhower.

"The dogma of the technical superiority of the United States has collapsed," wrote the French "Pari-Match" **[1]**.

On April 12, 1961, the historic flight of Yuri Gagarin took place (Fig. 1). In the Soviet Union, a new victory in space caused a huge patriotic upsurge (Fig. 2).



Fig. 2. The joy of Russia

a) employees of the Moscow telegraph were among the first to learn about Gagarin's flight, **b)** a demonstration in honor of a new victory in space, **c)** a boy with a leaflet about Gagarin

1) Quotes from other sources are in small print. Highlights in citations where it is not specified are made by the author of the book. Reference numbers to sources are indicated in square brackets (for example, **[1]**).

The Americans were very worried about this new blow to their prestige, because they did not hide the fact that they saw themselves as a world leader. "From the point of view of propaganda, the first man in space is worth perhaps more than 100 divisions or a dozen ready to take off at the first order of intercontinental missiles ... Representatives of the State Department fear the international consequences of Gagarin's flight," wrote the New York Herald Tribune and Wall Street journal " **[1]** .

In one of his campaign speeches, Senator DF Kennedy, who soon became President of the United States, said: "The peoples of the world have witnessed that the Soviet Union was the first to enter space. Its satellites were the first to fly around the moon and around the sun. They concluded that the Soviet Union was going uphill, and we were marking time. I believe that it is time for us to change this opinion " **[1]** .



America's counteroffensive

Fig. 3. John F. Kennedy, President of the United States (1961-1963). On May 25, 1961, he announced that the Americans would be the first on the moon.

Traditionally, only once a year (usually in January) the President addresses the Congress with a message "On the State of the Country", that is, with a political report and a program of future actions. But on May 25, 1961, shortly after Gagarin's flight, President Kennedy broke this tradition and delivered a second message "On the State of the Country" and announced that the United States would land a man on the moon by the end of the 60s (Fig. 3).

If we want to win the battle that has unfolded around the world between the two systems, if we want to win the battle for the minds of people, then ... we cannot afford to allow the Soviet Union to occupy a leading position in space ” [1] .

A year later, in September 1962, speaking at the Rice University stadium , Kennedy, in particular, said: "We vowed that we would not have to see an enemy conquest flag on the moon, [there will be] a banner of freedom and peace" **[2]** . As you can see, the terminology is almost military.

The lunar race has begun - a fierce rivalry between the USA and the USSR to be the first to send a man to the moon. Both sides attached great importance to achieving victory in this competition "... The rivalry for the moon was a kind of war. "The loser will face death and damnation," wrote the New York Times at the time. It was a struggle between two systems of power, in which the Americans had to win. By any means **[3]** ".

The USSR failed to send a man to the Moon, and the USA in 1969-1972 reported six times about the landing of its astronauts on the Moon **[4, 5]**.

Briefs from NASA Moon Missions

To win the lunar race, the Americans carried out a special program called "Apollo". It cost of 20-25 billion dollars (from different sources) and performed under supervision of NASA. (**N** ational **A** eronautics and **S** pace **A** dministration - NASA - Authority Aeronautics and Space) . Below, instead of the name "Apollo", the abbreviation "A" is often used.

According to NASA, the giant Saturn-5 rocket launched a spacecraft with a total mass of 45 tons and a crew of 3 people into orbit around the Moon (Fig. 4). Then the lunar module (1,2) with two astronauts separated from the spacecraft and landed on the moon . The command and service module (KSM) with one astronaut on board (3,4) [6,7,8] remained in orbit . After staying on the Moon, the astronauts in take-off stage 2 returned to the circumlunar orbit, transferred to the KSM and returned to Earth in it.

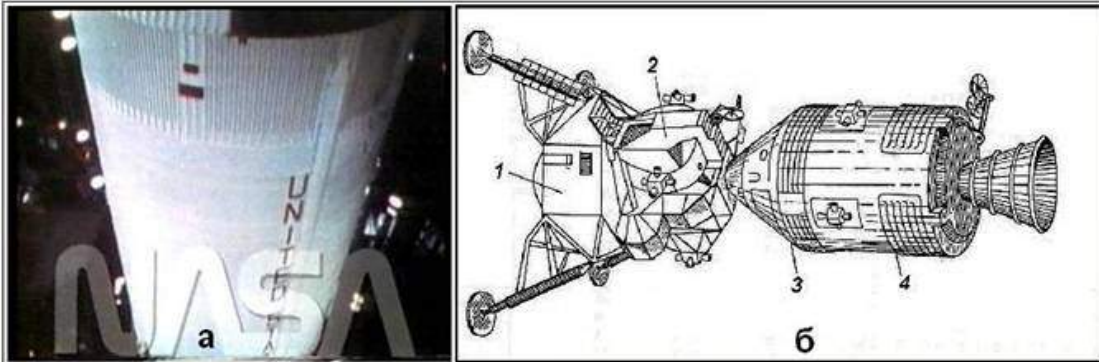


Fig. 4. a) Saturn-5 rocket takes off against the background of the NASA emblem;
b) a diagram of the Apollo spacecraft assembled with a lunar module

According to NASA, A-11 astronauts Neil Armstrong and Baz Aldrin were the first to land on the moon (Figure 5). They placed scientific instruments (5a) near the lunar module, set up a flag (5b), captured the prints of their shoes in the lunar dust (5c) and left a commemorative pennant (5d).



Fig. 5. Through the pages of the magazine " Life " (August 1969)

In 47 countries of the world, television broadcasts about the first landing on the moon (July 1969, A-11, ill. 6a, b). Magazines (Fig. 6 c, d) were published in special issues, including the frequently cited special issues of the American illustrated magazines “ Life ” [7] and “ A Look ” [8] .

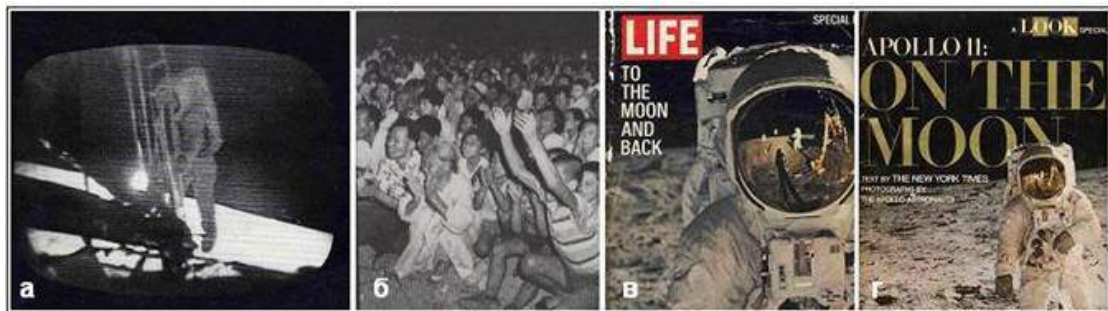


Fig. 6. a) an astronaut descends on the lunar surface, **b)** South Koreans watch the landing from a large screen, **c, d)** special issues of American magazines, August 1969

In the homeland of the first conquerors of the moon, a solemn meeting awaited (Fig. 7).



Fig. 7. This is how the Apollo 11 crew was welcomed in the USA

After the A-11 flight, according to NASA, astronauts landed on the moon five more times. Here is a general background on Apollo manned flights **[1,4-8]** :

A-7 . October 11-21.1968. The first manned flight of the Apollo spacecraft in near-earth orbit. The rocket "Saturn-1B" was used, subsequent ships were launched into orbit with the rocket "Saturn-5".

A-8 , December 21-27. 1968. First manned flight around the Moon.

A-9 , March 3-13.1969. The first manned flight in the lunar module in near-earth orbit.

A-10 , May 18-26.1969. The first manned flight in the lunar module around the Moon.

A-11 , July 16-24.1969. First landing on the moon. Stay on the Moon - 21 hours / of which - 2.5 hours outside the module. 20 kg of lunar soil have been delivered to Earth.

A-12 , November 14-24.1969. Second landing. 31 hours / 7.5 hours, 34 kg of soil.

A-13 , April 11-17. 1970. Ship accident. There was no disembarkation. The astronauts returned safely.

A-14 , January 31- February 9.1971. Third landing. 33 hours / 9 hours, 42 kg of soil.

A-15 , July 26 - August 7.1971. Fourth landing. 67 hours / 10.5 hours, 76.7 kg of soil.

A-16 , April 16-27.1972. Fifth landing. 71 hours / 20 hours, 95 kg of soil.

A-17 , December 7-19.1972. Sixth landing. 75 hours / 22 hours, 110.4 kg of soil.

According to NASA, the astronauts of the six expeditions took photographs, films, and telecasts on the Moon and collected soil samples with a total mass of 378 kg. At the landing sites A-11, A-14 and A-15, they left laser reflectors. In addition, they left a number of electronic devices on the moon, which transmitted information even after the astronauts had departed. Overall, the US triumph was complete.

However, over time, some people began to have doubts about the reliability of these messages. There were contradictions in NASA's "lunar" information. Other questions arose as well. For example, why don't Americans go to the moon anymore? The first satellite was followed by thousands, the first cosmonaut by hundreds, and the flights to the Moon - nothing! Why is the super-powerful Saturn-5 rocket not used, which disappeared almost immediately after the Apollo flights? Why are hundreds of kilograms of lunar soil, which the astronauts allegedly brought, have been allegedly stored in NASA's secret storage for almost 40 years, and scientists are given grams?

Skeptics and defenders



In the media and on the Internet, a controversy unfolded between skeptics who doubt the authenticity of the conquest of the moon, and defenders who claim - "were!" [9-12] .

Of the many works of skeptics, the book by Yu.I. Mukhina "Anti-Apollo" [10] .

Fig. 8. The most representative monographs of skeptics (a) and defenders (b, c)

The journalistic direction of "protection" is most fully represented by the book by Y. Golovanov "The Truth About the "Apollo " Program" **[1]** . As Academician B.E. Chertok writes **[11]** , "From the authors of the most objective works of the literary-memoir genre, I consider it necessary to single out ... Yaroslav Golovanov - an engineer who has become a professional journalist and writer closest to the circles of the rocket and space community." According to Y. Golovanov, the book was basically written in 1976, following the fresh trail of events, which gives it special value.

The technical direction of the "defense" is best reflected by the review article by V. Yatskin and Yu. Krasilnikov, published several years ago on the Internet, "Did the Americans fly to the moon?" **[12]** (as of 29.04.2003, when printing - 92 s).

About the rules of discussion of the topic

Let's discuss the rules that are reasonable to follow when discussing information about flights to the moon.

The author himself defends his achievements

Dock

It is the sole responsibility of the author to prove the credibility of any achievement. Therefore, the statement "the Americans were on the moon" must be defended by the Americans themselves. No one is obliged to prove that the Americans on the moon were not.

This idea is very lucidly stated in the speech of Academician of the RAS V.E. Zakharov. *"There is a difference between the function of a judge and the function of a scientist: the principle of the presumption of innocence works for court cases," while a scientist must be suspicious and distrustful. When receiving a project for examination, a scientist must assume in advance that it contains errors, and approve it only after careful and comprehensive verification. Otherwise, our very existence loses its meaning.* " (

http://www.polit.ru/science/2009/12/22/zakharov_vasilyev_print.html)

This order permeates our entire practical life. Try to tell your friends that you recently set a world barbell record. They will immediately either let you down to the bar, if there is one nearby, or they will ask you to name authoritative witnesses, moreover, not from among your close friends. And you will look strange if you demand: "And you prove that I could not squeeze out such weight!" Unfortunately, we often hear the "defenders" of NASA say: "And you prove that the Americans were not on the moon!" Thus, the accepted order is turned upside down.

No statute of limitations

Well, what if the defense went off brilliantly, and over time doubts arose? The rule of "statute of limitations" does not apply in science. For more than 2000 years, scientists, following Ptolemy, believed that the Sun revolved around the Earth. It was only 2000 years later that the accumulated errors in these theoretical predictions, as well as some other facts, prompted Copernicus to "deprive" the Earth of its central place.



In addition to sincere delusions, the history of progress is full of examples of hoaxes that were not immediately exposed. And the Americans have the corresponding "experience" **[13-16]**. At the beginning of the twentieth century, the world was captured by the race to conquer the poles of the Earth. Especially the North Pole was not "given". And on April 6, 1909, the American R. Peary (Fig. 9) reported that he had reached the North Pole. At the same time, 240 km to the Pole, he sent back Captain R. Bartlett, the only person on the expedition who, apart from Peary himself, was able to determine geographic coordinates. So there was no one qualified to confirm the achievement.

Fig. 9. Doubtful "conqueror" of the North Pole - American

R. Piri.

And, nevertheless, the American press made a lot of noise about this Peary victory. Her efforts were not in vain: until now, in many publications it is the American R. Peary who is mentioned as the first person to reach the North Pole. Nevertheless, careful researchers soon established that Piri actually overwintered in the north of Greenland. Later, the camp in which Piri was hiding was also found. And 70 years later, in the late 80s, when, according to Peary's will, his archives were opened, it was once again confirmed that he had not reached the Pole.

From these two examples, we see that there is no statute of limitations for renewed doubts about the reliability of a discovery or achievement.

Let's follow the example of the boy from the fairy tale of the naked king

Very often in discussions one can hear the following reasoning: "NASA (this and that) did it, but didn't show it", "Our people followed everything, but it is kept secret", "They were on the Moon, but films about it were made on Earth ", etc. The author treats such arguments in the same way as the hero of the famous fairy tale by H. Andersen. Seeing His Majesty naked, the boy did not listen to the words about the exceptionally thin fabric of the king's new dress, but said that the king was naked. And he was right.

The author of the book invites the reader to follow the same logic with him:

if NASA didn't show something, then it didn't do it,

if the mysterious "ours", who allegedly followed everything, have not yet appeared, then it means they have not followed ",

if films about astronauts walking on the Moon were filmed on Earth, then it means that they walked on Earth, and so on.

The author leads the discussion and draws conclusions only on the basis of the available specific, published and not anonymous information. Information from letters and oral communications was also taken into account, but with the obligatory indication of the identity of the witness and information confirming his authority in the issue at stake.

Do not shy away from the topic under discussion

Quite often, when discussing the Apollo flights, questions are raised such as what prevented the Russians from flying to the moon, whether space exploration in the USSR was carried out correctly, whether Gagarin flew, etc. Distraction on such topics, no matter how interesting they are, leads away from the answer to the question under discussion: "Were the Americans on the moon?" Therefore, other issues are better discussed in other books.

Having clarified the rules of the discussion, let's find out what can serve as evidence of the landing of astronauts on the moon?

What can serve as evidence of the landing of astronauts on the moon?

Usually defenders give the following list of evidence of the landing of people on the moon:

- 1) laser reflectors and electronic devices delivered to the moon;
- 2) recordings of radio communications between astronauts and the Earth;
- 3) lunar soil delivered by astronauts to Earth;
- 4) illustrative materials - films, television, and photographs from the Moon.



Laser reflectors and electronic devices were delivered to the moon by automatic devices

NASA said astronauts brought special reflectors to the moon (Figure 10), which were then detected from Earth using laser light pulses.

Fig. 10. Laser reflector

A laser reflector is a fairly light (10-20 kg) prism set that does not require precise adjustment in relation to the incident beam. Therefore, its delivery to the Moon may well be "entrusted" to automatic spacecraft. This was practically proved by the Soviet "Luna-17" and "Luna-21" (1971-1973), which delivered to the Moon self-propelled automatic "Lunokhod" equipped with laser reflectors (ill. 11b) **[17]**.

NASA also reported that astronauts left a number of electronic devices on the moon (Figure 6). But even before the "Apollo" instruments were delivered to the Moon by numerous Soviet and American automatic stations **[17-21]**. The first to do this in February 1966 was the Soviet "Luna-9", which gently landed on the moon (ill. 11a). Five months later, the first American automatic apparatus, Surveyor, arrived on the moon (Fig.11c). Before the flights of the "lunar" "Apollo", the Americans landed on the moon five such devices, each of which delivered instruments and devices with a total mass of at least 60 kg.



Fig. 11. Automatic devices delivered both reflectors and electronic devices to the moon:

a) the first vehicle in the world to make a soft landing on the Moon - the Soviet "Luna-9"; **b)** the Soviet "Lunokhod", the arrow points to the corner reflector; **b)** American apparatus "Surveyor"

Thus, neither the appearance of reflectors on the Moon, nor the delivery of other instruments there can serve as proof that there were astronauts on the Moon.

Radio recordings are not an argument

(in 1968, Soviet specialists carried out retransmission over the "Earth - automatic ship near the Moon - Earth" radio bridge)

K.P. Feoktistov recounts [22] : "... when Armstrong, Aldrin and Collins flew to the moon, our receiving radio equipment received signals from the Apollo 11 board, conversations, a television picture about the exit to the lunar surface."

The author of the book does not think that it is worth listening to "conversations and watching a television picture of going to the surface of the Moon" and you can find peace. The following episode from the history of the lunar race confirms this idea [23] :

"On March 2, 1968, the USSR launched an unmanned spacecraft Zond-4 into a high orbit, almost reaching the Moon (with an apogee of about 300 thousand km). Pavel Popovich and Vitaly Sevastyanov were in the Evpatoria flight control center, who for six days negotiated with the MCC via the Zonda-4 repeater, simulating a flight to the Moon and back. **Overhearing them, NASA specialists decided that Soviet cosmonauts were flying to the moon.** Soon everything became clear . "

The last words ("everything was soon clarified") show that NASA experts did not consider the overheard radio communications to be the main source of information. History knows many examples when precisely "radio conversations" are used for disinformation. Here's one historical example.

In December 1939 . the German battleship "Graf Spee" entered the battle with British ships off the coast of South America. Soon, the battleship commander Langsdorf had to hide his damaged ship in Montevideo Bay. British ships were also badly damaged and could not finish off the battleship. Then the British staged radio communications with a powerful squadron supposedly hurrying to help them. The German captain did not recognize the deception, he ordered the ship to be sunk, and he himself shot himself [24] .

It is, of course, necessary to get acquainted with the recordings of the conversations, but until the reliability of these conversations has been verified, you should not, figuratively speaking, rush to "shoot" and admit defeat in the lunar race. All these radio conversations and television pictures can be nothing more than a skillfully staged radio game. And the example of "Probe-4" proves its technical feasibility unambiguously.

Lunar soil: three conditions of evidence



According to NASA, American astronauts delivered a total of 368 kg of lunar soil samples to Earth (Figure 12).

Fig. 12. Moonstone (NASA image)

This information can serve as evidence of landings on the moon, but only at *the same time* the following three important conditions check it:

1. If the brought lunar samples in their significant part passed through examination in laboratories *independent* of NASA and the USA.
2. If the total mass of samples that have passed an independent examination is large enough (kilograms, tens of kg or more).
3. If a significant part of the samples that have passed an independent examination are bedrocks (or, to put it simply, moonstones).

The first condition is obvious. Even a specialist is unlikely to establish the origin of a stone by seeing it on a TV screen or through the glass of an exhibition stand. And NASA images like Figure 12 cannot be taken as proof: too interested source. In such an important issue, both qualified and independent expertise are needed at the same time. At the same time, the examination of American moon stones in the laboratories of the USA's rival in the lunar race, that is, in the USSR, would be of particular interest.

The second and third conditions need clarification. The fact is that soil from the Moon in those years was also delivered by automatic stations. In September 1970, the Soviet automatic station "Luna-16" landed on the moon, took a soil sample and delivered it to Earth (Fig. 13). Then the stations "Luna-20" (1972) and "Luna-24" (1976) did the same . Therefore, the **very fact of possession of lunar soil cannot serve as evidence of a man's flight to the moon**. After all, no one talks about the flights of Soviet cosmonauts to the moon on the grounds that the USSR has lunar soil. Is it were the Americans unable to deliver lunar soil to Earth using their (undeclared) robotic stations (see section 16)? Is it possible to distinguish lunar soil obtained by machine guns from lunar soil delivered by astronauts? It turns out that you can.

First of all, the machines can deliver a very modest amount of soil. Thus, the Soviet "Lunas" brought together only 300 g of lunar soil **[16]**, which is a thousand

times less than what, according to NASA, the astronauts brought. This explains the second point: **if kilograms or more of lunar soil are presented for an independent examination, then this is not soil delivered by automatic stations.**

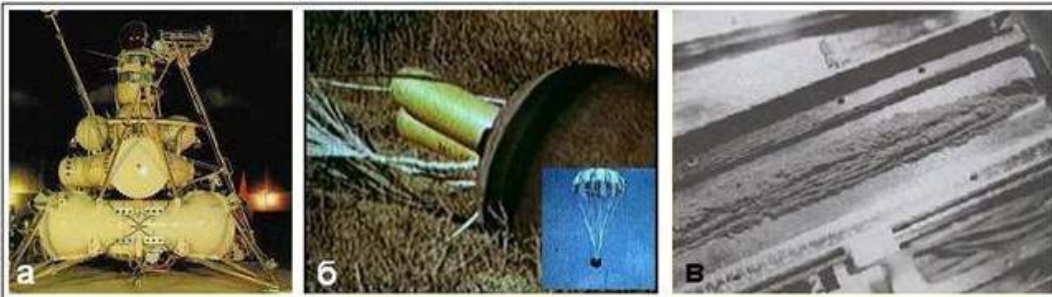


Fig. 13. September 1970 - USSR carries out automatic delivery of lunar soil to Earth

a) Luna-16 station ; **b)** returned capsule with soil; **c)** lunar soil (regolith)

There are also qualitative differences in the soil delivered by machine guns and delivered by astronauts.

Automatic devices can only dig into the surface of the lunar soil. This mixture of dust, grains of sand and the smallest pebbles is called "regolith" [25] .

For taking large samples of rocks, the then lunar automata were not adapted. Therefore, all three named Soviet "Lunas" brought only regolith from the Moon (ill. 13c).

But the astronaut will come up to the rock, and the stone will be chipped off from it. This is what geologists call bedrock samples. And just a large moonstone lying is an interesting specimen. This is where the third mentioned condition follows: the **automaton can deliver only regolith, and astronauts not only regolith, but also samples of bedrock lunar rocks, and separately lying large lunar stones.**

So, with regard to the American lunar soil, we will study the data known about it from the point of view of the fulfillment of the three above-named conditions, the three "if".

Film, video and photographic materials about flights to the Moon - the most important source for studying the reliability of lunar landings

Popular documentaries on this topic, produced directly by order and under the supervision of NASA or based on materials from NASA, play the main role in the propaganda of flights to the moon . To date, about two dozen such films have been released, and possibly more. Figure 14 shows the splash screens and titles of some of them. A rare TV show on the "lunar" theme does without showing fragments from these films. Space views of the Moon and Earth, spectacular

launches of "lunar" rockets, multicolored NASA emblems and comments from former astronauts - all this makes a huge impression on the viewer.

The first place in this series is occupied by the film “ For all mankind ” directed by Al Reinert, based on materials from NASA (1989, [26]).

In this regard, I recall the following episode. The author was at the house of his young colleague and discussed the chapters of the book. The owner's mother, a highly educated woman, a doctor of medical sciences, looked into the room. She asked what we were discussing here, she asked: “What is there to discuss? Of course there were! After all, everything is shown in the film! ” I meant the film "For All Mankind" . Here is what is written about this film (translated by the author of the book, used a selection of quotes [27, 28, 29]):

"For All Mankind" is a story about 24 people traveling to the moon, told in their words, in their voices, using images of their experiences. "

“These Apollo missions are arguably the most comprehensive (clear) of all 2 hour films. Al Reinert reviewed all the material filmed during the missions (over 2000 km) and chose the best one. In the film, only the voices of astronauts and (staff) of the control mission (Control Center) sound. Reinert uses the astronauts' own words from (their) interviews and from the mission archives. "

In the credits of the film itself it is written:

“For 4 years from December 1968 to December 1972, 9 manned flights to the Moon were made. 24 people made this journey. These were the first people of the Earth who went from planet Earth to another world. This is the film **they** brought back . "

" Filmed on location by the United States National Aeronautics and Space Administration, " meaning " filmed on location by the United States National Aeronautics and Space Administration ." “On nature” - that is, in particular, on the moon. How can one not believe such a film?

This popularity also has a “flip side of the coin”. For a small group of attentive viewers (skeptics), these same films served as a source of serious doubts about the truth of flights to the moon. The fact is that film and video materials carry much more information than, say, photographs. From them it is possible to establish, for example, that the flag set on the moon is waving, although there is no air on the moon, and therefore there is no wind. And this is just one, incidentally, a well-known example. We will come across a lot of similar examples in films about flights to the moon.



Fig. 14. Screensavers and credits of American space films studied in this book

Recently, a series of three discs "NASA X-Files" ("American Space Odyssey") appeared on the Russian video market [30]. There is nothing secret about these discs. They represent information long ago published by NASA itself. But this series is interesting in that it contains the main NASA films "about flights to the moon" in one place. Most of these films are a repetition of another series - "NASA : 25 Years of Glory (1961-1986)". The author and colleagues also studied film footage on the Apollo flights published by Spacecraftfilms [31].

So, we will carefully study the film, video and photographic materials about flights to the moon.

About the so-called "declassified" NASA materials and other "new" evidence

Every now and then there are reports that NASA has either published or is going to publish new materials about lunar expeditions, which were in its archives and were almost classified. In this regard, we can give such a "non-lunar" example.

On May 14, 2008, a joyful event took place in the history of Russian and Soviet football. For the second time in the long history of the prestigious prize of the European Football Federation - the UEFA Cup, it was won by the Russian football team Zenit from St. Petersburg. Sports commentators tried to adequately represent this victory of Russian football.

Can you imagine that decades later, new TV commentators confidentially presented to new, not yet born fans, "classified" footage from the mentioned match? Who will be interested in it then? Victory is important for contemporaries, and it is necessary to paint it in all colors now.

Such a comparison comes to mind when you hear reports of the publication of "declassified" materials about the flights of "Apollo". Victories are not classified.

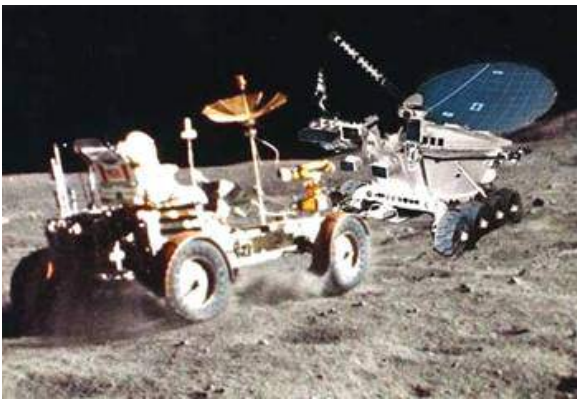
They are being blown about. Therefore, the author considers the so-called "new materials from NASA" as dubious propaganda works, the purpose of which is to support the version of flights to the moon in those places where it has clearly cracked.

The year of release of this film "For All Humanity" (1989), the author of the book considers a logical time line, after which the "reception" from NASA of "new" evidence of flights to the moon should be limited for the following reasons:

- By 1989, 20 years have passed since the A-11 flight - a period quite sufficient for such a powerful organization as NASA to systematize and generalize information about the Apollo flights;

- by the time the film "For all mankind" was released, NASA was quite confident in the power of its influence on public opinion, and therefore it did not have serious incentives to use computer graphics to manipulate images, which has actively entered our life since the second half of the 80s ;

- the film "For All Mankind" significantly contributed to the growth of doubts about the authenticity of the landing on the moon; After its release, and under the influence of criticism from skeptics, highly criticized materials began to disappear from NASA's sites , and new materials began to be put into circulation, designed to correct the mistakes made .



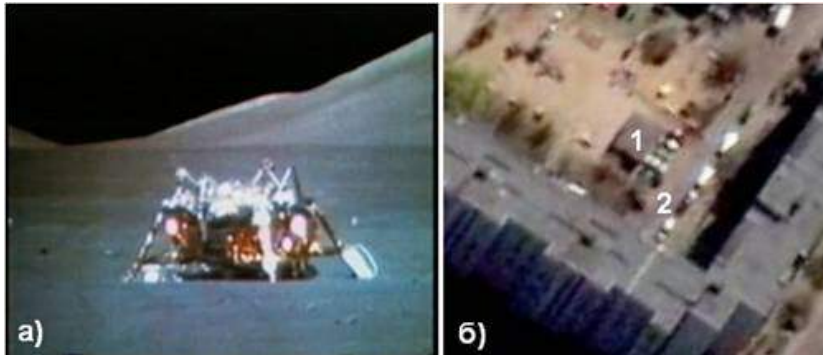
And before (before the advent of computer graphics) masters of photography and cinema were fluent in the art of editing images (in other words, the art of forgery), and nowadays, according to the defender [12] , using computer graphics, "anyone can put on a picture from the Moon even a pink elephant. " For example, Fig. 15 shows the meeting of American astronauts with the Soviet automatic "Lunokhod" on the Moon, that is, something that never happened.

Fig. 15. Something that never happened.

A comic plot that demonstrates serious possibilities for image forgery

Let's discuss one more question that sounds in almost every discussion "on the Moon". According to NASA, when the lunar modules took off from the Moon, their lower parts remained on the Moon. Corresponding images can be found on

NASA websites. One of them is shown in Fig. 16a. Here, NASA explains, shows the lower portion of the lunar module A-17, remaining forever among the lunar hills. Its image was allegedly transmitted by an automatic television camera, which also remained on the moon. And on the moon there should be five more such remnants of lunar modules. It is often asked whether it is possible to see them, say, through a telescope?



Ill.16 .

a) the lower part of the lunar module A-17, according to NASA, remaining on the Moon;

b) satellite image of the courtyard of a Moscow house from a height of ~ 200 km (1 - a building the size of a lunar module, 2 - cars)

Alas, in terrestrial telescopes on the Moon, you can see details with a size of at least 800m [**18**], which is 100 times larger than the size of the lunar module (8m). The "Hubble" space telescope has a "visual acuity" about 10 times better (about 80 m for the Moon), since it is not disturbed by the haze of the earth's atmosphere. However, this is not enough either.

It is quite possible to detect the modules remaining on the Moon from the circumlunar satellites. After all, there is no atmosphere on the moon, which makes observation difficult and prevents near-earth satellites from descending below an altitude of ~ 200 km. Even before the Apollo flights, in 1965-1966. the Americans launched the automatic lunar satellites "Lunar Orbiter", which took photographs of the lunar surface and could descend very low (up to 40 km [**32**]). It is not surprising that, according to [**33**], the Orbiters could "see" details up to 1m in size. To see at such a resolution the 8-meter remnants of the modules standing on the Moon is a completely real task.

As an example of the possibilities of satellite imagery, the author gives in Fig.16b a satellite image of the courtyard of his house (Fig.16b). On it, the number 1 marks an electrical panel box, the size of which is approximately equal to the size of the lunar module. Even freestanding cars are visible (2). Imagine how clear the picture would be if the distance decreased 5 times (from 200 km to 40 km) and the interfering haze disappeared. Namely, this would be the case when

shooting the lunar module with the Orbiter. Even some large details of this module could be discerned. Thus, already in the years of Apollo flights, NASA had all the technical capabilities to clearly show the whole world the parts of the lunar modules remaining on the Moon. But this was not done. But now such pictures, if they are presented, are no longer evidential, because today, using computer graphics methods, you can depict anything. Yes, and the credit of trust is undermined. For example, the European Space Agency (ESA) reported[34], relatively recently, "gave a slightly retouched old image of NASA for a new, own" (Fig. 17). The message [34] is so interesting that it is presented below in an abridged form. It deals with the images of the new circumlunar satellite "SMART", launched into circumlunar orbit in 2003.

06/27/05, Mon, 19:46, Moscow time

The SMART-1 probe, which attracted everyone's attention with a strange and difficult to explain mystery that surrounded its ESA (European Space Agency) mission , once again surprised observers.

The general bewilderment caused by the sudden cessation of the publication of images of the Moon (taken) by the SMART-1 apparatus did its job. ESA has published another picture, allegedly taken by the probe - it would be better if it did not, there are even more questions.

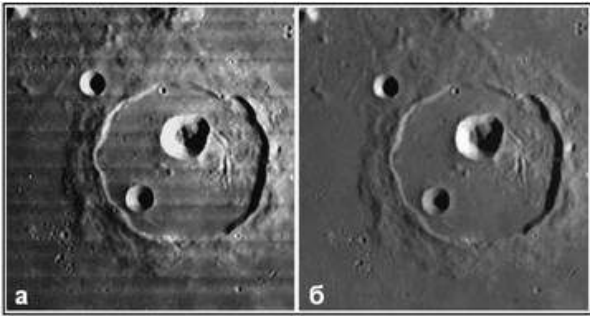
As ESA lead researcher Bernard Foing stated earlier, one of the main tasks was to photograph the landing sites of the American manned Apollo. "We will be looking for them using black and white and color images to help us gain insight into the effects of jet engines." It was assumed that it would be possible to find traces of the transporter on which (the astronauts) made, according to NASA, many kilometers of raids. The optimism was also added by the fact that practically at the same time the Mars Global Surveyor spacecraft in much more difficult conditions from orbit managed to detect probes that landed on Mars. But...

ESA has stopped publishing images of the Moon from the SMART-1 probe, (although) it had previously promised to do so on a weekly basis. Gone is the mention of the task of inspecting landing sites. In six months, only two new images of the circumpolar regions of the Moon have appeared, and of a discouraging low quality. However, on June 20, another one appeared in the gallery of images taken by the probe, which had not been updated for a long time. It depicts the Cassini crater "as SMART-1 saw it". It was pointed out that this picture is intended to please colleagues working in the research group "Cassini-Huygens".

Comparison of the image taken by the SMART-1 probe with the image obtained by the cameras of the American automatic station [Lunar Orbiter](#) in the middle of the 60s of the last century unexpectedly showed the identity of the two

images (Fig. 00000). It is also not entirely clear why the "new" snapshot is posted on the ESA website in a [mirrored](#) form.

Such strange coincidences may mean that both images were taken with cameras of similar resolution, from the same point in orbit and at the same time in local time. Such an explanation looks extremely unlikely It is not surprising that a more "down-to-earth" explanation is being expressed - ESA simply passed off a slightly retouched old NASA image as a new one, its own.



Indeed, it is practically impossible to make two identical images of the Moon at different times (both in terms of the shooting angle and in terms of the lighting conditions of the area by the Sun) from a satellite orbiting the Moon. To do this, the satellite must pass over this area for the second time at the same moment in local lunar time and that it be in the same direction for the survey as the first time. But the period of rotation of the moon around its own axis and the period of revolution of the satellite around the moon are not multiples of each other. Therefore, the satellite will appear in the wrong place and not when it is needed, then the photographed area will be rotated in relation to the sun's rays not the same as during the first survey.

Ill.17.

a) Cassini crater (image from the Lunar Orbiter probe, 60s)

b) Cassini crater (snapshot of the SMART-1 probe?)

In any case, one thing is clear: when it comes to "new" evidence, neither the Americans nor their colleagues from the allied countries can be relied on. Apparently, their objectivity is influenced by the commonality of their political interests.

Hundreds of "reliable" facts lose credibility when a few fakes are found

Defender V. Yatskin **[12]** reproaches skeptics like this: "As I understand it, neither hundreds of photographs from the Moon, nor hundreds of hours of astronauts' conversations with the Earth, nor hundreds of kilograms of lunar soil, nor laser reflectors and other scientific equipment left on the Moon are for you - not evidence. "

But let's remember how a skillful counterfeit is distinguished from the original, be it a document, an artist's painting or a banknote.

In a competent fake, there are only a few differences from the original, but there are many similar signs. Therefore, in order to identify a fake, they look for differences. And only in the case of the original you will not find these differences.



Figure 18 shows two Russian five-hundred-ruble bills - a counterfeit one and a real one. And Tsar Peter is equally built on them, and the ships are one to one and many, many other things coincide. But the cashier who accepted the money from me immediately discovered the fake. For this she needed two differences. I did not try to convince her to accept the ill-fated bill (above), since hundreds of its details are just like the real thing. In the same way, instead of answering questions about the dubious moments of the lunar epic, it is wrong to offer to look at what turned out well. After all, the signs of a fake (if found) will not disappear from this.

Fig . 18 . Two banknotes - real and fake (see text for details)

Therefore, studying NASA materials, we will look for possible differences in them from what would take place in a real flight to the moon. **Only if there really were landings on the moon, there will be no dubious details and signs of an obvious fake at all**

About building a book

In the first, main part of the book, the author invites the reader to mentally follow the astronauts on their flights and get acquainted with the relevant information. If the flights were real, then there will be no misunderstandings in this information. The second, auxiliary part of the book is devoted to the presentation of versions of how some of the events described could actually take place. At the end of the book, chapter 28 is a list of references. There are also links to a special site, which contains the most interesting cited materials.

Quite often, links to a well-known "secondary" source of information are used - the encyclopedic site "Wikipedia". A reading of the Wikipedia material shows that in the part that deals with the coverage of the American lunar program, they are accurately based on NASA data. But since the materials in "Wikipedia" are

collected conveniently for the reader, it is sometimes given preference. Moreover, there are necessary links to NASA sites in Wikipedia.

Acknowledgments

Many people helped the author in his work, including many specialists in different fields of knowledge:

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Among the volunteers, S.V. Yumatova, K. I. Malysheva, S. D. Romanina, E.V. Ivanova and M.V. Prokuronov, who made a very significant contribution in the early stages of the book's formation. Somewhat later, D.P. Kobzev. He enriched the book with many interesting findings and made a decisive contribution to its promotion on the Internet.

In this interest and help of different people, the author sees the most important evidence of the relevance of the topic. The author of the book considers all of them to be his co-authors, and he saw his role in writing the book in the systematization of relevant ideas and facts. And, if during the course of the book the author sometimes expresses a point of view that does not agree with the opinion of certain respected assistants, then he asks to treat this with understanding: it is impossible to achieve complete unanimity in the interpretation of facts.

E.V. Ivanov and K.I. Malyshev donated his own funds to sponsor a high-quality color edition of the book. The firm "Roptorg" has added its contribution to them.

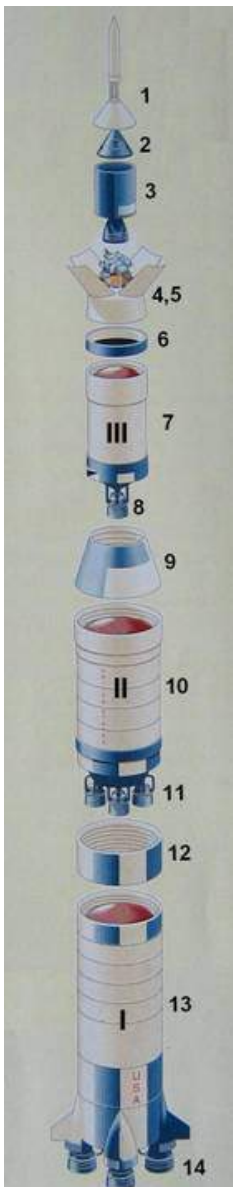
And, of course, this work would have been impossible without the patient sympathy and care of the author's wife, Elena. Only because she took upon herself the solution of most of the "earthly" issues, the author was able to calmly deal with "Moon".

It all starts with a rocket

35-44 minutes

Going on a long journey. Chapter 1.

Rocket: tests failed - let's fly to the moon



Space flight, figuratively speaking, begins with a rocket. There is a rocket with the necessary parameters - you can prepare a trip. In the 60s, the USSR and the USA worked hard to create their own lunar rockets **[1-16]**. The USSR did not succeed, and the USA at the turn of 1967-1968 . announced the creation of the Saturn-5 lunar rocket. It was a huge rocket (Fig. 1). Its height, assembled with the Apollo spacecraft, was about 110.7 m (a 40-storey residential building)

[1-4], the launch weight, according to various NASA data, ranged from 2700 to 3800 tons [1, 2, 13].

Fig. 1. Diagram of the Saturn-5 rocket assembled with the Apollo spacecraft

1 - emergency rescue system, 2 - ship command module, 3 - spacecraft service module, 4.5 - lunar module, 6 - connecting adapter, 7 - rocket third stage (S - IVB), 8 - engine nozzle J 2, 9 - connecting adapter, 10 - second stage (S - II), 11 - five nozzles of J 2 motors , 12 - connecting adapter, 13 - first stage (S - IC), 14 - five nozzles of F 1 motors

The development of "Saturn-5" was led by the director of the Center. Marshall (Huntsville), the famous designer Werner von Braun. As a preliminary stage, von Braun created the Saturn-1B rocket **[3]** with a launch mass complete with the Apollo spacecraft of 590 tons and a payload that was put into low-earth orbit of 15 tons. Saturn-5, according to NASA, could put a payload weighing about 120-130 tons into low-earth orbit and about 45 tons into a circumlunar orbit.

It is widely believed that the history of the creation of "Saturn-5" is a continuous chain of successes **[4,6,7,10,14,15]** . However, in reality, this story is not so simple and interesting to discuss.

Little-known "Saturn-5"

The actual history of the Saturn-5 rocket can be divided into three periods.

First, Saturn 5 goes through a streak of difficulties, ending on April 4, 1968 with a failed unmanned rocket test.

Then, without further unmanned tests, a ship is installed on the rocket, and, from December 1968 to May 1973, it participates in 11 successful flights, carrying spacecraft on its summit (10 Apollo and Skylab station). This period is called below "happy".

After that comes the "museum" period, when the most remarkable rocket in the history of human progress disappears forever from practical use, and the remaining "alive" three "Saturn-5" go live on the lawns of American space museums. This period continues to this day.

A difficult period, an unexpected decision by NASA, a triumphant technique

“Development of Saturn 5 began in 1962. In May 1966, on tests in St. Louis, the second stage of the rocket exploded and shattered to pieces. The first unmanned flight of "Saturn-5" was planned for January 1967, but an

endless series of breakdowns and failures pushed this period further and further ... The start finally took place on November 9, 1967 " [2, 16]. The first unmanned test was successful, according to NASA. But the second and final unmanned rocket test, which took place on April 4, 1968, called Apollo 6, failed . Here is what Y. Golovanov writes about this [16]:

“Literally from the first seconds of the flight, Apollo 6 bombarded the command post with alarms about all kinds of failures. Of the five engines of the first stage, only three worked, the engine of the third stage did not turn on at all, and then it "suddenly fell apart." Both main tasks of the tests were not fulfilled: the rocket worked poorly ... "The country's lunar program ran into a new difficulty," the Washington Post commented. Frankly speaking, we do not know what the matter is, - Arthur Rudolph, director of the Saturn-5 program, shrugged . So, judging by this description - a complete failure.

Let us recall that according to Y. Golovanov, his book was written in those distant years in hot pursuit of events. He visited Houston, met with American specialists and astronauts. And, as noted in the introduction, a veteran of Soviet cosmonautics, academician of the RAS B.E. Chertok described Y. Golovanov as an objective professional journalist and writer closest to the circles of the rocket and space community.

So, we can assume that the quoted passage quite accurately reflects what was said about these trials just then, and not in our days, when much is forgotten or "smoothed". And, if such a sincere well-wisher of America has described such a bleak picture of the test, it means that "Saturn-5" really upset its creators.

On the modern NASA website **[2]**, information about the tests on April 4, 1968 is presented in a more restrained manner :

- * During the operation of the first stage - oscillations and sharp jumps in readings;
- * After 2 minutes, vibrations occurred throughout the structure exceeding the permissible limits;
- * During the operation of the second stage, two out of five motors were turned off. The remaining engines ran out of sync and turned off at different times ;
- * During the operation of the third stage, the engine worked for 29 seconds longer than necessary, as a result of which a sharply elliptical orbit was formed instead of the required circular one;
- * Re-starting the engine to go to the initial segment of the flight path to the Moon failed;

* The speed of entry of the spacecraft into the atmosphere did not correspond to that which takes place when the spacecraft returned from the vicinity of the Moon, and the landing site was 90 km away from the planned one.

* Conclusion: ***"Apollo 6, therefore, was officially judged as not a success" - "The tests of Apollo 6, therefore, were officially judged unsuccessful."***

And what prevented NASA from completely concealing the fact of the failure of the tests and declaring them successful? Honesty? If one of the readers believes that Americans are the standard of openness and honesty in informing the public about failures, then in this book he will find many examples of the opposite nature. Two interesting cases were told to the author by E.V. Ivanov, a Muscovite, businessman, and in the mid-80s - a sailor on a ship of the Red Banner Pacific Fleet of the USSR :

“In the zone of our voyage was the American spaceport Point Mugu, from which the Americans launched ballistic missiles Trident, Minuteman and others. And their remains fell in the area of the Marshall Islands. At that time, a struggle was going on between the USSR and the United States for the maximum number of warheads on one launch vehicle.

We watched the entry of the warheads of American missiles into the dense layers of the atmosphere and counted the number of warheads separating from them. Here in the indicated sector of the sky a barely noticeable "asterisk" appears, it rapidly increases, becomes very bright, and now small "stars" - warheads - begin to separate from it . Separate as many "stars" are required, which means that the Americans have successfully passed the tests. Our vessel, along with other engineering controls, helped establish the true capabilities of the United States in this competition. We pride ourselves on the fact that our data is always accurate. In addition to the event itself, we had to record reports about the tests of American TV and radio .

Several times we saw that several warheads were separated from the warhead less than it should be for the missile type. But the next day, American radio and TV reported the successful completion of the tests. I then realized that the Americans can give false information when it suits them.

Once again I was convinced of this during the teachings of "Tim Spirit" (up to a year, it was 1985). We were not far from the exercise area and saw how an Intruder-class aircraft fell short of the Carl Vinson aircraft carrier and crashed into the sea. An hour and a half after that, the air was in full swing from the "energetic" negotiations of the American military on this matter. Three pilots were killed. But in the evening we learned in the American T B News that the exercise was going well. Not a word about the death of the pilots ”.

So the "official American report" is not necessarily a truthful message. And one can imagine how badly the tests of the Saturn-5 rocket should have ended, if NASA had to include in its reports the conclusion - "officially recognized as unsuccessful."

Y. Golovanov, of course, was not admitted to all of NASA's information, he drew information from the American media and from personal contacts. An official NASA report could also contain incomplete information due to an understandable desire to "smooth" the picture of failure. But what both messages have in common is that, by all accounts, the tests were unsuccessful.

It seemed natural that after April 4, NASA still had to test and test its lunar rocket. Moreover, NASA itself, when creating Saturn-5, the safety priority was "built in as fundamental" [3d] . This is exactly what many foreign experts thought.

Thus, Assistant to the Commander-in-Chief of the Air Force for Space, Head of the Cosmonaut Training Center, General N.P. Kamanin (Ill. 2) on April 10, 1968 wrote the following: "Apparently, the Americans will have to perform another launch of Saturn-5 with Apollo without astronauts on board" [11] .

But only 19 days have passed and NASA makes a completely unexpected decision. Here is what Y. Golovanov writes about this [16]:

"By the time of the first flight of the astronauts on Apollo, neither the ship nor its carrier had been properly worked out . **Two launches of Saturn-5, of which one was unsuccessful, could not convince anyone of the reliability of this rocket. Everyone was confident that a third test flight would take place, but on April 23, program leaders, after a meeting in Huntsville, recommended that the next flight of Saturn 5 be carried out with human participation.** These recommendations were discussed with members of the Senate Aeronautics and Space Research Commission and accepted for implementation . " Information about this meeting is confirmed on the NASA website [2].

In general, fly, guys, to the Moon, and on the way try and certainly successfully everything that did not work out before you. First of all, try out the modified Saturn V launch vehicle. Its "unmodified" version failed in trials on April 4. It will be modified, but there is no time for unmanned tests, the Russians are pressing. So good luck! Maybe you will get lucky.

If this is not a gamble, then what is a gamble? This is exactly how third-party experts evaluated this decision by NASA.

Speaking about the upcoming A-8 flight, the famous English astronomer, Professor B. Lovell (Fig. 2) said: "The thought of this flight depresses me. It is damn stupid" [16] .

And when N.P. Kamanin learned about this decision of NASA, his amazement was reflected in his diary [11] :

"The United States intends to fly around the Moon by the Apollo-8 spacecraft with three astronauts on board in December. I consider this a pure gamble: the Americans have no experience in returning ships to Earth at a second cosmic speed , and the Saturn-5 rocket is still not reliable enough (only two launches were made, one of which was unsuccessful). The likelihood of a sad outcome of such a flight is very high ... America is four times closer to shame and curses for the haste and thoughtlessness of the "leap to the moon" than to glory and triumph . "

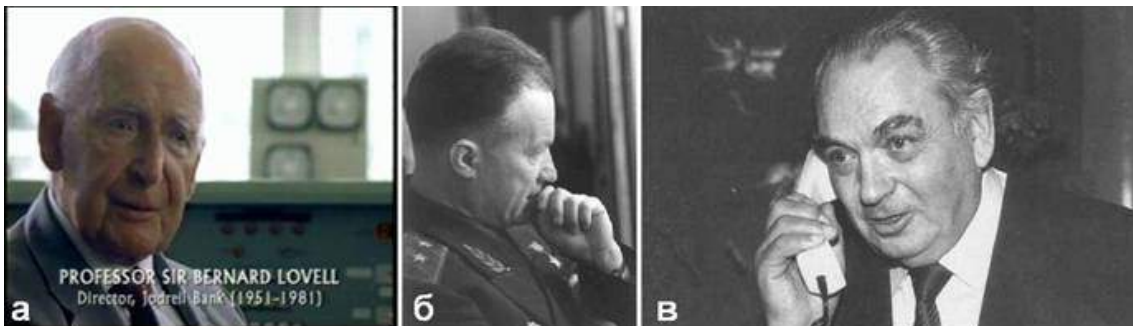


Fig. 2. Experts are surprised by the decision of NASA

a) Professor B. Lovell (England): "This is damn stupid"; b) Head of the Soviet Cosmonaut Training Center, General N.P. Kamanin: "I think this is the purest adventure"

c) academician, chief designer V.P. Mishin " was deeply convinced that this could not happen"

До самого последнего момента отказывался верить в успех назначенного полёта А-8 и преемник С.П. Королёва, главный конструктор, академик В.П. Мишин. В фильме "Время Луны" [16] приводится интервью известного советского «космического» корреспондента, автора многих книг по истории освоения космоса, писателя В.Губарева (илл.2). Он был в числе избранных лиц, которым довелось смотреть телепередачу из США о полёте А-8. Дело происходило в специальном зале центрального ТВ. В зале находился и В.П.Мишин. Вот что говорит В.Губарев о реакции Мишина:

"He did not believe that the Americans would leave low-earth orbit, go to the Moon. He was deeply convinced that this could not happen. And suddenly a message comes - the sustainer engine turned on and "Apollo 8 went to the Moon ... Vasily Pavlovich got up, looked at the screen, and everything was shown well there. I went and slammed the door. "

Based on the information they knew, Lovell, Kamanin, and Mishin were absolutely right. But maybe they were not aware of something about the true

background of NASA's decision ? It was difficult for them, who were in the thick of things, captured by the drama of the lunar race, to assume that NASA was not saying something.

Just two years later, apparently under the impression of NASA's messages on the moon landings, the Soviet astronautics guide [6] wrote about the second test much softer: "... On April 4, 1968, a number of failures took place during the flight, the program was not fully implemented".

The author of a textbook on rocketry [4] softened the paint even more in 1981 : "During the flight tests of Saturn-5, there was, in fact, one serious failure, when one from the side engines of the second stage. However, the flight test was not interrupted, although the full program had to be abandoned. "

Over time, these more than modest critical notes also disappeared.

" All launches of Saturn-5 were successful, and this deserves special attention. Among other things, it was a triumph of the adopted methodology for developing complex technical systems, when flight tests began only after the successful ground test bench "- writes the author of the article [7] S. Aleksandrov.

It is unclear, however, at what stage the miraculous technique "said" its final word. The development of "Saturn-5", as noted, has been going on since 1962. Unsuccessful tests on April 4, 1968 showed: over the past 6 years, the technique has not shown itself in any way. Could it be that her triumph took place in the 19 days that passed from the mentioned test to April 23, when NASA made its landmark decision? On what "ground bench" tests in 19 days did you manage to do something that did not work out in 6 years? NASA did not report this. So, did this very "triumphant method" exist or is it just a successful propaganda invention? If such a technique really existed, then it would be very useful after the end of the lunar epic. Who will refuse the technique, which allows people to be sent into space after unsuccessful rocket tests? Let's look for these traces.

After the completion of the Apollo program in the field of manned flights, NASA worked in two main areas - the development of reusable shuttle vehicles (Shuttle) and the creation of a long-term orbital space station (Freedom).

NASA created the shuttles, and at first they got off to a generally successful start. But on January 28, 1986, during the 9th launch, in front of thousands of spectators, the Challenger shuttle exploded and killed 7 crew members (Fig. 3a). Another shuttle (Columbia) burned up in the atmosphere along with a crew of 7

people on February 1, 2003, returning from the 26th flight (Fig. 3b). But shuttles are about reusable ships, in a way, space planes. And what can you say about the safety of an airplane, boarding which you do not know what the end awaits you? As a result, the Americans set a sad "record" for the number of deaths in space.



Fig. 3. Death of American shuttles

a) the dead crew of the Challenger;

b) the deceased crew of the "Columbia"

So why didn't NASA's "triumphant technique" help prevent these casualties? After all, shuttles were developed in the same Houston, where Saturn-5 was created, and it was manufactured by the same rocket and space companies [3, 23]. We would simulate the explosion of the shuttle at the start or the falling off of the thermal insulation tile upon entering the atmosphere on the ground stands, develop preventive measures and avoid unnecessary casualties. However, it is very likely that the "triumphant" method has sunk into oblivion along with the "Saturns-5" and flights to the Moon. This is also confirmed by the unsuccessful experience of developing the Freedom station [7] :

“In the early 80s, spurred on by the successes of the Salyut (Soviet orbital stations - A.P.) , the Americans began designing the Freedom station ... However, the design“ was not completed due to its constant rise in price as more and more technical difficulties. Even after ten years, the timing of the start of construction was still undecided, and NASA reasonably feared "organizational conclusions" from the US Congress ... The end of research work was not in sight, and its management had absolutely no idea how to report to Congress for the money spent. " And then the United States decided to create an orbital station, "relying on many years of Russian experience."

Isn't it strange that NASA - the exclusive owner of a miracle - methodology for ten years was unable to create a "complex system" by "Freedom" and turned to



the Russian experience? Something doesn't add up.

In fact, the final fate of the new complex technology is not determined by bench tests of its individual parts. How is it possible to check, without moving away from a place, whether your car obeys the steering wheel? Try to find an aircraft that "failed" in testing and was put into production without additional testing, based only on the fact that it was thoroughly modified on the ground. So it is with a rocket: on the ground, the reliability of its control cannot be checked. And what is the fate of a rocket with a serviceable engine, but with a failed orientation and control system, can be seen in Fig. 4.

Fig. 4. American missile that lost orientation during launch

It looks like the technique just mentioned was just made up to explain NASA's decision to send humans flying on a failed rocket. We will not dwell on it any longer and continue our acquaintance with the official history of Saturn-5.

Happy period: 11 successful launches, employees and chief designer released due to the success achieved

Eight months after the decision on April 23, Saturn-5 launched directly to the Moon, carrying the Apollo-8 ship with a crew on board **[18]**. Including this flight, the entire further history of Saturn-5 looks like a chain of continuous successes of victories. The "happy" period has begun. After "Apollo-8" on "Saturn-5" 9 more "Apollo" ascended into space. And on May 14, 1973, just six months after the flight of the last "lunar" "Apollo", "Saturn 5" took off for the last time. With its help, NASA launched the Skylab orbital station into near-earth orbit, the mass of which, according to NASA, is impressive even by today's standards - 75 tons **[7, 19]**. It was a strange station. More about it is written in section 25.

In total, the Saturn-5 rocket was launched a total of 13 times (Fig. 5), if we include here, as is often done by other authors, and the two mentioned unmanned tests.



Fig . 5 . Thirteen Saturn-5 launches and rocket chief designer Wernher von Braun

That, it would seem, is all that can be written about the happy period of "Saturn-5". After all, happiness is when everything turns out as it should. However, not everything was so simple during the happy period.

In the same 1968, even before the first flight to the moon, NASA decided to serve notices of "layoff" to *seven hundred* employees of the Marshall Space Research Center in Huntsville, where Saturn 5 was being developed **[16]** . And just 2 years later, the first and until that moment the permanent director of the Center. Marshall, the chief designer of many rockets and space systems, the chief designer of the Saturn-5 rocket, Werner von Braun (Fig. 5), was relieved of his post as director of the Center and removed from the leadership of rocket development. And removed not "temporarily", but forever. He "became like a director who was suddenly left without an orchestra" **[7, 20, 21]** .

By this time (January 1970), NASA had reported five successful lunar Apollo launches (A-8 to A-12), and von Braun's Saturn 5 rocket was the highlight of these successes. It turns out as if von Braun was relieved of his post as director of the Center in connection with the successes achieved. Already after the removal of von Braun, according to NASA, 5 more times Saturns-5 will successfully launch to the Moon and once will be carried into low-Earth orbit Skylab. Von Braun was offered a new, seemingly honorary position - Deputy Director of NASA, but for some reason he becomes uncomfortable at NASA. It takes another 2 years, and he completely leaves NASA.

What was the reason for the temporary layoffs of hundreds of missilemen and the removal of their chief designer from the direct leadership of missile development (already forever) ?

Museum period

After the end of the Apollo program and the launch of Skylab, there were three more Saturn-5s at \$ 430 million each **[2]**. There was talk at NASA about using them to launch an international space station. But it all ended with conversations. In August 1973, it was decided to mothball the remaining missiles, and in

December 1976 they were placed in museums (Fig. 8). And this exposition cost $3 \times 430 = 1300$ million dollars - about half of the entire then annual NASA budget [22] .



Fig . 6 . "Saturn-5" "went" to the museum lawns

A little later, the predecessor of Saturn-5, the Saturn-1B rocket, was also "retired". It made its last flight in 1975 under the Soyuz-Apollo program and has not been used since then. The termination of the use of "Saturn-1B" is still understandable, since it was replaced by shuttles, which had no less carrying capacity [23, 24] .

However, there was nothing to compensate for the disappearance of the "heavy truck" Saturn-5. After all, according to NASA, it was 5 times higher than the shuttles in terms of carrying capacity. B. Chertok says this about it [12] :

“The refusal of the United States from a well-developed, reliable carrier Saturn-5 seemed incomprehensible. I believe that it was a mistake. American astronautical historians, whom I met, could not clearly explain why, contrary to previous plans, the excellent carrier Saturn was“ buried ” -5. ” Since the American astronautics historians failed to come up with an intelligible explanation, Russian defenders came to their aid in solving this problem.

As the defenders explain the reasons for the rejection of "Saturn-5"

She has nothing to carry

" She has nothing to carry, because ... the mass of even the most" sophisticated "satellites does not exceed 20 tons", - write the authors of the article "Costs and Results" S. Aleksandrov and V. Ponomareva [7]. You see, the developers cannot figure out what else is useful to put in the satellite in excess of the usual 20 tons.

In reality, unfortunately, the opposite is happening: the extra tons should be “invested” in the spacecraft, but the rocket's carrying capacity does not allow it. Here is what S. Gromov tells about the preparations for the launch of the Mir station [7] .

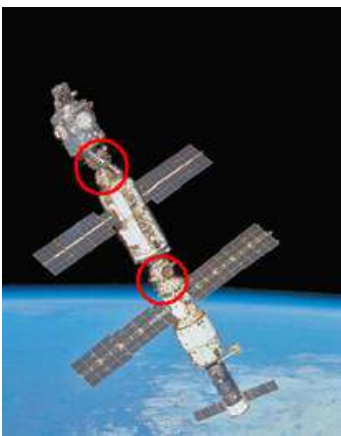
“In 1985, in the midst of preparations for launch, the developers found an excess of the total weight of 4.9 tons. How did you manage to get out of the situation? - we raised the carrying capacity of the Proton carrier by 1.3 tons, reduced the filling of the unit's propulsion system by 0.3 tons, reduced the weight of cables by 1.1 tons, gained 0.7 tons by reducing the orbital inclination. The last decision was very painful - it made the territory of Russia inaccessible for observation from the station. And this sharply reduced (if not reduced to zero) the usefulness of the station for the study of Russian natural resources proper ”.

These are the sacrifices that had to be made due to the limitation of the carrying capacity of the rocket. And, since at present there is nothing more powerful of the active rockets than our Proton, that is why the mass of the heaviest ISS modules - Zarya and Zvezda - is about 20 tons.

Are the authors of the Costs and Benefits article aware of this? Yes, they know at least one of them - S. Alexandrov. In the same book [7] he writes:

"The real reason for the appearance of orbital stations was the most severe restrictions on the mass and volume of spaceships, determined by the carrying capacity and size of existing launch vehicles." It is simply amazing how S. Aleksandrov on different pages of the same book (p. 126 and p. 330) can express such opposite opinions.

There would be, "what to carry" "Saturn-5" in our time, and not only to the moon. For example, it could launch a monoblock International Space Station (ISS) into orbit.



At present, the ISS is being assembled in orbit from blocks with a mass of no more than 20 tons. Figure 7 shows the ISS at one of the stages of its construction. The three ISS modules shown, taken together, have a total mass of ~ 53t. The docking stations now account for about 1/7 of the ISS mass, that is, about 9 tons. 9 tons for "doors" alone! Is not it too much? And "Saturn-5", according to NASA, could "in one fell swoop" deliver a monoblock station with a mass of 75 tons into orbit.

Fig. 7. Multi-unit ISS at one of the first stages of its construction.

Docking points are circled

If the ISS were a monoblock, then by reducing the number of docking stations, its structure would become simpler and more reliable. The number of docking would be reduced, each of which always remains a dangerous procedure, sometimes leading to severe injuries [7]. It would be freer to live and work for her crews. So why didn't NASA provide Saturn 5 to launch the ISS?

"Saturn - 5" is very expensive to manufacture

We have to hear such an opinion. However, it is known that when developing new technologies or products, the first samples are expensive, but the cost of producing subsequent samples begins to decline sharply. Let's take the same Saturn-5 rocket. Its development, and, therefore, the first copy cost about \$ 7 billion. But already subsequent copies cost \$ 400 million apiece [2], that is, 20 times cheaper. And what would happen with their further production?

According to [25], by 1999 about 1000 Soyuz-type missiles had been fired in Russia. Since the beginning of the 60s, this has been an average of 25-30 missiles per year. Did they all go for the price of the first missiles? Of course not. This scale of production means a dramatic reduction in manufacturing costs.

In the article by V.A. Surnin [24] compared the cost of delivering 1 kg of payload to low-earth orbit by various carriers. As you know, NASA pinned great hopes in terms of economic efficiency on reusable shuttle ships (shuttles). But these hopes did not come true. Here is what V.A. Surnin.

“The specific cost of delivering one kg of payload to orbit using the Space Shuttle system under the project is \$ 2500-3600. ... However, the launches showed that the actual cost significantly exceeds the predicted data. The main reason for this discrepancy is the discrepancy between the actual number of launches and the planned one. So, during the design it was planned to carry out up to 30-40 launches per year, in reality only 10-11 launches are carried out. The disaster of the Challenger spacecraft, which stopped the launches of the MVKA for two years, also affected the unit cost of cargo delivery. an additional 2.4 billion dollars ... for the Space Shuttle transport system, the cost of delivering 1 kg of payload to a near-earth orbit is 9 thousand dollars.

Further, he cites data in the article, from which it follows that with the declared value of the payload for Saturn-5 (120-130 tons), the delivery of goods with its help would cost about 5-7 times cheaper than shuttles. So, maybe it is worth re-equipping the space shuttle launch complexes for Saturn-5s? But for some reason the Americans have money for the "wasteful" shuttles, but not for the "economical" Saturn-5s.

Saturn-5 is very expensive to maintain

“Another obstacle is the complexity and cost of servicing a huge rocket,” write the authors of the article [7, p. 126]. “One day of servicing the Saturn-5 rocket, standing on the launch pad, cost 200 thousand dollars,” explains the author [16]. This is already an argument designed for a completely ignorant person. By everyday standards, 200 thousand dollars is, of course, a huge amount. But not by the standards of space launches. The Zarya module alone for the ISS costs 1000 times more - \$ 220 million [25]. For one launch, "Saturn-5", even in a shortened two-stage version, according to NASA, put 75-80 tons of payload into orbit. These are four such modules as "Zarya" - almost a billion dollars. So the cost of maintaining a rocket at launch is a penny compared to the cost of the payload being launched.

Lost blueprints, factories and specialists

In the magazine Popular Mechanics [27], its editor-in-chief A. Grek informs us about the following completely bleak picture: “Now it is unrealistic to set up production of Saturn-5: no complete documentation, no assembly plants, or specialists have survived.” In general, everything is gone. Well, let's try to help.



Fig. 8. Everything was found, or what they did and are doing in the Center. Marshall:

a) the first stage of the Saturn-5 rocket; b) - a fuel tank for the shuttle; c) - production of ISS modules

The first step is to find the blueprints. Fortunately, five issues earlier the same magazine, but through the mouth of another author (Paul Eisenstein), pleased with the following message [28]: “The situation was clarified by Paul Shavkross, an employee of the internal inspection of NASA. All the blueprints for the world's largest rocket are safe and sound. ” So, we found the drawings.

And where did the plant that made Saturn-5 disappear to? It turns out that the plant is intact. The most bulky part of "Saturn-5" - the first stage, was produced at

the plant in the Space Flight Center. Marshall, Huntsville, Alabama (Figure 8). Currently, the Center continues to create space technology. And since the technique is being done, it means that the specialists are not extinct.

So there is everything: factories, documentation, and specialists. Only NASA has no desire to produce and use such a wonderful rocket. And the reasons given by the defenders are not convincing. They could not help American astronautics historians "clearly explain" why the supposedly excellent Saturn-5 carrier was forgotten.

Where did the super-powerful F -1 engines go ?

Only in 1988, almost 20 years after the first flight of Saturn-5, the USSR was able to create the Energia rocket (Fig. 9) [29, 30] with approximately the same payload that NASA named for Saturn-5 ...

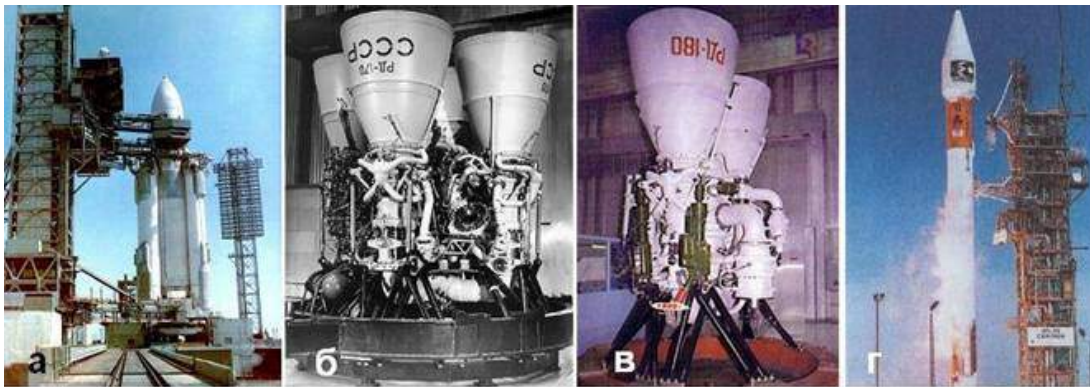


Fig. 9. Engines from Energia on an American rocket

a) 1988. Soviet rocket "Energia"; **b)** the engine from the Energia rocket - RD170; **c)** RD180 engine (modernized RD171); **d)** 2003. Launch of the American Atlas rocket with the RD180 engine.

Energia successfully launched twice, but soon perestroika began in the USSR and Energia became one of its victims. The USSR itself ceased to exist, and what was within the power of a great power became beyond the strength of an average country burdened with economic problems.

And, nevertheless, Energia did not disappear without a trace for technical progress [30]: "The technologies developed for Energia are still used today. The engine of the Energia lateral blocks RD-170, the most powerful, as of 2005 the engine in the history of cosmonautics is used as the RD-171 in the first stage of the Zenit launch vehicle (including in the Sea Launch project), and the RD-180 engine, designed on the basis of the RD-171, is used in the American rocket Atlas-5".



In general, the engine is the heart of the rocket, moreover, the heart is special - long-lived, allowing transplantation to the next client when the previous one has already died. From this point of view, it is interesting to discuss the fate of the F -1 engine (Fig. 10). Five of these super-powerful engines located in the first stage, according to NASA, provided the launch of the 3,000-ton Saturn-5. But where have these super-powerful engines gone, and why **are not the "native" F- 1 "Saturn-5" engines used for the new powerful American missiles , but imported ones from the Soviet rocket "Energia" (ill. 13b) ?**

Fig . 10 . The F -1 engine disappeared along with the rocket

(The chief designer of Saturn-5, Wernher von Braun, stands near the nozzle of the F -1 engine)

After all, if the F -1 engines not only stood at exhibitions (Fig. 10), but also worked, then it was the American engines that were ahead of the Soviet ones by at least 20 years. And according to the logic of progress, by now NASA should have engines more advanced than the RD-180. But for some reason the Americans are buying Russian RD-180s. And then, did the F -1 engines actually exist and that Saturn 5 rocket that only they could lift?

A record without independent and authoritative witnesses will not count.

According to NASA, Saturn-5 is the undisputed record holder among rockets, whose record lasted 20 years (before the appearance of the Energia rocket). But pay attention to the fact that the results of his records were recorded without witnesses, or rather, without outside witnesses.

Since 1976, the USSR has been practicing the participation of foreign cosmonauts in flights on the Soyuz spacecraft. Until 1986 alone, 11 foreign cosmonauts flew on Soyuz **[31]** . At present, Soyuz is delivering international crews to the ISS. "Protons" launched modules for the ISS into orbit. So the carrying capacity of Soviet missiles is known to foreign experts from their own experience. And what could Soviet and other foreign experts say from their own experience about the carrying capacity of Saturn-5?

In July 1975, the Saturn-1B rocket launched the Apollo spacecraft into near-earth orbit, and the Soviet Soyuz rocket launched the ship of the same name (Fig.

11). The ships docked and the Soviet cosmonauts visited the Apollo **[7]** . The flight allowed foreign (in this case, Soviet) specialists to personally verify that the Americans have a Saturn-1B rocket capable of launching Apollo into low-earth orbit the Apollo spacecraft in a lightweight, “near-earth” version (15 t , **[7]**) . This is 8 times less than the mass of 120-130 tons, which Saturn-5 could allegedly put into low-earth orbit.

And since none of the outside witnesses met in space with those heavy objects that Saturn-5 allegedly took out, the declared by NASA the ability of Saturn-5 to launch super-heavy objects (120-130 tons) into orbit remained unconfirmed by foreign experts. In the meantime, the record is not confirmed by outside witnesses, there is always reason to doubt that it was at all.



**Fig. 11. Soviet cosmonauts - witnesses
and participants in the Apollo flight with a mass of 15 tons**

(joint flight of Apollo and Soyuz in near-earth orbit)

Let's summarize the interesting facts that we learned about in this section:

1. The Saturn-5 rocket passed, according to NASA, only two unmanned flight tests, and the final second test (April 4, 1968) was unsuccessful.
2. After the unsuccessful second test, no other unmanned tests were carried out, and the next flight of the rocket (December 1968) was manned, that is, with a crew.
3. In the same 1968, NASA decided to serve "layoff" notices to seven hundred rocket scientists in Huntsville, the center of the lunar rocket development.
4. In just 2 years, the director of the Rocket and Space Center named after V.I. Marshall, chief designer of the Saturn-5 rocket, Wernher von Braun. The liberation took place during the brilliant epic of the Apollo flights, carried out precisely on the Saturn-5 rocket.

5. After the end of the Apollo program and the one-time launch of the Skylab station, the great achievement of American rocketry - the Saturn-5 lunar rocket was never again used, either in whole or in parts in the form of engines. And this, despite the fact that, according to NASA, after the completion of these programs, it still had three such rockets.

6. Taking into account the 20 years for which Saturn-5 allegedly overtook the Soviet Energia, the Americans should be far ahead of us in terms of creating the corresponding super-powerful engines. And they buy Russian ones. So did the F -1 engines actually exist ?

7. All 10 manned flights of the Saturn-5 rocket were carried out by crews composed exclusively of US citizens. None of the citizens of other countries did not work in space on those super-heavy objects that, according to NASA, the Saturn-5 could launch into outer space. Therefore, the declared NASA ability of "Saturn-5" to put such superheavy objects into orbit remained unconfirmed by foreign experts.

All that has been said about this makes us wonder **whether there was some kind of deception that is still incomprehensible to us hidden behind the launches of giant rockets?**

Be that as it may, and the decision of NASA on April 23, 1968, no one canceled: "Saturn-5" - to start together with astronauts to the moon. And when the decision is made, then any doubts about the success of the case, and even more so its criticism, are unacceptable. Therefore, let's talk about those who hindered success with their disbelief and criticism.

Eliminate critics!

51-65 minutes

"Eliminate" critics!

In December 1968, the Americans allegedly began flights to the moon. And throughout the previous 1967, fatal accidents raged in the NASA astronaut corps. Astronauts died far from space and under the most earthly circumstances. The first "accidents" happened even earlier - in 1964-1966. while running the Gemini program. In total, about 15% of the squadron were killed.

Skeptics put forward the version that "chance" overtook those who did not show enough patriotism to participate in the performance of space flights, instead of the flights themselves.

Such "refuseniks" can be understood. Indeed, the most experienced pilots in their prime entered the NASA squad, dreaming of flying into space. But instead, they gradually discovered that they would have to be the main actors in a rather dirty show. It is unlikely that any of the members of the detachment was pleased with such a prospect. But the majority remained silent, realizing that there was no turning back.

However, apparently, there were "dull" ones who did not realize that they had no choice, and did not express a clear readiness to participate in the space scam. How to deal with them? After all, the chiefs revealed to them the secret of the upcoming space scam. And these from that moment revealed dissenters became potential sources of leakage of top-secret information. Information capable of causing colossal damage to the prestige of the United States. So they must be silent and silent forever!

Is elimination possible for political reasons in a country that presents itself as an example of freedom, democracy and protection of human rights? - another reader will be surprised. It is very possible! Including in the period of time we are considering. For example, in November 1963, the President of the United States was assassinated in Dallas, Texas. This is described in detail in the book of the KGB veteran, Colonel O.M. Nechiporenko [1] .

Note: in all quotes below, their abbreviation, as well as the highlighting of the text in different fonts and its underlining belong to the author of this article.

With numerous witnesses, the President of the United States (1963) and the presidential candidate (1968) are killed



Fig. 1. The Practice of American Democracy

- a) 1963 - US President D.F. Kennedy, an hour later L. Oswald was accused of murder and arrested;
- b) a day later, D. Ruby kills L. Oswald in the building of the police department;
- c) "avenger" D. Ruby died in prison
- d) 1968 - US presidential candidate R.F. Kennedy;
- b) the killer S. Sirhan is serving a life sentence

"On the Moon we see the banner of freedom, peace and democracy," - he said E. Kennedy declaring May 25, 1961 the launch of the program "Apollo" [2]. On November 22, 1963, Dallas was lavishly decorated with the banner of "freedom." The city received the president. The President was well aware of the customs of his country. Upon arrival at Dallas airport, he said that the president could simply be killed with a sniper rifle. This was done (Fig. 1a). John F. Kennedy was shot in broad daylight as he rode in a parade cortege through the city streets. In the car next to him were his wife and the governor of the state. There are plenty of witnesses: all the sidewalks are packed with people.

And how cleverly the "ends in the water" were hidden. They quickly "found" and seized the "killer" - a certain Lee Oswald (ill.1b). *"Wait, I'll soon name everyone who set me up,"* said Oswald. Did not have time! A day later, in the same police department where Oswald was being held, he was shot dead in front of the FBI agents by another "loner" (Fig. 1b). Someone Jack Ruby is a bartender and a well-known FBI dealer in illegal weapons, that is, simply a "dark personality". Who put him in control? Who let him go to Oswald's press conference, which was held the day before in the same department? Obviously so that Jack would personally see the one he should shoot the next day.

O.M. Nechiporenko very colorfully described how Oswald was shot:

"On the morning of November 24, we again sat in front of the TV, waiting for a live broadcast of Oswald's transfer from the police department to the district prison, which had been widely announced the day before. When the procession appeared, I noticed that Oswald was not covered by detectives, but, on the contrary, seemed to be pushed forward, in other words, substituted. As soon as I had time to say: "Now they will kill him ...", when a back appeared on the screen, a shot rang out, a dump began ... "Now this is not a tenant either!" I exclaimed. The credibility of these statements can be confirmed by several participants watching this broadcast. "

Ruby apparently believed someone's promise of impunity. *"I'm Jack Ruby, you all know me,"* he shouted during the arrest. Cheat Jack. They put him in prison, where he died soon enough (ill. 1c). Those witnesses from the street who volunteered to tell the investigation what they saw or heard at the time of the president's assassination were also not lucky. The newspapers then printed photographs of several dozen such witnesses with the signatures - "missing"

A high commission chaired by US Supreme Court Justice Warren investigated the president's assassination for almost a year and eventually declared it to be the work of the lone Oswald. "Ends in the water!"

In 1968, the younger brother of the assassinated president (Fig. 1d), Robert F. Kennedy (US Attorney General in 1961-1964, Senator since 1965), put forward his candidacy for the presidential elections in the United States. Had a chance of success, but on June 6, 1968, he was killed in Los Angeles, in a hotel building, in the presence of numerous correspondents [3] . A certain Sirhan Bishara Sirhan (ill. 1e) was shooting. As expected, he was declared a lone killer. Sirhan was "baked" for life in prison. Presumably - without the right to communicate.

And what is a certain astronaut in comparison with the president of the country or with the senator? And what will happen if high politicians decide that it is better for him not to live? Yes, it will be so! After all, the Apollo program was the subject of very big politics.

Taking into account the described American customs, let us return to accidents in the NASA astronaut corps from 1964. through 1967 inclusive. Why did the "oblique" become attached to a small team?

Let's not forget about the death of another person in 1967. He was not an astronaut, but he was fully involved in the Apollo program. Thomas Ronald Baron worked for four years (until the end of 1966) at the cosmodrome as a safety inspector for the construction of the Apollo complex. After a close acquaintance with Apollo, he wrote two reports - first, 55 pages, and then 500. The general theme is the **complete unsuitability of the Apollo spacecraft for flights to the Moon** . His second report was even heard in the US Congress, and the next evening Baron "accidentally" died ("accidentally" with his family).

What NASA attorneys write on this subject

To begin with, let's listen to the home-grown lawyers of NASA Yu. Krasilnikov and V. Yatskin [4,5] :

"11 astronauts really died. But only 4 of them directly participated in the Apollo program. Let's list them by name.

01/27/1967 W. Grissom, E. White, R. Chaffee burned down during training in the Apollo spacecraft.

05.10.1967 K. Williams. Killed in a T-38 plane crash a year before the first manned

flight "Apollo", was included in the crew of one of the "Apollo".

The other seven astronauts were not associated with the Apollo program.

11/15/1967 M. Adams. Crashed while testing a super-high plane NASA X-15

08.12.1967 R. Lawrence. He was a pilot during a training flight on an F-104B aircraft. Crashed while landing.

09/13/1967 R. Rogers. In 1963 he returned to flight work. At the time of his death, he had nothing to do with space flights. The F-105 fighter he was flying exploded in mid-air.

31.10. 1964 T. Freeman. His T-38 plane collided with a bird.

02/28/1966. E.C. and C. Bassett were the first candidates to fly on the Gemini-9 spacecraft. On February 28, they flew on a T-38 plane to the factory, where the ship intended for them was being assembled. Xi made a mistake while landing, and the plane crashed into the same workshop where the ship was being assembled. Sea and Bassett were killed and 14 factory workers were injured.

06/06/1967 E. Givens. Died in a car accident. "

NASA attorneys have quite accurately quoted information from the official biographies of the deceased astronauts [6] . An interesting commentary on these facts from Yu. Krasilnikov [4] :

"The circumstances of the death of the listed astronauts do not look very much like malicious intent.

** There are many simpler and more reliable ways to remove unwanted bystanders than plane crashes.*

** Moreover, there is no need to eliminate the unwanted along with a unique experimental aircraft or the first copy of a new spacecraft. It was hardly possible*

to adjust the errors of the pilots during the landing approach, and even more so the collision with a bird in the air.

** And it is absolutely stupid to remove those who are not involved instead of "dissenting": most of the victims had nothing to do with flights to the moon.*

** This sequence only confirms the well-known truth: the professions of a test pilot and an astronaut are not the safest.*

The opinion is understandable, but why the lawyers on their list start from 1967, then jump to 1964 and 1966, then go back to 1967. Trifle? Not really! In this way, they mask the ominous increase in the number of deaths in 1967.

Also, why are NASA lawyers only considering the deaths of astronauts? Isn't the named inspector involved in the Apollo program? Or is he an "uninformed" participant? How well informed! If his report was empty and absurd, Baron would have received the usual formal reply from a certain official: "they say, they met, considered the report unreasonable." So no! The author of the report was invited to Congress for a personal interview. So there was something to talk about.

Why do the lawyers argue that the conversation should be conducted only about four people who, in their opinion, are the only ones who "*directly participated in the Apollo program*"? Obviously, they mean the burned-out crew of Apollo 1 (W. Grissom, E. White and R. Chaffee), as well as astronaut K. Williams, who was included in the crew of one of the Apollo's. And the rest of the dead astronauts - what are they? Accidentally wandered into the detachment, and know nothing? By the way, T. Baron was not an astronaut at all. But he knew Apollo as well as the astronauts. Why he was invited to Congress to hear his criticism.

Augmented and ordered list of the dead

First of all, we will rewrite the list of the dead in chronological order and, for convenience of discussion, we will assign serial numbers to all emergency situations (emergencies). We will include T. Baron in the "death" list together with members of his family. After all, T. Baron, as we will see below from an obituary in an American newspaper, died precisely as a "critic of Apollo." The members of his family were "guilty" of knowing about the anonymous telephone threats received by the inspector.

So, 14 people died - 11 astronauts and 3 more "civilians" (Inspector Baron with his family):

PE No. 1 . 31.10. 1964. T. Freeman. Plane crash. His **T-38** plane collided with a bird;

PE No. 2. 02/28/1966. Plane crash. E.C. and C. Bassett were the first candidates to fly on the Gemini 9 spacecraft. On February 28, they flew on a **T-38** plane to the factory, where the ship intended for them was being assembled. Xi made a

mistake while landing, and the plane crashed into the same workshop where the ship was being assembled. Sea and Bassett were killed and 14 factory workers were injured.

PE No. 3. 27.01. **1967** . V. Grissom, E. White, R. Chaffee burned down during training in the Apollo - 1 spacecraft;

PE No. 4. 28.04. **1967** . Inspector T. Baron. Found dead with two family members in his car at a railroad crossing the day after his critical Apollo report to the US Congress;

PE No. 5. 6.06. **1967** . E. Givens. Killed in a car accident;

PE No. 6. 13.09. **1967** . R. Rogers. Plane crash. His F-105 fighter exploded in mid-air;

PE # 7. 05.10. **1967** . K. Williams. Plane crash. Killed in a **T-38** plane crash . Was included in the crew of one of the Apollo;

PE No. 8. 15.11. **1967** . M. Adams. Plane crash. Killed while testing a super-high plane NASA X-15;

PE No. 9. 08.12. **1967** . R. Lawrence. Plane crash. Killed on F-104B while landing .

In Fig. 2, the list of the victims presented by the author is shown in faces for clarity. Let's reason like this. If one day a member of a small group died as a result of an accident, then one should not immediately suspect of this someone's higher malicious intent. But, if accidents go one after another, and by the end of the period under consideration they become monthly, then only the blind will not see in this series of guiding participation someone's merciless hand. It turns out that for 15% of astronauts, life on Earth turned out to be many times more dangerous than for those who, according to NASA, overcame all the difficulties of flying to the Moon and back 10 times. Nonsense!

If for a start we limit ourselves only to the dead astronauts, then contrary to the assertion of the NASA lawyer, most of the emergency is completely unrelated to the danger of the profession of a test pilot and astronaut. In seven emergency situations (Nos. 1, 2, 5, 6, 7, 8, 9), people died while piloting serial aircraft and even driving a car. And only two cases (No. 3 - the fire on Apollo-1 and No. 8 - the crash of the X -15 aircraft) seem to fit the protector's statement about the dangers of these professions. Therefore, below we will consider these PEs # 3 and # 4 in more detail.



Figure 2: A clear picture of the statistics of death in the NASA astronaut corps and at the cosmodrome for the period 1964-1967.

The year 1967 is highlighted in bold in the ordered list because three astronauts died in the previous three years and eight died in 1967. Plus Inspector Baron and his family.

The T-38 aircraft is also highlighted in bold in the list. Let's start with him.

"T - 38" - "teacher, transport, toy" or a trap for the "unreliable"?

The T - 38 is an American training aircraft for training pilots - novices (Fig. 3), that is, an aircraft with dual fully duplicated controls [7] . Both the student and the instructor sitting behind it can control the training aircraft.

NASA astronauts were no strangers. They were the finest aces in American combat fighter aircraft. With a flying time of at least 1500 hours. What is the training T-38 for such aces? So they used the T - 38 as a taxi for traveling (more precisely, flights) from Houston to the cosmodrome and back (Fig. 3).

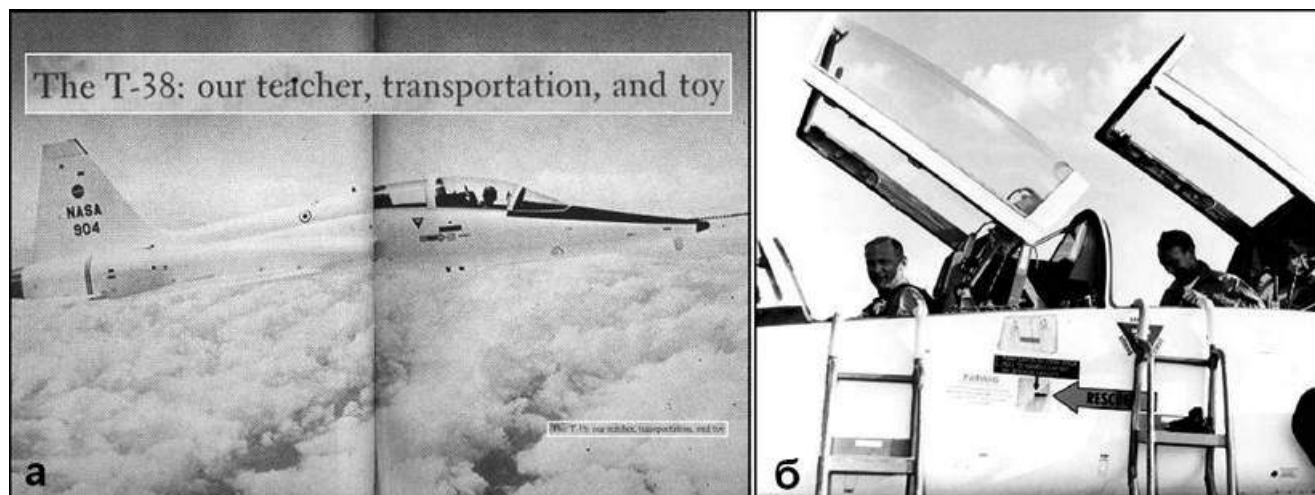


Fig . 3 . a) T-38. Photo from the book "Carrying Fire" by M. Collins. Translation of the inscription: "*T - 38 is our teacher, our transport, our toy*" [8] .

b) June 1969. Astronauts A-11 Aldrin and Collins have just arrived in T-38.

<http://www.hq.nasa.gov/office/pao/History/alsj/a11/ap11-69-H-990.jpg>

There is simply no more reliable and simpler planes than training airplanes. “ *The aircraft remains in service to this day*” [7] . Since 1961 in the ranks! The best praise for an airplane is hard to come up with. However, in just four years, within the framework of a small flight team, consisting of about 30 selected aces, three such super-reliable T - 38s suffered a disaster!

Aces Freeman, Si, Bassett and Williams died under various circumstances, and in none of the three disasters, none of the four pilots managed to jump out with a parachute! What a fatal and rather stable hopelessness!

If, following NASA's advocates, all three T-38 disasters in the astronaut squad were assumed to be mere accidents, then how many newcomers to American flight schools were supposed to die in the United States every year? Let's try to figure it out. As far as the author knows, virtually all members of the astronaut corps used the T-38 for their work trips. Three T - 38 crashed together with the pilots (four people in total). This is approximately 10% of the size of the squad.

Multiply that 10% by the number of new recruits trained annually to recruit US military aircraft. Let's put this number approximately equal to 700-800 people, as it was in the USSR. Then, in the process of training, about 70 - 80 newcomers a year were supposed to die on the T - 38. The right to rescue (bailout) during a disaster will be denied to both beginners and instructors. Only then will the comparison with the astronauts who died on the T - 38 be correct. And since beginners don't fly without instructors, 70 - 80 instructors will follow. And this is just one year!

Yes, who needs a trainer like this? And who will go to study and teach in flight schools with a 10% lethal outcome of the learning process? The American Air Force would have died due to lack of recruiting!

But the US Air Force is flourishing, and there has never been any complaints about the T-38's reputation as a very reliable aircraft. This has already been written above. And the members of the astronaut corps loved, respected and used this aircraft. Here is a touching inscription of the astronaut A-11 M. Collins on the photograph of the T-38 in his book [8] : “*The T-38 is our teacher, our transport, our toy*” (ill. 3a).

So NASA attorney word about the dangers of " *profession test pilot*" totally irrelevant , when it comes to training plane. First, the T - 38 had already been tested - retested by the time it was put into production (1961) and showed excellent reliability. And, secondly, for the aces, he really is a toy, if we bear in

mind the ease of his control. Not newbies! But let's make a reservation, the T - 38 is reliable only for the "correct" aces. Ases, loyal to those unusual and dubious tasks set by NASA.

For example, Figure 3b shows Neil Armstrong and Michael Collins, who have just arrived in a T - 38 plane at the airfield. It's June 1969. By October 1967, four astronauts had already died on three T - 38s (Freeman, Sea, Basset, Williams). And these two fly on the T - 38, as if nothing had happened. Is it because they are so calm that they are the "correct" aces, and in just a month it will be they who will play the performance of the "first landing on the moon" in front of all mankind.

Now we will consider those emergency situations about which more or less detailed information has reached us.

1964 - 1966: Gemini flight time. PE No. 1 and No. 2

In 1964 - 1966 NASA conducted the Gemini Manned Orbital Missions program. Almost every two months, the launch of the next Gemini was announced. There was a rocket launch from the cosmodrome, but without a crew. And the Geminis were not in orbit due to the weakness of the then American launch vehicles [9] . The entire orbital part of the flight was carried out by means of the media. Isn't it a rehearsal of the upcoming lunar scam [9, 10] ? According to skeptics, NASA's "space scams" should be accompanied by accidents with astronauts on Earth. This is like a sign. And so it was!

In 1964, there was an emergency number 1. The astronaut pilot - ace Freeman was killed [11] . On many types of aircraft, he flew his 3300 flight hours, and died in the cradle for beginners - in the training T - 38. Allegedly, while landing in the air intake, a white goose flew into the air intake and thus caused a fire. How much can you take from the white goose? Yes, and you will not check. And the time was hot for NASA: the Gemini scam was just beginning [10] .

The year 1965 passed without losses in the astronaut corps.

1966 year. Astronauts Si and Bassett (Emergency # 2) were officially assigned to fly on the Gemini-9 spacecraft. But "Gemini - 9" passed without them, because shortly before it both aces crashed into a T - 38 while landing on instruments during fog [12] .

By the time of enrollment in the squad, C had flown 3,700 hours, and Bassett - 3,600. Didn't they land in the fog and on instruments during these thousands of flight hours? Or did the necessary instruments work badly at the right time on this fatal flight on the T - 38? Or did both pilots "black out" at the very last moment before landing? In vain doubts?

And how can we be sure if just 14 minutes later another T - 38 from the same NASA astronaut corps successfully landed at the same airfield. But, only, as it

became clear now, in this T - 38 there were 100% "correct" astronauts. They were T. Stafford and Y. Cernan - the future "moon rovers" [12].

It just so happened that a former military pilot turned out to be a neighbor of the author's dacha. Naturally, the author turned to him with a request to scrupulously read a section of an article about the strange "behavior" of the T - 38 aircraft, which so unusually showed itself under the control of some astronauts (at the same time pilots - aces). Voenlet agreed with the author's analysis, adding that not only pilots control the landing and bear responsibility for its success: *"And what did the ground service of the flight control airfield do? Did all the radars fail? Are all the operators responsible for flight safety asleep?" ...*

In 1964 - 1966 according to NASA, 10 orbital near-Earth flights were performed on two-seat Gemini. Consequently, 20 actors - "astronauts" took part in these "flights". And 3 astronauts (Freeman, Sea, Bassett) during the same time, as if by accident, died. 3 to 20 is the same 15%. What is it? Is it a coincidence, or, so to speak, the average of a common human conscience among American astronauts? The share of those who did not want to change the dream of space flight for a brazen hoax? For which he paid.

The Gemini scam served as the psychological foundation for the next lunar scam. NASA has learned to fool the brains of all mankind. But the scale of the Gemini scam was, of course, much more modest than the scale of the Apollo scam. "

And with the approach of 1968 - the year of the practical beginning of the lunar scam, this began ...

Relentless 1967: "epidemic" of "accidents"

After the end of Gemini (1966), NASA took a two-year hiatus in its "space" flights. On the line of readiness went "Apollo" - a symbol of the grandiose lunar swindle. Here the preparation should be more solid. Big task - big expense. In 1967, 8 astronauts and Inspector Baron with the whole family went into "expense". Now the fatal emergency has gone one after another. In total, 11 people died from various "accidents"!



PE №3.

Early January 1967.

Astronaut V. Grissom hangs a lemon on the Apollo

(In the USA, an extremely unreliable technique is called "lemon" - A.P.).

Fig. 4. The Apollo spacecraft and the astronaut Grissom.

(lemon in the picture <http://www.astronautix.com/craft/apolocsm.htm> added by the author of this article)

The account of "accidents" was opened by the crew of the Apollo - 1 spacecraft. 3 astronauts were burned at the cosmodrome during training. How accidental - judge for yourself.

Let's start with the fact that the famous all over America astronaut V. Grissom (Fig. 4), after getting acquainted with the Apollo spacecraft, declared that it was not good for anything!

The American researcher R. Rene writes about it this way [13, p., P. 90-108, 202] :
"By January 1967, Grissom was clearly unhappy with what was happening. He became disillusioned with both NASA and the flight capsule manufacturer. "Quite negligible" he called the chances of fulfilling the mission entrusted to him. "

"At the beginning of January 1967, Grissom demonstratively hung a lemon on the Apollo capsule, which unambiguously expressed his attitude towards NASA equipment.

Moreover, he threatened to make his dissatisfaction public . Grissom was so famous in America and so popular in the media that he would have had no problem. Even NASA's censors couldn't control the situation. Titles like "Famous Astronaut Revealed NASA!" would flood the country "[13, p., p. 90-91] .

"Before the fire, he began to actively oppose the not too transparent hints of NASA that a real patriot should lie to his citizens in the name of the country" [13, p. 202]

.

End of January 1967.

The Apollo 1 crew burns out at the launch site in the very Apollo!

The Apollo used pure oxygen to breathe for the crew members. Recall that in the air surrounding us, oxygen is only 1 / 5th part. The rest is nitrogen. So the Americans decided to throw out the nitrogen "ballast". This makes the ship much lighter, but in pure oxygen a small spark is enough to start a fire.

This is evidenced by the total number of accidents that have occurred since September 8. 1962 to Jan 1 1967 in training in a purely oxygen atmosphere. Some of them were carried out directly according to the Apollo program [13, p., P. 93 - 94] :

* *Burnt alive* - 4 people;

* *Lost consciousness* - 2 people;

* *Received serious burns* - 4 people (2 of them were also seriously injured) .

In general, the fire hazard of Apollo was well known to NASA. But a disadvantage can turn into dignity if it is necessary to "naturally" eliminate such a dangerous critic of Apollo as Grissom. In this case, of course, two more astronauts will burn, but you cannot send him to burn one. Everything should look natural. Say, the entire crew died heroically while performing a service assignment.



Fig. 5. Fire on Apollo 1. a) the Apollo-1 crew, target mark and inscriptions were supplied by the author of the article,

b) at the launch site on top of the rocket "Apollo-1" is on fire together with the crew,

c) the inside of the capsule after a fire

<http://grin.hq.nasa.gov/IMAGES/SMALL/GPN-2000-001159.jpg>, [15],
<http://www.hq.nasa.gov/office/pao/History/alsj/a410/ap1-67-H-380.jpg>

And on January 27, 1967, a crew of astronauts E. White, V. Grissom and R. Chaffee climbed to the top of the launch complex (ill. 5a). Officially, they were to conduct a ground training for the launch of the ship. In fact, they were awaited by cremation in a tightly sealed capsule (ill. 5 b, c) [13, p., P. 90-91, 98, 99, 101, 202] :

"By 13:00 on January 27, the astronauts were buckled into their chairs. It was planned to work out the switching of the necessary toggle switches . "

" At 17.45, Grissom made a complaint against the signalmen because of the missing radio communications " [15] :

Dispatcher: "Hear me?"

Grissom: "No, Chuck, I can't hear you at all. Chuck, I can't hear you. Maybe let's try the phone?"

How are we going to communicate with the Moon if we can't hear each other from neighboring buildings? I don't hear a single word from you. "

"At 18:31 one of the astronauts shouted " Fire! "... after 14 seconds the pressure reached 2 atm., And the capsule broke, thereby releasing heat and extinguishing the flame. But it was too late. "

Two probabilities:

8-fold randomness - 0.4%, prepared fire - 99.9%

Just an anecdote:

- "Defendant, eight wounds were found on the body of the murdered man. How do you explain this? "
- "Mr. Judge, we were cutting a watermelon, the unfortunate man slipped on the watermelon peel and fell right on the knife. "
- "Yes, but eight wounds were found on the body of the murdered man ?!"
- "And so - eight times in a row, Mr. Judge!"

On the eve of the fatal training V. Grissom, apparently, had a presentiment that something was wrong. *"Mike Gray recalled: " Grissom did not leave the feeling of anxiety. He once said to his wife Betty: "If a serious accident occurs in the space program, then I will surely find myself in it" [13, p.91] .*

"Grissom something alarmed, because he asked Joe Shea (by Joe Shea), the chief administrator of NASA pass this test with him. Shea refused, citing the impossibility of plugging in a fourth pair of headphones. It is hard to believe that this was impossible within 24 hours "[13, p. 98] .

It was not enough for NASA to install a pair of headphones for 24 hours, but *"the hatch, which had previously opened outward, was redone on the day of testing and began to open inward. With this design, any pressure inside the capsule would simply prevent it from opening. In addition, outside the hatch was additionally battened down with non-bursting bolts" [13, p. 108] .*

Literally a hopeless situation!

A whole series of downright one-sided "mistakes" were made [13, p., P. 107 - 108] :

"On the day of the test, the camera inside the ship, which was part of the flight and test equipment, was missing." (And already no one could see how three people would be burned alive - A.P.).

It is very important that fire extinguishers are kept inside the ship during testing. In addition, (usually) fireproof Teflon sheets covered electrical wiring and astronaut seats. All these devices were definitely missing on January 27, 1967. "

But for the first time there was something that could help the fire. *"This was the first time that foreign flammable objects such as two foam cushions were placed in the cab . "*

In 1996, a prominent American rocket scientist B. Wood gave a lecture [14] , in which, in particular, he said: *"The fire started under Grissom's seat in 10 pounds of oiled rags that were put there, and which quickly ignited in pure oxygen of the capsule "*. (Read about B. Wood himself in the appendix).

This clearly shows that **Grissom was the intended victim for the organizers of the fire**. If the fire is not strong enough and the crew survives at least for a while, then what will the extremely angry V. Grissom tell? And therefore it must burn out guaranteed. And so a rag is put under his chair. And those two are "allowed" to survive. If we get lucky. But not Grissoma!

Let's summarize the entire set of "random errors":

- 1) the hatch door was urgently re-equipped so that no one could get out of the burning capsule of the ship;
- 2) the fire protection teflon sheets were removed;
- 3) Flammable pillows made;
- 4) the fire extinguishers were removed;
- 5) the internal TV camera was removed;
- 6) the sound communication of the ship with the dispatch service was provided disgustingly;
- 7) 4 kg of oiled rags were placed under Grissom's seat. You can't imagine a better kindling! Technical oil and pure oxygen "love" each other very much.
- 8) The unreliable Grissom could have kept seditious personal records about this very "Apollo" at home. Immediately after the fire, they must be urgently removed, while relatives do not yet know about the tragedy. And, God forbid, these records will be made public. So you need to keep a team of relevant agents ready. And so it happened! *"Government agents promptly searched Grissom's house before the fire became known. They confiscated all of his personal papers. His diary and personal documents with the inscription "Apollo" were not returned to his widow "* [13, p. 108] .

Everything went according to plan - everything burned out! Of course, when performing a service assignment. Grissom did not have time with his revelations.

Let us estimate the probability that the fire was still accidental. Let the probability of bringing in each factor is approximately $\frac{1}{2}$. That is, they could convert the door,

or they might not. They could have removed the fire extinguishers, or they could have left them. Etc. Then the probability that all of these 8 factors were randomly realized simultaneously is $(1/2)^8$. This is only 0.4%. The remaining 99.6% allow us to say that the fire was planned!

V. Grissom's son, Scott Grissom, was also suspected that the fire had been staged. The documentary [15] shows a page from the Dayton Daily News (Fig. 6) with the article "Astronaut's son accuses of sabotage" and includes an interview (Fig. 6) of the son himself.



Fig. 6. Left: Headline of an article from the Dayton Daily News [15] :

"The son of an astronaut considers sabotage (sabotage) to be the reason",

Right: Scott Grissom states in an interview:

"I believe it was a deliberate sabotage " [15]

Buried with honors and an investigation was carried out!

(Commission of Inquiry 204)

The burials of those who were burnt were very dignified (Fig. 7). Then a commission was organized to investigate the causes of the fire. She "lacquered" the legend of the accident [13, p.102] . Its chairman was astronaut Frank Borman (Fig. 7), who, by the way, was also a physicist of a fairly high level. Before joining the detachment, he lectured on thermodynamics at the West Point Academy [16] . However, *"Borman said under oath: "None of us fully knew about the danger when a purely oxygen environment is combined with a significant amount of explosive materials and a possible source of ignition ... therefore this test ... was not regarded as dangerous "* [13 , p.102] .

From the lips of a physicist, what Borman said may sound either as a deliberate lie, or in a sick delirium. Any student and even a high school student who studied chemistry or physics knows about the extreme fire hazard of working with pure

oxygen. But after all, without batting an eye, the assistant professor of physics swears to the Congress - " *None of us ...*".

In addition, this is said after in five tests carried out in a purely oxygen atmosphere and passed before the "training" of "Apollo - 1", 6 people were injured, and 4 simply burned out. Moreover, three tests took place specifically within the Apollo program (that is, under the control of NASA), and two testers were burned to death just three weeks before the Apollo 1 tragedy. But the chairman of the NASA commission, it turns out, is not in the know !?



Ill.7.

Hearse with Grissom's tomb

http://www.capcomespace.net/dossiers/espace_US/apollo/apollo1/ap1_67-H-141.jpg

F. Bormann - Chairman of Commission 204 to Investigate the Causes of the Fire on Apollo 1,

associate professor of physics, a member of the astronaut corps, two years after the fire - allegedly the first person to fly around the moon, then - the political adviser of the White House on flights "to the moon" [16]

How much is the ship per piece?

The lawyer, of course, must use all the arguments to help the client. And you will not refuse such an effort to the lawyer of NASA Yu. Krasilnikov. What is his phrase *"there is no need to eliminate the unwanted along with ... the first copy of the new spacecraft . "* At the same time, it is not clear from his text what kind of accident he has in mind. Only emergency # 2 (Si and Bassett) and the just considered emergency # 3 are associated with the destruction (elimination) of spaceships. But, in both cases, the lawyer did not bother to make ends meet in his defense speech. Let's re-read his list of the victims:

PE No. 2. *"E.C. and C. Bassett were the first candidates to fly on the Gemini 9 spacecraft, scheduled for June 1966. On February 28, 1966, they flew in a T-38 aircraft to the plant in St. Louis, where the ship was being assembled. "Why does the lawyer write about the "first copy of the ship"? The number of this supposedly*

"first" ship was "NINE". And the ninth, one might say, already a production model is always much cheaper than the first copy. So don't dramatize the situation.

As for the emergency number 3 (fire on "Apollo"), then here the lawyer "forgot" that the name "Apollo-1" was assigned to this story much later than the fire that occurred? The burned out command module had index 012 in the order of manufacture . Because shortly before the tragedy with the fire, the Americans reported the tests of the eleventh copy of the capsule [17] . That is, the capsules of "Apollo" by the time of the fire were also produced "on stream". So, the loss of the twelfth sample was probably not so hard. " *Unit Cost \$: 77 million* " [18] . Not cheap, but sheer nonsense when it comes to eliminating criticism that threatens US national interests.

Ralph Rene concludes

“ After all that has been said, I have no doubts: the “ cremation ” of Grissom's crew was a murder ” [13, p., P. 108 - 109] .

Application . In 1996, B. Wood gave a lecture [14] , in which, among other things, he gave information about himself:

“From 1964 to 1968, I worked on the Minuteman ICBM and other missiles with classified information security clearance. I graduated from California Polytechnic University in 1976 with a bachelor's degree in aerospace engineering and a master's degree in mechanical engineering. I also have degrees in mathematics, physics and chemistry.



Уильям (Билл) Вуд в фильме Дэвида Перси «Что случилось на Луне?»

Until 1979, I worked at McDonnell-Douglas on a launch vehicle for the Delta satellites. There I worked alongside many of the same engineers who developed the third stage of the Saturn 5 lunar rocket. From 1977 to 1993, I worked on various and numerous US government classified and top secret missile programs.

I have published many classified and open-source technical papers on rocket and ramjet engines and have served as chairman of the American Society of Mechanical Engineers (ASME) jet propulsion technical committee. Since 1993 I have been working as a consultant for several non-governmental missile programs. "

In the opinion of the author of this article, the summary presented allows us to believe that in the person of B. Wood we have a very experienced and recognized American rocket specialist in our midst. This is particularly convincing by the

information "was the chairman of the ASME technical committee. The American Society of Mechanical Engineers is an authoritative social - scientific organization. And being the chairman of one of its committees is an obvious sign of recognition of the authority of BV among his colleagues.

PE №8.

Adams died in a unique, but already exhausted plane.

(The plane was in distress, but all the instruments said "Okay!")



To finish with the topic of "accidental" deaths of astronauts, we will break the order of consideration of the emergency. Consider state of emergency number 8. (And then we will return to emergency number 4, since purely civilians were killed by it).

“Moreover, there is no point in eliminating the unwanted along with the unique experimental aircraft,” wrote NASA lawyer Yu. Krasilnikov [4] . Obviously, he was referring to the pilot of the X-15 aircraft, astronaut M. Adams (Fig. 8).

Ill.8. Astronaut M. Adams in H-15 [4]

Adams died in the 191st X-15 flight. A total of X - 15 flew 199 flights. The X-15 program has exhausted itself [19] . So M. Adams died, albeit in a unique, but no longer very necessary for NASA aircraft, because by the time of its flight, the general program of flights on the X - 15 had been completed by 96% ($191/199 = 0.96$).

Remember how the connection with the dispatcher was broken in Apollo 1? Adams also had something similar, only he did not have time to understand it. *“All telemetry information was lost along with the plane. Even during the climb, the instruments were out of order and what the pilot saw on the indicators did not correspond to reality. When the rocket plane was already in distress, the pilot still received information about the normal operation of all systems ”*[20] .

So it is probably not worth excluding the Adams case "from consideration" only on the basis of the extraordinary flight characteristics of the X-15. And it is worth remembering once again that the instruments "let down" the astronauts C and Basset.

Another lawyer Yu. Krasilnikov believes that *"there are a lot of much simpler and more reliable ways to eliminate astronauts than a plane crash ..."*. Or maybe, as applied to Adams, a plane crash is just the most optimal way to deceive the public? After all, Adams "died in the line of duty."

However, this also applies to all astronauts who "accidentally" died in plane crashes. These are the mentioned Freeman, SI, Bassett, Rogers, Williams, Lawrence. American nemesis made an exception only for the astronaut Givens - he died in a car accident. But Nemesis also needs to sometimes diversify her methods.

PE №4.

Obstinate inspector

April 21 - 27, 1967 Thomas R. Baron actively criticizes Apollo at a meeting of two commissions - at the cosmodrome (21) and in the US Congress (27).



On April 28, Baron tragically dies along with his family.

Fig. 9. Apollo critic Thomas Ronald Baron is the Apollo quality and safety inspector.

Freeze frame from the video "Thomas Baron and the Astronauts Killed to Save the Apollo Program."

<https://youtu.be/ZfYBJFPuiwE>

"And it's absolutely stupid, instead of "dissenting", to remove those who are not involved: most of the victims had nothing to do with flights to the moon," writes lawyer Yu. Krasilnikov [4]. Of course, it is clear to everyone that if Grissom and his team climbed into the Apollo capsule, then they were "involved." Well, and if the astronaut is not assigned to a specific flight "to the moon", then he is "not involved"? Or, if it is not an astronaut at all who is dying, but an active critic of Apollo? Whereas? Get acquainted with the story of the death of more than once mentioned Inspector Thomas Baron [15]. He was not an astronaut, but, nevertheless, because of him there was a threat to disrupt all of NASA's "lunar" plans. The inspector began to openly and reasonably criticize Apollo at the end of 1966.

End of 1966. Baron's first report. Dismissal!

Here is what the English Wikipedia [21] writes about the inspector (translated by A. Bulatov) :

"Thomas Ronald Baron was a quality and safety inspector assigned to North American Aviation (NAA) when the company was the general contractor for the Apollo command module."

In the USSR, the so-called military representatives performed a similar function. For any malfunctions in the product, discovered after the acceptance, they were responsible, if not with their heads, then with their position - for sure! So the inspector was simply obliged to know thoroughly the device of the capsule. Further, we read in the same place :

"Baron has written two reports. The first 55-page report was presented to NASA officials in late 1966, revealing violations he observed while working at the spaceport . The manufacturer's managers decided that some of Baron's remarks were correct, but otherwise the report was unacceptable. After the report was leaked to the press, he was fired. Baron began to prepare a thorough report. After the Apollo 1 fire, he submitted this 500-page report to the Congressional committees investigating the incident . "

So, at the end of 1966, a very clear signal was sent to the inspector - "For criticizing Apollo, you are fired! Draw your own conclusions! " It is unlikely that he knew that instead of flying to the moon, a global deception was being prepared. Most likely, Baron was sincerely worried about the astronauts who would board such a ship. And in fact, he also "hung a lemon" on the Apollo. On April 21, 1967, armed with a second report, he again challenged NASA officials to an apparently unequal dispute over Apollo.

April 21-26, 1967 Baron's second report. Two high commissions.

Phone threats. Death.

The Inspector made a second presentation at two high commissions. The first (preliminary) one took place on April 21, 1967 at the V.I. Kennedy (Fig. 10, [22, 23]). The second (final) was held in Congress on April 27 at the House of Representatives subcommittee on control (over) NASA [13, 15] .

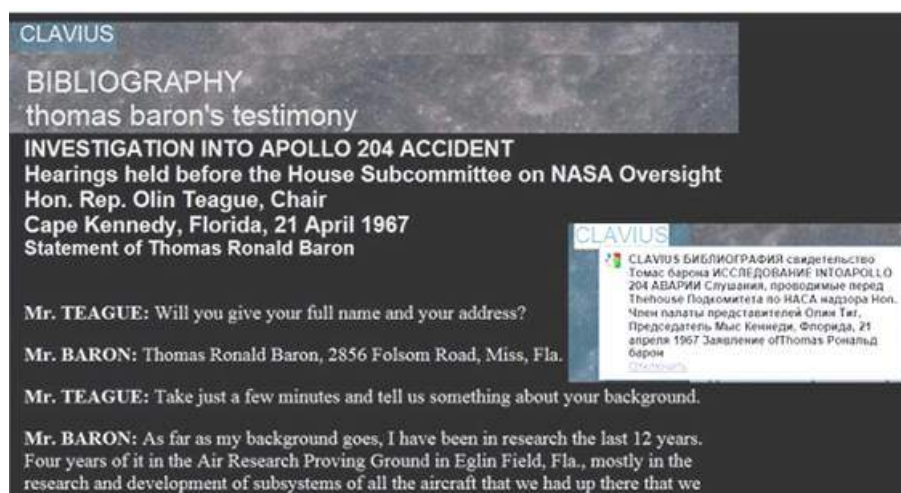


Fig. 10. Cover page of the minutes of T. Baron's preliminary hearings, Cape Kennedy, Florida, April 21, 1967.

<http://www.clavius.org/baron-test.html>

Inspector Baron has already been fired from his job for his truth-seeking. Toward the end of this story, T. Baron and his wife began to receive new warnings. Already anonymously and by phone.

*“Thomas Ronald Baron said before Congress that the deplorable state of the apparatus would have prevented it from reaching the moon . He submitted a 500-page report. **Having expressed his opinion, Baron turned into a living target ...***

Reporter: "Do you feel pressure from NASA?" Baron: “No! Although immediately after this incident, my wife and I received threatening calls , but now everything is quiet [15] . Baron calmed down, but in vain.

The 21st of April. First commission.

The inspector has seven days to live!

The first commission met at the cosmodrome under the chairmanship of Congressman Olin Tig.

O. Teague, first of all, asked T. Baron questions concerning his technical competence (this is reflected on the first page of the record of the hearing). The answers, judging by the protocol of 28 pages [22] , did not raise any objections. And here is the most interesting excerpt for us from T. Baron's answers (translated by A. Bulatov):

Teague: Mr. Baron, if the state of affairs is really as bad as you described it to the commission in your report, do you think we would have a chance to reach the moon? Do you think we would have had at least one successful flight?

Baron: Of course, sir.

Teague: Given the state of affairs you describe, do you think we could succeed on every flight?

Baron: No sir. No, I do not think so.

Teague: But have we had a lot of success?

Baron: Yes, sir, it was. But not on the Apollo program.

Thus, the Inspector's opinion of the Apollo was distinctly negative.

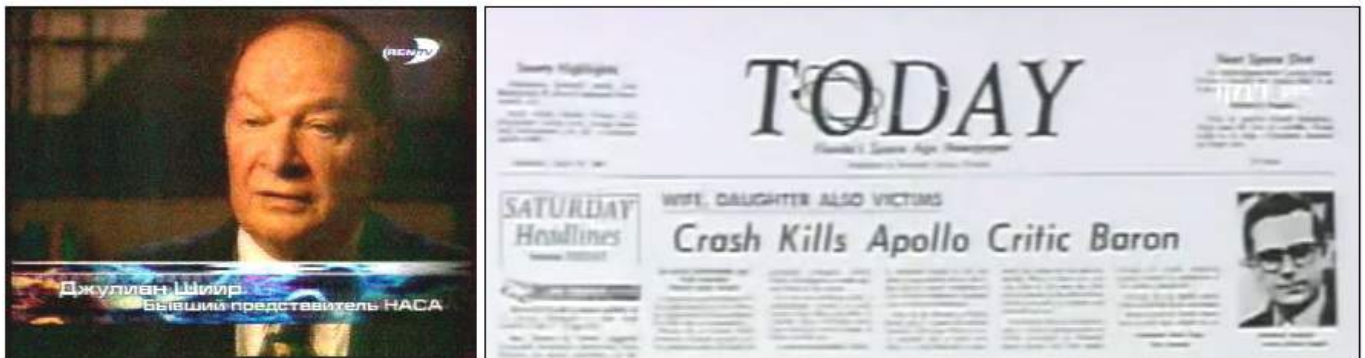
April 27. Second commission.

"Thomas Baron has been the target of violent attacks from NASA . "

"NASA feared that this would be the end of the whole project."

The inspector has one day left to live!

On Thursday, April 27, 1967 T. Baron reported already to the commission of the Congress [13, p. 105] . He again exposed the unsuitability of the Apollo. In an interview with the creators of the documentary [15] , then-NASA public relations officer D. Sheer (Fig. 11) stated *"NASA feared this would be the end of the entire project . "* As R. Rene writes, *" On April 27, 1967, Thomas Baron became the object of violent attacks from NASA."*



Ill.11

a) Representative of NASA D. Sheer says to the authors of the film [15] : *"NASA feared that this would be the end of the whole project . "*

b) Project Apollo will live, critic Baron will not! The newspaper " TODAY . Florida ' s Space of Age Newspaper "from April 29, 1967 announces the death of " *criticism "Apollo" Baron, his wife and daughter, "* [15] .

April 28. Death of Baron and his family

The story soon came to an end. Only not for the Apollo program, but for its critic. ***" The next evening Baron, his wife and stepdaughter were found dead. The***

women shared the fate of those who posed a threat of exposure to NASA. One of the types of "accidents" for those who, for some reason, have become inconvenient for the state, is the gambit with old railroad crossings in Florida. This state has a huge number of semi-abandoned village streets that intersect the existing railroad tracks. And we are still being told about the horrors of the KGB! " [13, p. 105.] .

Fig. 11 shows a page of the newspaper " TODAY . Florida ' s Space of Age Newspaper "sold out" Crash kills criticism of "Apollo" Baron ". Let us emphasize that the newspaper put in the headline not "Inspector" Baron, but "Criticism of Apollo" "Baron! That is, the newspaper perfectly understands what fate has punished Thomas Baron for.

The date of issue of the newspaper could not be read from the screen [15] . But on the left you can see the full house "Saturday Headlines". And Saturday was April 29, 1967 [23] . Considering the efficiency of American newspapers, we can confidently assume that the death of Baron and his family took place on April 28. That is, Baron died, as R. Rene writes, "the next evening" after his report to Congress.

And what were the two women guilty of? They didn't criticize Apollo! Presumably, my wife was "guilty" by knowing about anonymous threats over the phone ("my wife and I received threatening calls") . And with a high probability, the adult daughter was also aware of these calls. And how to organize the "accidental" and simultaneous death of all three, there are appropriate specialists for this.

We have detailed the circumstances and causes of death of two prominent critics of Apollo - astronaut Grissom and Inspector Baron. And whether the astronauts Givens, Rogers, Williams were critics of Apollo. Adams and Lawrence, who also died in accidents in the second half of 1967? And were those who died earlier critics of Gemini? There is no data on this.

Perhaps because these victims were not as widely known as V. Grissom and T. Baron. But, it is reasonable to assume that not only active critics were subject to liquidation, but also those who at least somehow shared their opinion and could contribute to its dissemination. What kind of accidents can we talk about if in six months, starting from June 6, 1967, 5 astronauts proceeded to the grave? And everything is in the prime of life and everything is the fault of "accidents"! Almost every month, then - a dead astronaut!

When the scythe of "accidents" took away all the sacrifices it needed, the critics quieted down, and the accidents, as it were, stopped by themselves. NASA was now ready to begin reporting on glorious victories on the Moon.

Links.

Internet links are checked and confirmed as of 29.2.2016

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Film information - <http://www.imdb.com/title/tt0277642/> and http://www.imdb.com/title/tt0277642/companycredits?ref_=ttrel_sa_4 ;

For the domestic audience, the author of the article recommends Russian-language copies of this film, which differ only in names, and in translation from English are very accurate. It:

a) <http://video.yandex.ru/users/almonah3/view/205> - film (duration - 44.27)
English text with simultaneous translation.

b) "The Incredible Adventures of Americans on the Moon." Completely Russian copy of the film (duration - 42.17). <http://www.youtube.com/watch?v=FmNGjLuf3eQ>

The author also recommends to the reader a 4-minute clip - a short segment from the specified film. It is dedicated exclusively to the death of astronaut V. Grissom with his comrades and inspector T. Baron with his family members:

<http://yandex.ru/video/search?text=%D0%A2%D0%BE%D0%BC%D0%B0%D1%81%D0%20%D0%91%D1%8D%D1%80%D0%BE%D0%BD&path=wizard&filmId=4Ijt6osoUXI&fiw=0.00346593> <https://youtu.be/ZfYBJFPuiwE>

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THE X-15 PROGRAM IN RETROSPECT

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23. **we** use a very convenient Perpetual Calendar to help with accurate dating. http://www.liveastrology.org/vechny_kalendar.htm . April 21, 1967 - Friday, 22 - Sat, 23 - Sun, 24 - Mon, 25 - Tue, 26 - Wed, 27 - Thu, Baron spoke to the Congressional committee and became the target of violent attacks from NASA. The next evening (28 - Fri) was killed; 29 - Sat. the announcement of his death on the Saturday issue of the said newspaper

At the start

21-26 minutes

Going on a long journey. CHAPTER 3

How is your health?

The sick in the Apollo cabins

*“The selection of candidates for the astronaut group was very harsh in those years. Only a qualified test pilot with a flight time of at least 1500 hours, **no older than 40 years old**, and **with absolute health** can become a candidate. Initially, 508 people were selected. Analyzes, checks, psychological tests, finally, just the exorbitant severity of all kinds of tests squeezed this group like shagreen skin. From this group, 253 people were selected as "candidates to go along the lunar road", and from this group of "lucky people" for the flight to the moon were selected by the piece " [1], [2]. 11 crews took part in the Apollo flights. Studying their state of health reveals interesting facts.*

A-7: the first ailments



The A-7 flight was the first manned flight under the Apollo program. During the flight, Astronaut Shirra (Fig. 1) developed an unpleasant cold.

Fig. 1. W. Shirra took pills to clear the airways and aspirin every 8 hours during the flight.

“The runny nose made Shirra take a pill to clear the airways and an aspirin every 8 hours. Twice Shirra canceled TV shows from the ship. ... I have a cold ... - he grumpily radioed to Houston " [1]. Sick aboard a spaceship? Such a possibility cannot be completely ruled out. He caught a cold, say, just before the start, and in space he got sick.



However, another member of the A-7 crew, astronaut W. Cunningham, had health problems during preparations for the flights. Walter, *"having already become an astronaut, seriously injured his cervical vertebra while jumping from a springboard and could remain crippled. But he not only recovered, but was allowed to fly. Doctors explained this by his amazing persistence and perseverance"* [1].

Fig. 2. W. Cunningham was admitted to flight with a healed cervical vertebra injury

This story characterizes Cunningham from the best side, but what were the doctors guided by, leaving in the astronaut detachment a person who had suffered a serious injury? Was there not an equally persistent and stubborn astronaut among 253 people, but without a cervical vertebra injury?

A-8: On Earth, legs fail and liver is naughty, in space - diseases



The A-8 flight was a truly historic flight under the Apollo program, but it was also accompanied by interesting medical events both on Earth and in space.

"Initially, Bormann, Collins, Anders were planned for flying around the moon. But shortly before the start, Collins had a big trouble: somewhere on his neck a nerve was pinched, and because of this, his legs sometimes suddenly refused - Collins fell. The astronaut was faced with a dilemma: either a long treatment, or a very serious but quick operation. Collins chose surgery. Everything went well, but he was late for the A-8. He walked completely dead, and the white bandage around his neck made him feel sorry for him even more" [1].

Fig. 3. M. Collins - removed from flight A-8 for urgent operation

Instead of Collins, James Lovell flew - an astronaut, also interesting from a medical point of view. Here is what Y. Golovanov writes about him [1]: *"I went to the astronauts (Lovell) without hesitation, although he had to pacify his sick liver for a long time."*

So, if an astronaut with an injured cervical vertebra (Cunningham) flew on a near-earth flight A-7, then an astronaut with a "pacified sick liver" went to the first manned flight to the Moon (A-8).



Fig. 4. D. Lovell - an astronaut with a "pacified sick liver"



But the "medical history" associated with the flight of the A-8 did not end there. During the flight, the entire crew of the A-8 ship (Anders, Lovell, Bormann) fell ill with the flu, and fell ill at the most inopportune time - during the flight to and around the moon. During the flight, *Bormann suffered a stomach flu. He started vomiting, had a headache, and an upset stomach. His comrades also felt unwell ... and had to resort to antibiotics ...* "[1].

Fig. 5. The entire crew of the A-8 ship unexpectedly fell ill during the flight to and around the moon

"Pacified sick liver", the commander's illness in flight, supplemented by the general malaise of the crew - isn't it too much? It turns out that the NASA doctors and the selection for the astronaut detachment were not strict, and "missed" the prelaunch control, letting the sick crew fly.

A-9: a "treated" crew is sent into space and continues to be ill there

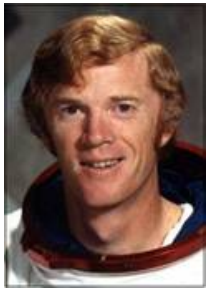


Until now, medical problems overtook astronauts either on Earth, or, as it were, unexpectedly, in space. The flight of the A-9 is an interesting exception in this regard. Here, sickness in space was almost planned. Here is what Y. Golovanov writes about the start of A-9 [1]:

"The start was scheduled for February 28, but literally the day before, the entire crew fell ill with a mild flu, the outbreak of which, fortunately, was quickly extinguished. Fortunately - for the crew and for the leaders of NASA, because the

rocket and the spacecraft stood, as they say, in pairs, and each day of the reprieve was worth 200 thousand dollars. On March 3, Apollo 9 ... was launched into orbit. "

Fig. 6. Hastily treated A-9 crew goes to the start



It is known that urgent "repayment" of influenza is a bad guarantee of health. And so it happened.

"As a sin, on the eve of the experiment Schweikart, who was supposed to carry it out, fell ill. He twice vomited in the cockpit, had a headache, lost his appetite, ... McDivitt (the ship's commander) suggested canceling Schweikart's transition from ship to ship, and Houston agreed with him. The next day, Schweickart felt better, and he was allowed to go into outer space from the lunar cabin, still docked to the ship. ... "[1].

Fig. 7. R. Schweickart: vomited twice in the cockpit, had a headache, lost appetite

A-11: operated Collins flies to the moon



If you decided that Collins had to leave the squad of astronauts after an attack of illness and the subsequent serious operation, then you are mistaken. Just 7 months after the operation, Collins embarks on the super important flight A-11: according to NASA, this will be the first landing on the moon (Figure 8).

Fig . 8 . Astronaut M. Collins was sent on a flight to the moon about six months after undergoing a complex operation

What if Collins had a relapse during the flight? Wouldn't it be more logical to send another astronaut instead of Collins? After all, there were also unoperated people among the American astronauts?



A-12: keeping the tradition - space for the sick

Colds in Apollo seem to have become a tradition. Astronaut A-12 Alan Bean did not violate it: he had a cold, according to NASA, occurred in circumlunar orbit [3] .

Fig. 9. Astronaut A. Bean caught a cold in Apollo - a common occurrence

A-14: age is not a hindrance



The commander of the A-14 ship, Alan Shepard, *“was known all over America. 25 days after Gagarin's flight, he made his first fifteen-minute suborbital flight in the Mercury capsule. The only veteran of the first group of astronauts, he remained in the ranks when the flights to the moon began. Space is for real guys, and I want to be with them, - said Alan. He really wanted to visit the moon, and neither serious ear disease nor age could stop him: he turned 47 - he was the oldest of the American astronauts ”* [1] .

A touching story, but somehow fits in with the requirement of absolute health? And the age seems to be inappropriate: NASA itself has established that *“a candidate (astronaut) can be a test pilot no older than 40 years .”*

Fig. 10. Astronaut A. Shepard could not be stopped neither by a serious ear disease, nor by age (47 years)

For the sake of justice, it should be noted that two years before 47-year-old A. Shepard went to the moon, in October 1968, 47-year-old Soviet cosmonaut G. Beregovoy flew into space. But he flew not to the moon, but in a normal near-earth flight.

If something serious happened to the astronauts in near-earth orbit and their independent return to Earth became impossible, then organizing a rescue expedition is an extremely difficult, but still possible matter.

To organize a rescue expedition to the moon is practically unthinkable neither now, nor, even more so, then . *“We must never forget that this (flight to the moon -*

AP) is an extremely risky task," the then director of NASA T. Payne explained to reporters for the hundredth time [1]. The physical characteristics of an astronaut, his health, reaction time to unforeseen circumstances are an important component of the safety of space flight. And no matter how good a 47-year-old may feel, he is inferior to a 30-35-year-old young big man. So sending a 47-year-old to the moon is a risky business. Why isn't NASA afraid of this risk?

So, in six of the eleven Apollo flights (according to the lunar program), an unfavorable situation was noted with the health of individual astronauts and even the entire crew as a whole (A-8, A-9). Moreover, these same astronauts had previously gone through the school of near-earth flights in the cramped Gemini ships and there they did not get sick [4].

Как можно понять все эти странности, вдруг проявившиеся именно в полётах «Аполлонов»? Конечно, отдельные случаи заболевания нельзя исключить, но в такую фатальную подверженность астронавтам болезням в космосе поверить трудно. Не используется ли здесь «болезнь», как удобный предлог для того, чтобы поменьше общаться с общественностью, с прессой и т.п., поменьше рассказывать о том, что в действительности происходит в полёте очередного «Аполлона». Но такой предлог нужен только в том случае, если истинная программа полётов «Аполлонов» существенно отличается от официально объявленной. А в этом случае нужны, прежде всего, надёжные люди и даже требования абсолютного здоровья отходят на второй план.

If this is so, then one can understand why stand-ins were not in demand even when all three members of the A-9 crew fell ill before the start. Apparently, only the members of the main crew knew the true content of the mission. And so for two days they kept the rocket "under steam", urgently "extinguished" the flu, but they did not let out the backup. And only when the loss of health by a member of the main crew exceeded all reasonable limits, as in the case of Collins with his epilepsy, the sick was replaced. Of course, these are only the author's assumptions, but nevertheless, such frequent medical histories contribute to such doubts.

We've talked enough about the health of astronauts. But astronauts are only the top of a huge pyramid called the country's space sector.

How is the US space sector health?

The plan of landing on the moon has been ripening in the highest circles of the American administration for a long time. Back in 1959, the authors of the secret Pentagon report wrote: *"For political and psychological reasons, it would be a disaster to be not the first on the moon ... - this is a refusal of the opportunity to inflict defeat on the USSR"* [1].

The then head of the Department of Guided Missiles and Special Weapons of the US Air Force, speaking in Congress, said *"I hate the idea that the Russians will be the first on the moon. The state that will be there first will have a decisive advantage over any potential enemy"* [5 , from. 160].

Exactly one year before Gagarin's flight, the US Air Force's ballistic missile control drew **up a plan [5] that provided for**

- a) automatic delivery of lunar soil (1964);**
- b) the landing of astronauts on the moon (1967) and**
- c) the creation of a permanent lunar base (1969).**

Thus, **reaching the moon before the USSR could do it, the Americans considered the most important strategic task.** With this in mind, it will be interesting to get acquainted with the following information.

NASA budget cuts on the eve of flights to the moon

For four years (1963 - 1966) NASA's budget was kept at approximately the same level, and three years before the announced landing, it began to decline. *"Having reached its peak in 1966 - 5.9 billion dollars, the budget of NASA the next year decreased to 4.7 billion dollars and rolled down like an avalanche"* [1] . NASA's website [6] gives slightly different figures for funding cuts, but essentially says the same thing: NASA's budget decreased from 4.5 billion in 1966 to 4.2 billion in 1967 and 3.2 billion in 1969: a reduction of almost 1 , 5 times. This site also contains detailed information specifically on the Apollo program. In particular, it is reported that in 1968 funding for the Apollo program itself was cut by 12%. Let's remind that budget financing is planned in advance, as a rule, in the previous calendar year. This means that the decision to cut funding for Apollo in 1968 was most likely made in 1967. It looks very strange, because in 1967 there was still more than a year left before the first flight to the Moon (A-8). The moon race is in full swing, who will win is far from obvious, and the United States is cutting funding for the Apollo program ?!

Funding cuts almost always lead to a reduction in the number of employees, and it was not long in coming.

Reduction of work on lunar technology

We already know from Section 1 that in 1968 at Huntsville, the center for the development of the Saturn 5 lunar rocket, 700 employees received layoffs. And this is against the background of the failed final unmanned test of the "lunar" Saturn-5 rocket on April 4, 1968. But the process did not end with this reduction.

"There are a few watchmen left at the \$ 20 million Everglades missile test site. Another test site, the construction of which cost NASA \$ 400 million, switched to a military theme. 400 people lost their jobs at Thompson-Ramo-Wooldridge Systems. The main contractor for the spacecraft, the giant North American Rockwell plant in Downey, California, has cut 3,000 people and said the Apollo project will decline even faster. By 1968, the Michud plant was ordered to reduce the production of the first stages of the Saturn-5 rocket from six to two per year. 1,000 people were fired by the Hughes Aircraft Company, 15,000 - by Aerojet - General. [1].

In total, about 24,000 people were dismissed on this list. But that's not all. On May 17, 1969, the well-known business magazine " Business Week " wrote: *"In the midst of work in 1966 about 300 thousand people took part in the works. Today there are only 218,500 people "* [5] . Thus, the **overall reduction in the number of employees was about 80,000** . Let us compare this information with how the work on the creation of lunar technology was going on at this very time.

Reduction of works on the Saturn-5 rocket

"The Michud plant was ordered by 1968...." From these words it is clear that the order to reduce the production of missiles was issued no later than the end of 1967. But just now, on November 9, 1967, according to a NASA report, the first unmanned test of Saturn 5 was successfully completed. The second test, scheduled for April 1968, has yet to take place. Isn't it too early to cut production?

"In 1968 at Huntsville, the center for the development of the Saturn 5 lunar rocket, 700 employees received layoffs." But, over the past few months since November 1967, the situation has changed dramatically. On April 4, 1968, new unmanned tests of Saturn-5 ended in failure. This is not the time to lay off staff at the rocket development center. And yet, employees are "temporarily laid off," and new unmanned tests are no longer assigned. How to understand this?

Reduction of work on the lunar module

"In early 1969 ... the lunar cabin is being phased out." For what reason? Have you already made enough lunar cabins for all the upcoming lunar flights? Well, quite possible. But, after all, they have practically not been tested yet. By this time, only one and, moreover, not particularly successful tests took place. Ya. Golovanov writes about them [1] : *"When on January 22, 1968 the lunar module was launched on the Saturn-1 rocket and its tests began in orbit, new complications arose: 39. Repeated switching on did not give anything "*

In addition, this test flight was unmanned, therefore, the life support systems of the lunar module remained untested in real space. And manned flights with the module are still ahead - in March and May 1969 (see section 7). So what are the

reasons to hope so firmly for the already made lunar modules that we can start removing them from production?

Reduction of work on the Apollo spacecraft

"The main contractor for the spacecraft, the giant North American Rockwell plant in Downey, California, has cut 3,000 and said the Apollo project will decline even faster."

That is, the Apollo spacecraft also fell under the cuts even before the start of the "lunar" flights. But successful developments are not removed from production. How not to recall here the careless statement of Inspector Baron, that *"the deplorable state of the apparatus would not allow reaching the Moon"*? What would he have been able to tell about this if he had not been "suddenly" run over by a train? The Apollo is a very cramped ship. Hishabitable volume - only 6 cubic meters. m, one and a half times less than the "Union". Apollo did not have, like the Soyuz, an airlock for the astronauts to go out into outer space. To leave the Apollo into space, one astronaut, the rest of the crew had to put on spacesuits, because the cockpit hatch opened directly into the void of space. And the pure oxygen that the astronauts breathed? It's like living under constant stress. One spark and follow White, Grissom and Chaffee.

It is not surprising that Apollo is now forgotten, unlike the safe and reliable Soyuz. But how could one decide to fly to the Moon on ships that were not useful even near the Earth? Doesn't the decision to curtail the work on the Apollo spacecraft indicate that its unsuitability for lunar flights became clear to the leaders of NASA even then?

1966 - a change in strategy for the moon race?

It can be assumed that, starting from about 1966, it became clear to the highest circles of the United States and the leadership of NASA that the state of affairs in the Apollo program does not give grounds for optimism. A year earlier (fiscal 1966 is planned for 1965), the belief in success still existed, and that is why 1966 was the last year when the lunar program was funded "to the maximum". And it was about this time that "Business Week" wrote: "In the midst of work in 1966 ...".

Sometimes the idea is expressed that the decrease in funding was due to the fact that the main work backlog was completed. But in 1966, more than two years before the first lunar landing was announced, it was far from clear that the United States would be the winner in the lunar race. Recalling that time, columnist Howard Benedict wrote in 1974:

Apollo was a truly emergency program, carried out almost with the haste of war. Center them. Kennedy and launch sites really resembled a military camp

before the decisive battle” [1] .

In 1966, in May, the second stage of the Saturn-5 rocket " *exploded and exploded into pieces*" at the test site in St. Louis during tests [1]. Probably, there were some failures that remained unknown. And it was not for nothing that at about the same time the press reported that "*the mood prevailing in Congress can best be expressed in the words*" *growing fatigue.* " [1] True, at the very end of 1967, NASA announced the first and successful test of a lunar rocket. But only six months later, on April 4, 1968, her second test ended in failure. It would seem that the work ahead is "up to her throat".

However, "*in August 1968, NASA passed two decrees on the reduction of appropriations within one week*" [1] . As far as the author knows from his own experience and from the experience of colleagues, when something does not work out, they ask for additional money to speed up the work, and do not refuse it. It all sounds strange to say the least. Does this mean that in 1966 NASA thought about some other way to achieve victory in the lunar race?

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Did man fly around the moon

13-16 minutes

Going on a long journey. Chapter 4

What machines could do

“NASA understood perfectly well that the images are the most important documentary material” - this is how the defenders Yu. Krasilnikov and V. Yatskin write **[1, 2]**. In the following sections, we will see many images that, according to NASA, were taken by astronauts en route to the Moon, in circumlunar orbit and on the Moon itself **[3]**. To critically evaluate them, you need to know what automatic spacecraft (in short - "automata") were able to do, which by that time were launched into high near-earth orbits, mastered the way to the Moon, circled around it and even landed on it **[4-12]** ... The time factor plays a very important role in this analysis, so we recall that the first flight of the "lunar" Apollo (A-8) took place in December 1968.



Images of the distant Earth taken with automatic devices (since 1966)

The altitude of the orbits of manned near-earth spacecraft is about 300-400 km, which does not exceed 1/30 of the Earth's diameter. A relatively small part of the globe is visible from this height (Fig. 1). If the Earth is visible in "full format", then it is obvious that it was taken from a distance (Fig. 2).

Fig. 1. American spacecraft Gemini in low-earth orbit (300 km).

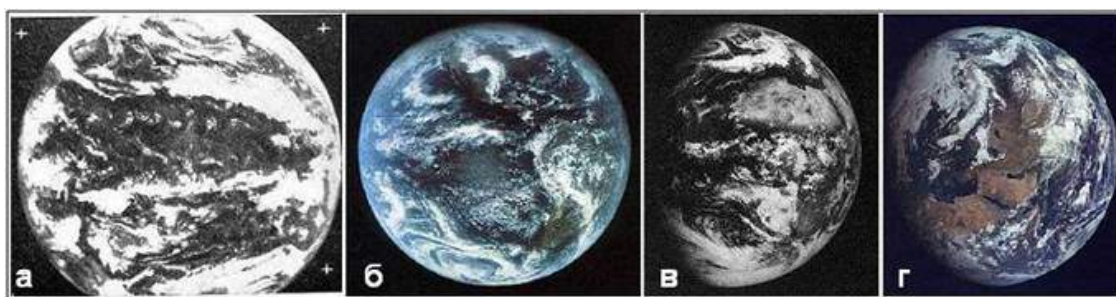


Fig. 2. Views of the distant Earth, captured by "automatic machines" before and during the Apollo flights:

a, б) American satellites ATS-1 and ATS-3 (December 1966 and January 1968)

c, d) Soviet automatic ships "Zond-5" and "Zond-7" (September 1968 and August 1969)

NASA has provided on behalf of the astronauts many images of the Earth taken from afar [3]. Do such images prove that the astronauts really flew away from the Earth? No, because thanks to high-altitude satellites, NASA had such images a year or two before the Apollo flights (Fig. 3a, b). The USSR also demonstrated similar capabilities, with the difference that in this case, images of the distant Earth were obtained both with the help of high-altitude satellites "Molniya" and with the help of automatic spacecraft "Zond" that flew to the Moon and back (Fig. 3c, d). This is what an authoritative scientific journal wrote about this [4].

"The first global television images of the Earth from heights of 18000-29000 km were obtained from the artificial satellite Molniya-1 on May 30, June 9 and November 21-23, 1966. The first color television images of the Earth from space were obtained. On December 9, 1966, a global television image of the Earth was also received from the American satellite ATS-1. It was located at an altitude of 35800 km. On November 5, 1967, a global color television image was obtained from the ATS-3 satellite. The original global photographs of the globe were delivered to Earth by the automated probe Zond-5 in September 1968. Very interesting global color photographs of the world brought to Earth "Zond-7" in the August 1968 " .

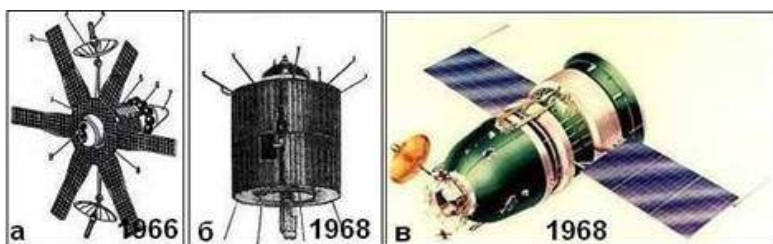
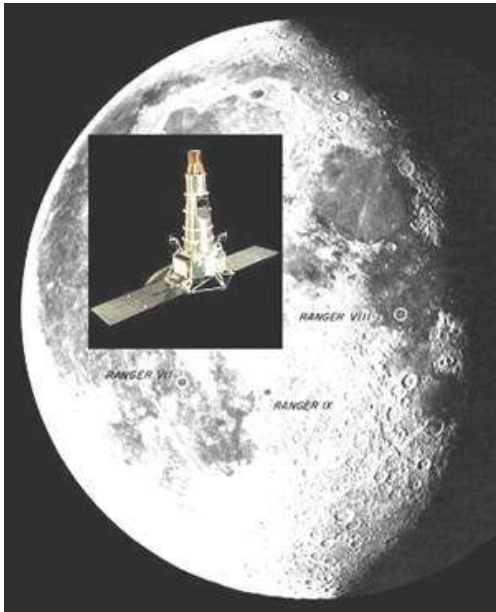


Fig. 3. Automatic spacecraft, with the help of which global images of the Earth were obtained:

a) Soviet satellite "Molniya"; **b)** American satellite ATS-3; **c)** Soviet lunar ship "Probe"

Thus, by the time of the flight of the "lunar" "Apollo", both in the USSR and in the USA, global, that is, covering the entire visible earth's disk, images of the Earth had become quite commonplace.

Images of the nearby lunar surface obtained with automatic devices (since 1964)



Images of the nearby Moon and its individual sections appeared at NASA thanks to automatic devices for four whole years before the flights of the "lunar" "Apollo". In 1964-1968. NASA (if we count only successful attempts) sent a total of 13 light robotic vehicles to the Moon and around the Moon [**5,8-12**]. Moreover, although the USSR was each time ahead of the United States in terms of the time of the first launch of such devices, the program for photographing the moon carried out by American devices was much more extensive than the Soviet one. The main contribution to photographing the lunar surface was made by the Ranger and Lunar Orbiter (Orbiter for short) satellites.

Rangers

The Soviet "Luna-2" hit the moon in 1959. After 5 years, in 1964-1965 . Three American vehicles reached the moon: "Rangers" Nos. 7,8 and 9 (Fig. 4). "Rangers", falling on the moon, transmitted to Earth images of the approaching lunar surface.

Fig. 4. Places of the fall on the moon "Rangers" - 7, 8 and 9

Each "Ranger" had six different types of television cameras [10] . The highest quality and widest image was provided by the TV camera "A". Fig. 5 shows images of the lunar surface # 20 and # 50, transmitted by the Ranger-9 camera "A", indicating the shooting time, distance to the lunar surface at the time of shooting and the linear size of the surveyed area [10].

It is useful to track the rate of transmission of television images [10]. The first image from Ranger 9 was transmitted 20 minutes before it hit the lunar surface. After 87 seconds, a second frame followed. Then the gaps between adjacent frames began to shrink. This is understandable: the closer to the surface, the more interesting the pictures. After the 21st frame, this interval decreased to 5 seconds, but after that it did not decrease anymore. It can be assumed that the interval of *5 seconds per 1 frame* was the minimum possible, provided that images were transmitted with satisfactory quality.

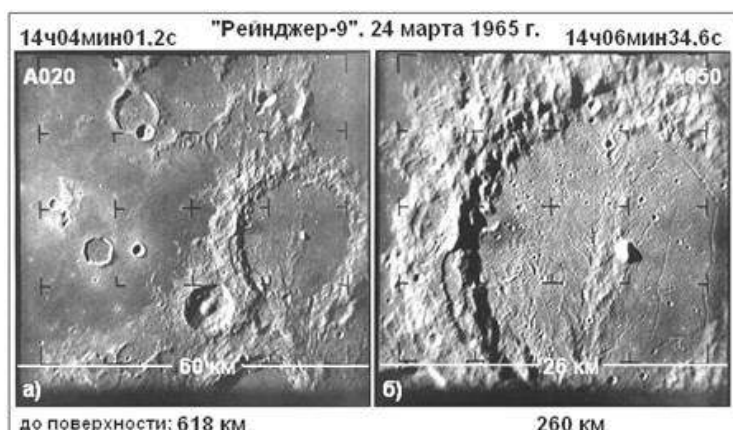
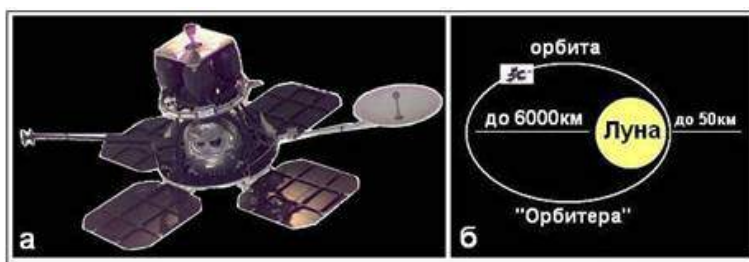


Fig. 5. Images No. 20 and No. 50, transmitted by TV camera "A" of "Rager-9" at distances to the lunar surface of 618 km **(a)** and 260 km **(b)** ,

In just 20 minutes of the fall of the device, camera "A" transmitted 70 images to the Earth. These images were watched live by millions of American television viewers. [10]

"Orbiters"



The Rangers transmitted several hundred images of the approaching lunar surface to Earth. They showed in general the same lunar terrain, since they fell on the moon almost vertically. For mapping the entire surface of the moon, the Americans in 1966-1967 . launched 5 circumlunar satellites of the "Orbiter" type (Fig. 6).

Fig. 6. Satellite "Orbiter" **(a)** and its approximate orbit **(b)**

The "Orbiters" circled the Moon in highly elongated elliptical orbits (ill. 6b). The lowest descended to the lunar surface "Orbiters-1, 2 and 3" - up to 50 km . The highest climbed "Orbiters - 4 and 5" (more than 6000 km). Therefore, the "Orbiters" filmed large fragments of the lunar globe (Fig. 7a), and large objects of the terrain (Fig. 7 b), and very close parts of the lunar surface (Fig. 7c). And in

August 1966, the American lunar satellite "Orbiter - 1" showed for the first time what the Earth looks like against the background of the lunar horizon (Fig. 8).

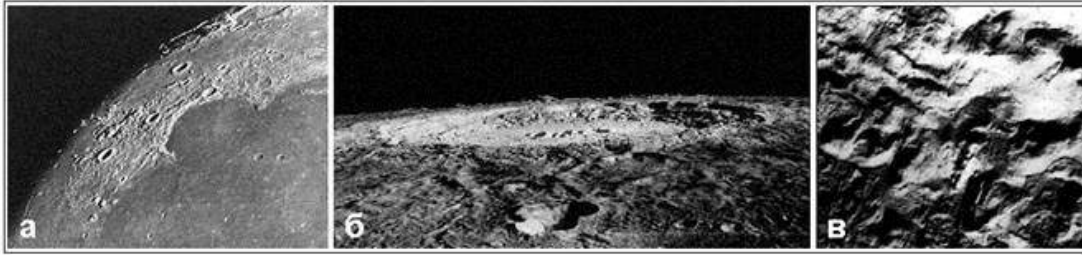


Fig. 7. Orbiters' images: **a)** a view of a part of the lunar globe, **b)** Copernicus crater with a diameter of about 100 km, **c)** a small area in the area of Tycho crater, shot with high resolution

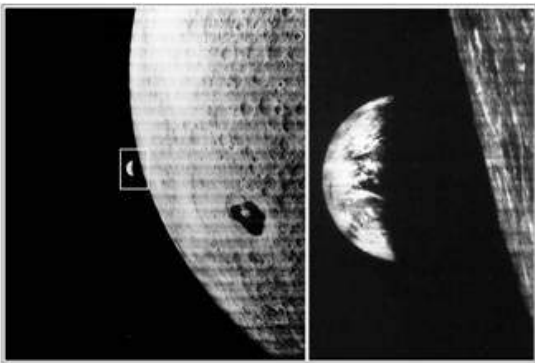


Fig. 8 . The first television image of the Earth against the background of the lunar horizon (1966, "Orbiter - 1")

“Unlike the Rangers falling like meteors, the Orbiters worked in a circumlunar orbit for about 1 year and could not be in a hurry. But from the "Orbiters" was required the highest quality of the transmitted image, because they were "cartographers".

For this, the so-called photo-television technique was used, the essence of which we need to know.

In this technique, the image is first photographed. Then the film is developed and viewed, read out using a photocell. And already the signals from the photocell through the antenna of the "Orbiter" "slowly" are transmitted to the Earth. The quality of the received image is much better than with live TV, but the whole procedure is time-consuming. As a result, if the "Ranger" (direct TV) managed to transmit several hundred images in 20 minutes of a fall, then the Orbiters took about two weeks to transmit about the same number of images.

Many of the Orbiters' images show longitudinal stripes (Figure 8). These are traces of the reader's work. But these stripes are not present in all photographs. For example, in the images in Fig. 7, the stripes are almost invisible. Consequently, the Americans, when they considered it necessary, could process the images from the Orbiters in such a way that they could well be passed off as ordinary images that were obtained without using the reading procedure. That is, such pictures that

were taken by a person who found himself in a circumlunar orbit and then delivered them to Earth.

Lunar Probes

Concluding the story about the successes of the "lunar automata", one cannot fail to mention the corresponding Soviet achievements. Soviet circumlunar satellites (Luna-12 and Luna-19) also transmitted interesting images of the lunar surface to Earth [7]. But especially beautiful pictures were transmitted by the "Probes" (Fig. 9, 10). It was this kind of images that NASA later presented as illustrative evidence of the flight of astronauts to the Moon and the Moon. The well-known Soyuz spacecraft was created specifically for the task of a manned flight around the Moon [13-17]. The USSR was testing the then completely new "Soyuz" in an unmanned automatic version called "Probe". "Probes" were launched to the Moon, flew around it without entering a lunar orbit and returned to Earth [5].

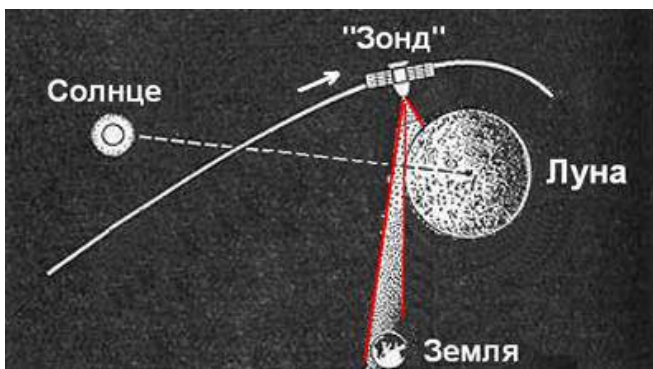


Fig. 9. "Probes" - automatic ships that flew

around and photographed the Moon;

red lines show the sector for photographing the Earth's setting beyond the lunar horizon

In November 1968, Zond-6, orbiting the Moon, took a picture of the Earth's setting behind the lunar horizon (Fig. 10a). In August 1969, a similar, but color photograph was taken by Zond-7 (ill. 10b). In October 1970, Probe-8 circled the moon. He rendered simple black-and-white, but surprisingly clear images of the Earth's setting over the lunar horizon (Figure 10c).

A few words about how the images taken by the Probes ended up on Earth in the hands of researchers. If the "Rangers" and "Orbiters" broadcast their images on the TV channel, then in the case of the "Probes" the Soviet Union, having overtaken the United States, was able for the first time to solve the problem of returning spacecraft to Earth with a second space velocity (11 km / s). Therefore, the film filmed by the "Probes" returned to the Earth with them.

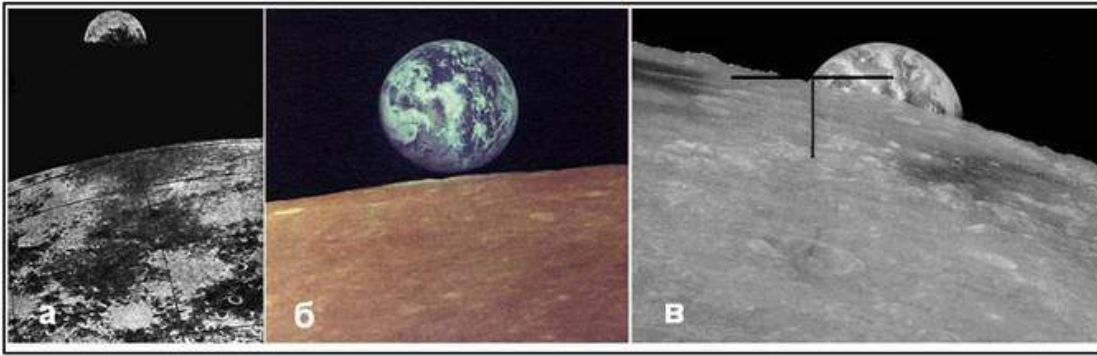


Fig. 10. Earthsets behind the Moon, filmed by: "Zond-6" **(a)**, "Zond-7" **(b)** and "Zond-8" **(c)** in 1968-1970.

Astronauts had to demonstrate what automata could not do

So, by the time the "lunar" "Apollo" flights began (1968), the automatic "Rangers" and "Orbiters" "accumulated" for NASA an extensive archive of images of the distant Earth and the nearby Moon (only announced about 3000 images). With so many images, nothing prevented NASA from leaving some of them unpublished in order to then present them on behalf of the astronauts.

But "Rangers" and "Orbiters" did not broadcast anything from the Moon that looked like a continuous TV movie. Apparently, they could not do this, since their image transfer rate was insufficient for this.

A whole 40 years have passed since the flights of the "Rangers" and "Orbiters", and already in our time, in October 2007, the Japanese automatic satellite "Kaguya", equipped with the latest television equipment, was launched into orbit around the Moon **[18]**. In November of the same year, Kaguya broadcast from a circumlunar orbit **[18, 19]** two exciting 4-minute television films with views of the Earth's rising over the Moon and the Earth's setting beyond the lunar horizon (Fig. 11). It is useful, however, to note that, for completely objective reasons, the quality (resolution) of the image transmitted by the Kaguya television cameras is much worse than the quality of real photographs of the Earth's approaches, delivered 40 years ago by the Probes. To verify this, look at the two fragments depicting the Earth (Fig. 12).

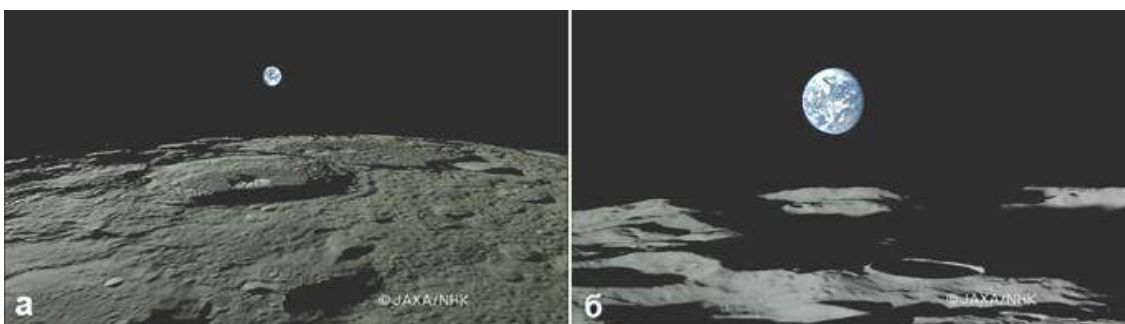


Fig. 11. Stills from continuous TV movies betrayed by the lunar satellite Kaguya (2007):

a) the rise of the Earth; b) approach of the Earth



The first fragment (ill. 12a) is taken from a photograph (ill. 10a) taken by "Zond-7". The second fragment (Fig. 12b) is taken from the TV frame (Fig. 11b), transmitted from the "Kaguya". As you can see, the image from the Probe-7 is sharper than the image from the Kaguya. That is, although the delivery of photographic film taken in space to Earth is a very difficult matter, it pays off with high image quality.

Fig. 12. Comparison of images of the Earth obtained

- a)** direct photography with the delivery of the film to the Earth ("Zond-7", 1969);
- b)** TV show from the Moon - ("Kaguya", 2007).

NASA reported that its astronauts nine times circling around the moon, and they had a movie camera [20] . But then shooting a high-quality film about the flight over the Moon would have been simply a solvable task for them. I put a movie camera to the window, and NASA has something that the automatic devices of that time had not shown even close - a wonderful film about the flight over the Moon.

Therefore, a continuous film about the flight over the Moon could serve as a very weighty proof of the fact of the flight to the Moon of people, and not of automata.

"Kaguya" vividly showed the approximate plot of such a film, and the photographs from "Zonda-7" demonstrated the quality that should be expected from it.

4

25-31 minutes

to the moon. Chapter 5

The first three steps

Figure 1 shows a fragment of a NASA diagram showing the Apollo flight path to the Moon [1]. After launching from the cosmodrome, the rocket allegedly launched the spacecraft into a near-earth orbit with an altitude of about 200 km (stage 1). After two revolutions in this orbit, the third stage was switched on again (stage 2) and put the spacecraft on the track to the moon (stage 3).

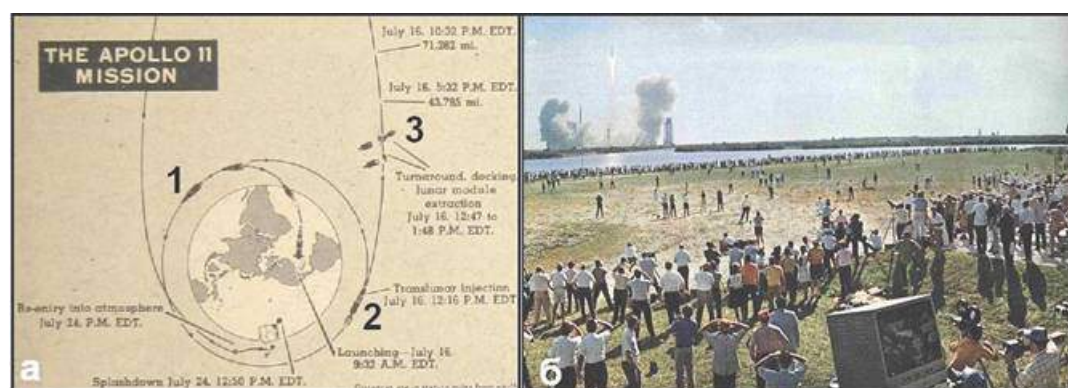


Fig. 1. a) a fragment of the flight to the Moon, b) Apollo starts

1 - launching the spacecraft into a near-earth orbit; 2 - start from orbit to the Moon; 3 - distance from the Earth to the Moon;

The Apollo launches were attended by thousands of correspondents and hundreds of thousands of spectators (ill. 1b). Hundreds of millions of TV viewers watched the starts on TV. How, with such openness, can one suspect that something important was withheld from the public? Let's follow all the same stages 1, 2 and 3 according to the materials of NASA.

1. In low-earth orbit

Beautiful photomontage for the gullible viewer



Fig. 2. And the rising of the moon, and the shining sun - all in one picture

http://www.boston.com/bigpicture/2009/07/remembering_apollo_11.html

The NASA film "The Moon: old and new" from the TV series **[2]** tells about the studies allegedly carried out by astronauts on the Moon. Scenes of space launches flicker, and then we are shown **[3] the** rising of the Moon over the Earth, allegedly taken from near-earth orbit (ill. 2 a, б). Say, the moon is still far away, but soon "Apollo" will fly to her. It looks impressive, but this is not a very complicated photomontage.

Note that the view of the Earth in Figure 2 does not change at all. But the Moon rises due to the fact that the ship goes around the Earth. The angular diameter of the Moon in the earth's sky is 0.5° . The moon rises by about five of its diameters, that is, by 2.5° . This means that the ship flew around the globe 2.5 about an arc from its circumference, which is about 300 km. The altitude of the intermediate near-earth orbit of the "Apollo" NASA reports - 200 km. And what: at an altitude of 200 km, the ship flew 300 km in orbit and not a single cloud has moved below? Therefore, before us is not shots of a real moonrise, but a photo-film-montage. Against the background of one space image of the Earth at different distances from the horizon, images of the Moon were mounted and a beautiful episode was created, but did not exist in reality.

The filmmakers working for NASA liked this image of the Earth so much that they decided to use it 100%. In Fig. 2c, he already depicts a picture with a shining Sun, allegedly seen by the Apollo 11 astronauts shortly after launch, upon arrival in near-earth orbit. As we can see, the Moon is rising, and the Sun is shining all over it in the same place, with the same cloud pattern for astronauts of various Apollo.

Of course, the average viewer is usually very trusting of the official chronicle coming from an organization like NASA, but this trust should not be so abused. In any case, this plot warns us that such "replacements" can occur in American space films in the most unexpected places.

Is this Apollo?

In the course of the film "For all mankind" [4], during a short stay in near-earth orbit and before starting from it to the Moon, one of the astronauts makes a spacewalk (Fig. 3).

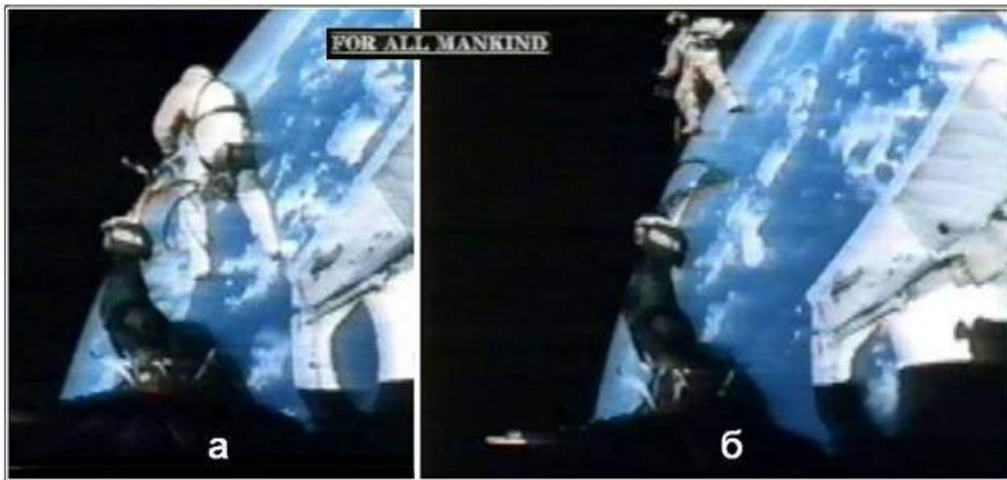


Fig. 3. Is this Apollo? (strange shots from the movie "For All Humanity")

But, according to the NASA scheme, when flying to the moon, astronauts were not planned to enter space in near-earth orbit [1,5]. Here is the skeptic Y. Mukhina and asks [6]:

"... when Apollo with the third stage of Saturn was still in Earth orbit, someone from the crew opened the hatch and went outside. He did this solely to hang in an airless space and say, "Hallelujah, Houston." Soon Houston demanded that he return to the compartment, since a few minutes later the Apollo's acceleration to the Moon began. How to understand all this? "

Defenders V. Yatskin and Yu. Krasilnikov [7] did not stand on ceremony with the answer :



"Only in such a way that you did not understand anything about what you saw ... the exit shown in the film was carried out during the flight of Apollo 9. Astronaut A-9 Russell Schweickart went into space ... to test

the lunar spacesuit in a vacuum ... "Apollo 9" performed a test flight in near-earth orbit. "

Alas, the defenders gave incorrect information. Here he is, astronaut Schweickart, captured, according to NASA, during an A-9 spacewalk (Figure 4). He has a life support satchel behind him, but in Figure 3 the astronaut has no knapsack. And Schweickart's helmet is red, and the unknown astronaut's is white. So Figure 4 is not Schweickart.

Fig. 4. This is how NASA shows the astronaut Schweickart during the exit from Apollo 9 [http : // www . hq . nasa . gov / office / pao / History / alsj / a 410 / AS 9-19-2994. jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS9-19-2994.jpg)

And the defenders also blundered with the ship. It was not Apollo 9

Little Gemini as Apollo



Four years before the Apollo, the Americans put small two-seater Gemini ships into low-earth orbits [8, 9] . One of them is shown in Fig. 5.

Ill.5. "Gemini"

after splashdown

<http://images.jsc.nasa.gov/lores/S65-61886.jpg>

During a flight on one of these ships (Gemini 4) in June 1965, astronaut Ed White made the first spacewalk in American history. This output of Ed White is shown in Figure 3. To be convinced of this, it is enough to watch the films of NASA "4 days of Gemini 4" or "The Legacy of Gemini" this very spacewalk of astronaut Ed White [10]. Figure 6 shows two frames from this episode. Their identity with the frames in Fig. 3 is obvious.



Fig. 6. Astronaut Ed White walks into outer space from Gemini 4, June 1965 (footage from NASA's film Four Days of Gemini 4)

In addition, the image shown in Figure 3b can be seen in the August 1969 issue of Life [11] along with a series of other images showing astronaut Ed White's spacewalk from Gemini 4. Here is the corresponding computer cut from the named magazine (Fig. 7)

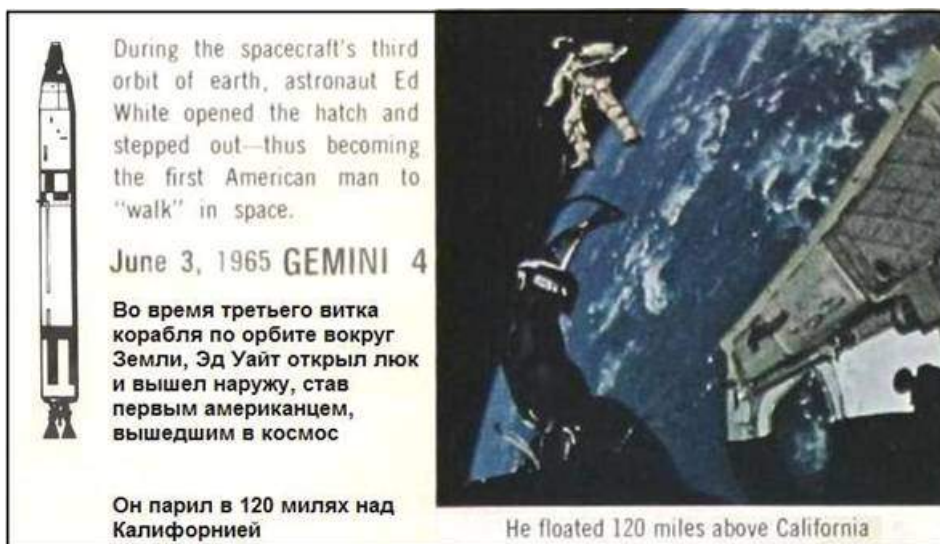


Fig. 7. Astronaut Ed White goes into outer space from Gemini 4, June 1965 (Image from Life magazine, August 1969, translation of the text from the original - by the author)

So, in Fig. 3 we have not Apollo, but Gemini 4, not Schweickart, but White, and not 1969, but 1965. That is how many “creative replacements” by the efforts of the film director and Russian defenders of NASA were made in just one episode of the “flight to the moon”.

2. Start to the Moon

But maybe the episode with White's release was included in the film about flights to the Moon in the form of a historical reference? No, the episodes considered take place in the film "For All Mankind" [4] occurs without mention of

"Gemini", and at this time the voice-overs on behalf of the astronauts (A) and the Mission Control Center (C) tell us that the astronaut should hurry to get back on board, because it's time to fly to the moon:

***A** : Hallelujah, Houston. ... Beautiful view. And of course the memories that you are racing at a speed of 25 thousand miles per hour. And you understand that you are in space not because you deserve it, but because you were lucky, you had the privilege of representing humanity at this moment in history and experiencing what you are experiencing, in a sense, for the rest of humanity.*

C** : The control center is giving the command to get back on board ... Guys, now there will be an orbit correction, after which **you will go to the moon.

***A** : When you realize that you are now going to the moon, it suddenly becomes a shame that you spent so little time on Earth. Three two one. Ignition. The ignition has turned on, the boosters are working. Guys, hold on to your hats. Acceleration of the order of 30 feet per second. **Distance about three thousand miles, speed about 35 thousand feet per second.** This is the fastest speed known for an artificial aircraft. (35 thousand feet per second ~ 11 km / s is the second space velocity with which spacecraft fly away from the Earth - A.P.)*

*And suddenly the engine turned off. We looked at the Earth and the **Earth suddenly began to shrink.** "*



Everything in this text speaks about the flight to the Moon: three thousand miles (~ 5000 km) to the Earth, the second cosmic speed, the decreasing Earth. And under these words, in the course of the film , a flame appears in the ship's window (ill . 8). Apparently, it should indicate the torch of the working rocket engine of the third stage of the lunar rocket. What else is needed for the viewer to believe that he sees the start to the Moon [4, 12]?

Fig. 8. This episode accompanies the announcer's story about the flight to the moon in the film "For All Mankind"

And again "Gemini" as "Apollo"

In fact, the viewer is again shown the Gemini ship and, which is curious at the moment of the opposite property: when it returns to Earth. To be convinced of this very free treatment of the viewer, it is enough to watch four frames from the episode "flame in the window" (ill . 9) . In the first place is the same frame as in Fig. 8, with the difference that it is mirrored. Why this was required will become clear a little below. In the same way, the author mirrored in comparison with the film [f2] and the rest of the frames from the top row. The episode ends with a view of the Earth, filmed from a great distance, and the viewer is already convinced that he has witnessed the start of the flight to the Moon. And he is unlikely to ask the question, why is the ship from which the shooting is being carried out rotating? (This can be seen along the line of the globe's limb in the window). Although the ship during this episode is located at the head of the rocket, and it is not supposed to rotate in any way. What's the matter?



Fig. 9. And again "Gemini" as "Apollo" "

top: film "For all mankind" - "start to the moon";

below: film "4 days of Gemini 4" - the descent of "Gemini" to Earth

And the point, it turns out, is that we see a typical case when they say about one thing and show about another. Without any explanations, while talking about a launch to the Moon, we are shown footage of the final stage of the Gemini flight - its descent from orbit to Earth [13] . This is easy to see if you look at a selection of frames from the film "Four Days of Gemini 4" (bottom row) in Figure 9. The light ship Gemini did indeed rotate as it descended. This helped to maintain its orientation in space. And the flame in the window is the "tail" of the incandescent rarefied air (plasma) that flows around the descending Gemini. This descent is pumped, as it should be, with a bright earthly sky and a parachute dome above the ship.

Now about why the frames of the top row of Fig. 9 are shown in a mirror image in relation to their appearance in the film "For All Mankind" [4]. The fact is that the creators of this film were afraid to use the footage of the descent of the ship from the film "4 days of Gemini 4" in their original form. Apparently, they were afraid of their identification. And they "mirrored" them. Such a technique prevents even an informed viewer from recognizing the Gemini descent in the frames accompanying the Apollo launch to the Moon. Therefore, having made a reverse mirror image rotation, the author gave the frames of the upper row their original appearance.

Plays a role in confusing the attentive observer and color. It differs markedly for the frames of the upper and lower rows of Fig. 9, although the common origin of the frames of the upper and lower rows is obvious. Why did it take all those Geminis to play Apollo?

3. Did the Apollo fly away from the Earth?

Where were the rocket stages taken from the "lunar" Apollo?

According to the scheme of Fig. 1a (stage 3), the last stage of the rocket, after running out of fuel, is separated from the ship, and flies nearby for a long time. According to NASA [15], this occurs at a distance of 20-50 thousand km from the Earth. From this distance, the Earth completely fits into the frame of the camera with the usual angle of view of the lens (50-60 °).

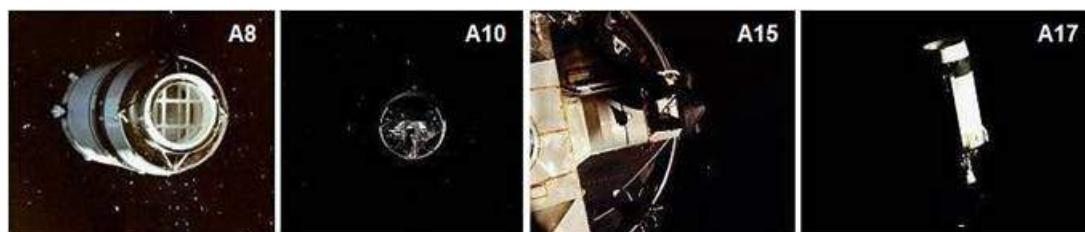


Fig. 10. The last steps of the "lunar" "Apollo", filmed in an unknown place

<http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS8-16-2583.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS10-34-5011.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a15/AS15-91-12336.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a17/AS17-148-22714.jpg>



Figure 10 shows four images of the last stage, supposedly taken by the crews of different "lunar" "Apollo" while moving away from the Earth [14] . But there is no Earth on them and there is no way to be sure where they were filmed: on the way to the Moon or in low-Earth orbit (or even just in the studio)?

For example, take a look at the last stage image captured in orbit from near-Earth Apollo 7 (Figure 11). There is no need to explain the location here: it is quite obvious.

Fig . 11 . View from the near-Earth Apollo 7 to the discarded last stage

<http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS7-3-1545.jpg>

Why did the "lunar" astronauts not photograph the last step against the background of the full globe of the Earth and thereby show their distance from the Earth? This is not to say that NASA did not foresee such questions. Check out an interesting "NASA movie" on this topic.

Cinematography: a rocket stage against the backdrop of a distant Earth

On ill.12 shows three successive frames from a movie NASA «« Apollo 13 »»: Houston , we ' ve got a problem » [17] .



Fig. 12. "Cinema" from two shots:

The view of the last stage of the rocket against the background of the distant Earth **(b)** was obtained by superimposing individual views of this stage **(a)** and the distant Earth **(c)**.

The last stage of the rocket is shown on the left, on the right is a view of the distant Earth from space, and in the center, the superposition (influx) of these two views shows the last stage against the background of the Earth. The need to resort to such tricks suggests that, apparently, NASA did not have a real picture of the last stage against the background of the distant Earth. And this is after six flights to the moon.

Consider another curious "movie trick" from the movie "For All Humanity", revealed by D.P. Kobzev. It is also intended to convince us that the astronauts flew away from Earth.

"Cinema" from one photo

For 20 seconds at the 22nd minute, we are shown a decreasing image of the Earth (Fig. 13, top row). And the voice-overs are intriguing: " *We looked at the Earth, and the Earth suddenly began to shrink* " - these are the astronauts. " *You are going to the moon. You are on your way to the moon now, for sure. You hear me? Houston Says ...* " is the Mission Control Center. It would seem that everything is clear: Apollo is moving away from the Earth. However, let's not rush to believe.

It is easy to see that the phase of the globe's illumination, and the location of the continents on it, and the cloud pattern in all frames are exactly the same. Only the scale is different. This suggests that in this episode, the removal is simulated by different scales of the same image of the Earth. And we know NASA had images of the full Earth even before the Apollo lunar flights (Chapter 4). For comparison, the author did a similar trick: by reducing the same photograph, the author depicted a receding Mars, although he did not fly to Mars (Fig. 13, bottom row).

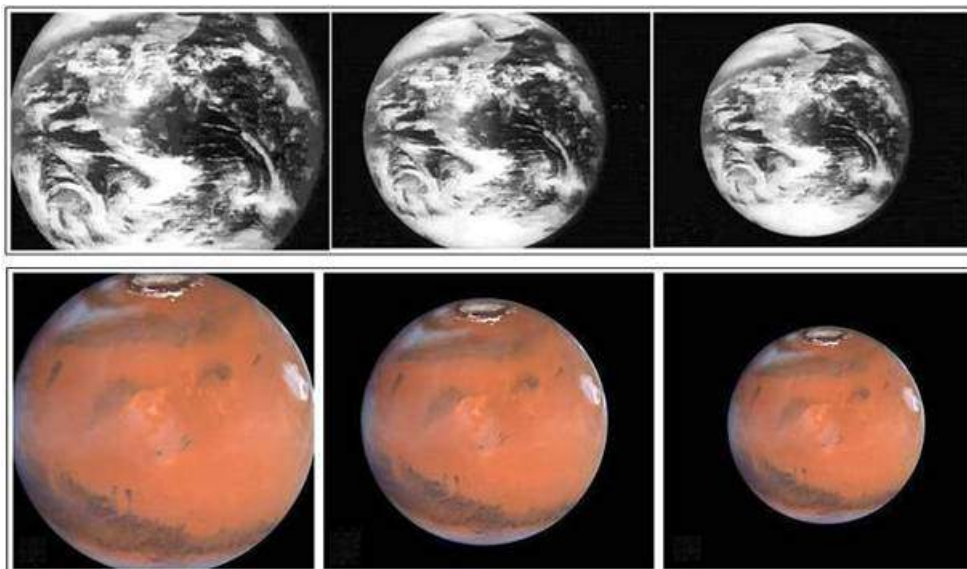


Fig. 13. "Cinema" from one photo:

Top row: astronauts "see the receding Earth" - a film trick from the film "For all mankind" (a selection of frames from the film - D.P. Kobzev)

Bottom row: joke - the author of the book sees Mars receding (similar photo trick)

(the image of Mars is used - <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-000919.jpg>)

But is it possible only on the basis of the immutability of the view of the Earth in Fig. 13 to suspect the authors of the film of another "artistic" technique? After all, if, say, we move away from the house in a straight line passing through it, then the apparent size of the house will decrease, and in other details its appearance will not change. This is true, but a spacecraft launched from orbit moves away from the Earth not along a radial straight line, but rather tangentially to the globe (see Fig. 1a and Fig. 14).

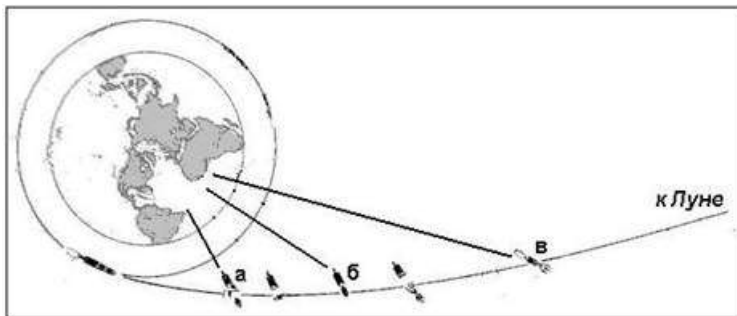


Fig. 14. The ship moves away from the Earth along a tangential trajectory

Therefore, as the spacecraft moves away, the Earth must, as it were, turn in front of the astronauts. For example, from point "a" astronauts would see South America in the center of the earth's disk, and from point "b" - the South Atlantic, and so on. At the same time, since the direction of gaze from the ship to the Earth changes, and the direction of the rays from the distant Sun remains unchanged, the visible phase of the illumination of the globe would also change. This is exactly what it looks like in real space photography.

For example, Fig. 15 shows two images of Mars taken by the Mariner-7 spacecraft while passing by the "red planet". From image "a" to image "b" Mars noticeably turned relative to the direction of imaging (see detail 1). The apparent phase of the planet's illumination has also changed.

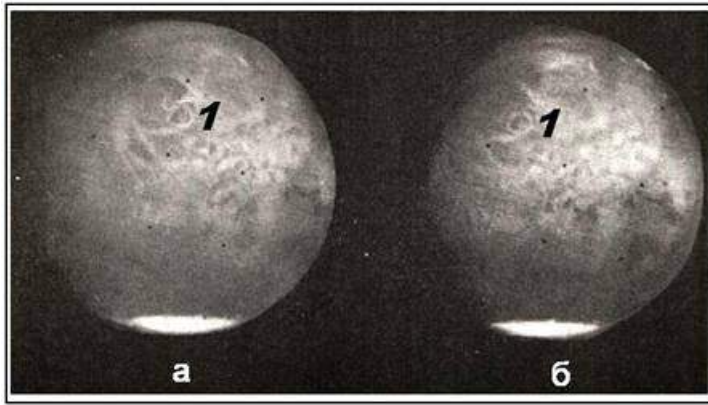


Fig. 15. Images from a distance of 450 thousand km **(a)** and 470 thousand km **(b)**, obtained by the "Mariner-7" spacecraft when flying past Mars

So, everything suggests that the considered episode with the receding Earth is really made from one snapshot. Why would you do such an imitation if you flew away from the Earth and you had a camera?

The skepticism in relation to the photographs of the distant Earth, allegedly taken by astronauts, is reinforced by the fact that some of them show clear traces of photomontage (Fig. 16).

Why was this photomontage needed?

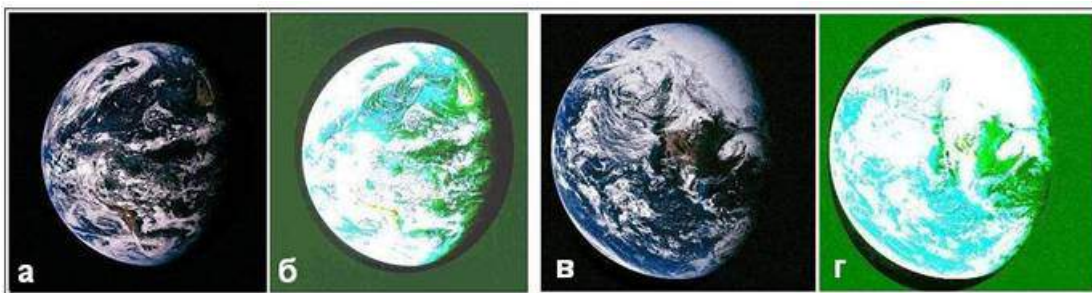


Fig. 16. Why was this photomontage needed?

a, c) Earth, allegedly captured by astronauts, **b, d)** the same views with an increase in contrast and brightness.

http://nssdc.gsfc.nasa.gov/imgcat/hires/a15_h_91_12343.gif ,
http://nssdc.gsfc.nasa.gov/imgcat/hires/a16_h_118_18885.gif

Figure 16a shows a snapshot of the Earth, allegedly taken by astronauts A-15. And here is the same picture, in which, at the suggestion of D.P. Kobzev, with the help of a computer, the contrast and brightness were increased (ill. 16b). It can be seen that the Earth has been cut from some other image and inserted into a wide black field. By the way, when the original image of Fig. 16a is carefully viewed on the screen, the oval from the inset of the image of the Earth is noticeable even without processing. And here is a snapshot from the A-16 collection (Fig.16c) with the same phenomenon (Fig.16d). Why did NASA need this photomontage if the images in question were actually taken by astronauts?

NASA's Late Child?

Much enthusiasm **[18]** among the defenders of NASA is the sight of a small, that is, supposedly distant Earth next to the contours of the Apollo spacecraft (Fig. 17a). This, in their opinion, certainly removes all questions. Look how far Apollo flew from Earth. However, placing an image of any space object on a black background is a trifling matter. To prove this, the author in Figure 16b “removed” the Earth altogether, and in Figure 17c he drew as many as four Earths.

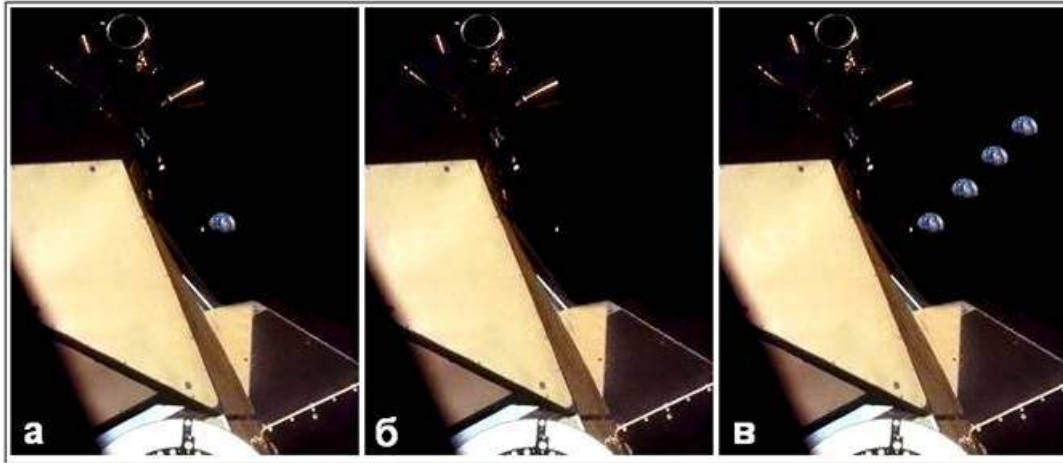


Fig. 17. NASA 's Late Child?

a) a snapshot of the distant Earth, allegedly taken by the A-11 astronauts on their way to the Moon [http : // www . hq . nasa . gov / office / pao / History / alsj / a 11 / AS 11-36-5404 HR . jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-36-5404HR.jpg) ;

b, c) how you can manipulate a separate image of the Earth

And why was the image of Fig. 17a not published in 1969 in the special issues “Life” and “A Look” **[1,11]**, published immediately after the flight of Apollo 11? After all, they had so few pictures on the lunar theme. This image appears to be a later NASA “baby” born to reinforce the line of defense.

Does man work like that?

In conclusion, let's look at the pictures of the Earth and the Moon, presented on behalf of astronauts, about which you can ask: “does a person work like this?” Here are three consecutive images from the atlas **[19]** attributed to astronauts A-8 (Fig. 18).



Fig. 18. "Naughty" Earth (pictures allegedly taken by astronauts A-8).

<http://ilewg.lpi.usra.edu/resources/apollo/images/browse/AS08/14/2507.jpg>

<http://ilewg.lpi.usra.edu/resources/apollo/images/browse/AS08/14/2508.jpg>

<http://ilewg.lpi.usra.edu/resources/apollo/images/browse/AS08/14/2509.jpg>

Earth is the only subject here. Therefore, it is logical to expect that the astronaut will position it in the center of the frame. But the Earth does not "obey" and the frames came out lopsided. And there are hundreds of such lopsided images in the atlas **[19]**, this main "Apollo piggy bank" of NASA . It doesn't sound like human work.

Here are two series of sequential shots **[19]** , allegedly taken by astronauts A-14 (Fig. 19).

Now the moon does not want to stand in the center of the frame. And there are also many such series with the "naughty" Moon in the atlas **[19]** . And that doesn't sound like human work.

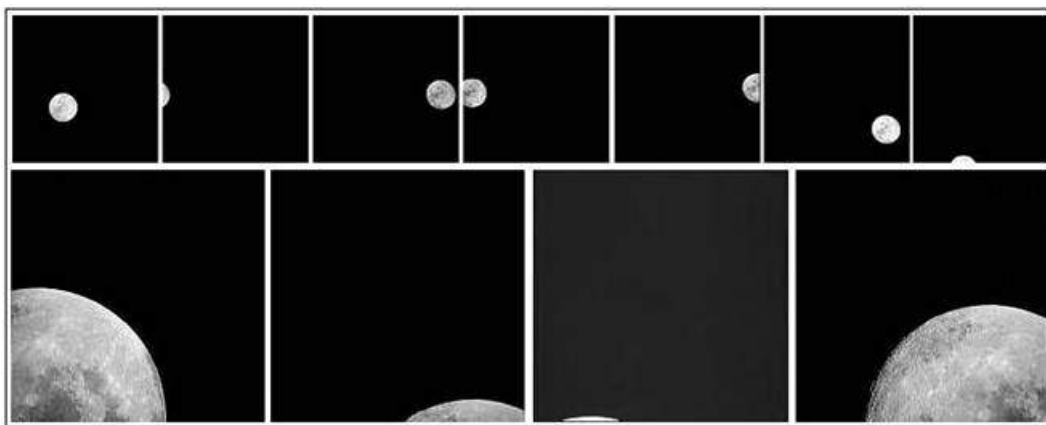


Fig. 19. "Naughty" Moon (pictures allegedly taken by astronauts A-14).

<http://www.lpi.usra.edu/resources/apollo/frame/?AS14-73-10197> ... (10198,10199,10200,10201,10203,10204)

<http://www.lpi.usra.edu/resources/apollo/frame/?AS14-73-10180> ...(10181,10182,10183)

If we assume that the images of Figures 18, 19 were taken by an automatic space photographer, then everything is quite understandable. The automatic camera sometimes lost its orientation, and then the subject would go away. (Recall that we are talking about the first years of the formation of space automatic technology). And while the automatic camera "searched" for the lost direction, the result of the shooting turned out to be rather stupid from a human point of view, which we can see in Figures 18, 19.

Of course, there are many correct images of the Earth and the Moon on the NASA websites [20]. But this does not eliminate doubts, since an automatic apparatus can work, sometimes quite satisfactorily, then no. And a prepared person cannot "betray a marriage" in series. For him - a slight movement of the hand and an object in the frame (see also Appendix 2 to Chapter 6 about this).

These facts reinforce doubts that the Apollo astronauts flew away from the Earth. Nevertheless, let's move on after the astronauts on our mental journey.

Links

1. " A Look " August 1969, see un1 "References-2"
2. φ8-8 "Links-2"
3. iv36 "Links-2"
4. f2, iv2 "Links-2"
5. <http://www.hq.nasa.gov/office/pao/History/alsj/frame.html> - Apollo Lunar Surface Journal
6. Yu.I. Mukhin. Antiapollo. Lunar scam of the USA. - M.: Yauza, Eksmo, 2005, p. 325
7. V. Yatskin and Y. Krasilnikov. "Did the Americans fly to the moon?" <http://www.skeptik.net/conspir/moonhoax.htm>, p. 38
8. Little encyclopedia. Cosmonautics. Ed. Academician V.P. Glushko. M.: SE, 1970, p. 121
- 9.a) <http://www-pao.ksc.nasa.gov/kscpao/history/gemini/gemini-overview.htm>
b) <http://www-pao.ksc.nasa.gov/kscpao/history/gemini/flight-summary.htm>
c) <http://www-pao.ksc.nasa.gov/kscpao/history/gemini/gemini-manned.htm>
10. f8-2, f8-1, iv3, iv4 "Reference 2"

11. " Life ", August 1969, see un2, "References-2"

12. iv5 "Links-2"

13. f8-2, f8-1, iv6, iv7 "Reference 2"

14. Photographing of the S - IVB stage after separation was planned:

A-8:

http://www.hq.nasa.gov/office/pao/History/alsj/a410/A08_MissionReport.pdf,
p.10

A-10:

http://www.hq.nasa.gov/office/pao/History/alsj/a410/A10_MissionReport.pdf,
p.183

A-16:http://www.hq.nasa.gov/office/pao/History/alsj/a16/A16_MissionReport.pdf
, p.108

A-17: <http://www.hq.nasa.gov/office/pao/History/alsj/a17/a17mr.html>, p.101

15 . These NASA on the distance from the earth , in which by " lunar " " Apollo " allegedly separated rocket stage S-IVB, Command and service Module / lunar module ejection from S-IVB .:

A -8 - [http : // www . hq . nasa . gov / office / pao / History / alsj / a 410 / A 08_ MissionReport . pdf](http://www.hq.nasa.gov/office/pao/History/alsj/a410/A08_MissionReport.pdf) - exact data on the height of the compartment was not found: p. 50, the height of the Spacecraft / S - IVB Separation maneuver is 3797.8 miles at the moment of time 3:20:59, the time of the Separation maneuver is 3:40:01 (p .12), i.e. in 19 minutes, the height above the Earth at this moment is also more than 10 thousand miles

A-10

http://www.hq.nasa.gov/office/pao/History/alsj/a410/A10_MissionReport.pdf - 17944.7 miles , p.50

A-11 http://www.hq.nasa.gov/office/pao/History/alsj/a11/A11_MissionReport.pdf
- 16627.3 miles , p.94,

A -12 [http : // www . hq . nasa . gov / office / pao / History / alsj / a 12 / A 12_ MissionReport . pdf](http://www.hq.nasa.gov/office/pao/History/alsj/a12/A12_MissionReport.pdf) - no earlier than 12504.5 miles, p .87

A -13 [http : // www . hq . nasa . gov / office / pao / History / alsj / a 12 / A 12_ MissionReport . pdf](http://www.hq.nasa.gov/office/pao/History/alsj/a12/A12_MissionReport.pdf) - no earlier than 12455.83 miles, p . 28

A-14 <http://www.hq.nasa.gov/office/pao/History/alsj/a14/a14mr06.htm> - 26299.6 miles

A-15 <http://www.hq.nasa.gov/office/pao/History/alsj/a15/a15mr003.gif> - 12826.9 miles

A-16 http://www.hq.nasa.gov/office/pao/History/alsj/a16/A16_MissionReport.pdf
- 12492.7 miles , p.17

A-17 http://www.hq.nasa.gov/office/pao/History/alsj/a17/A17_MissionReport.pdf - 13393.6 miles, p. 22

16. Q2, iv8 "Reference 2"

17. f8-9, iv37 "Reference 2"

18.<http://forums.airbase.ru/2007/08/29/topic-57328--Identifitsiruem-izobrazheniya-Zemli-v-fil'makh-NASA.html#p1267595>

19. NASA <http://www.lpi.usra.edu/resources/apollo/catalog/70mm/>

20. HACA

http://spaceflight.nasa.gov/gallery/video/apollo/apollo11/mpg/apollo11_dlclip01.mpg
.

Fig. 1. a) [1], numbers 1,2 and 3 are applied by the author, b) [11]

Fig. 2. f8-8, iv36 "Reference 2"

Fig. 3. f2 , iv1 "Links-2"

Ill.6. NASA, f8-1, f8-2, iv3, iv4 «Links-2»

Fig. 7. f2 , iv5 "Links-2"

Fig. 8. editing of the author based on still frames from f2, f8-1, f8-2, iv5, iv6, iv7, "Links-2"

Fig. 12. montage by DP Kobzev on f2 , iv8 "Links-2" See also <http://www.hq.nasa.gov/office/pao/History/alsj/a17/as17-148-22727.jpg>

Ill . 14. [1]

Fig. 15. "Earth and the Universe", 1970, No. 1, p. nineteen

Fig. 16. f8-9 "Links-2".

Did man fly around the moon

48-61 minutes

Around the moon. Chapter 6

Did Apollo fly around the moon?

First knockout

USSR targets the moon

Launching unmanned "Probes" around the Moon (another name - the ships L1 or 7K-L1), the USSR, step by step, stage by stage, prepared a manned flight around the Moon. The USSR was in a great hurry to get ahead of the Americans. And yet, through the entire Soviet program, the line of maximum risk reduction for cosmonauts ran like a red thread. It is interesting to feel the drama of the race taking place according to the diary entries of the head of the Cosmonaut Training Center, General N.P. Kamanin **[1]**. Here are short excerpts from his diary for September-December 1968:

September 19th. "The Apollo 7 orbital flight with three astronauts is scheduled for October 1968 for eleven days. In January-March 1969, it is planned to fly around the Moon by the Apollo-8 spacecraft with a crew. In May-June 1969, it is planned to land astronauts on the moon. Orbital flights of Apollo around the Earth and even a flyby of the Moon are possible within the timeframes set by the Americans, although it is impossible to send a crew to fly around the Moon without performing two or three technological overflights. Nor do I believe in the reality of the American expedition to the moon in 1969. "

November 9. "We are much more prepared for a manned flyby of the Moon, but we can't count on 'maybe we're lucky" - our flight around the Moon by the crew is scheduled for the first half of 1969. The planned flyby of the Moon by Apollo 8 with astronauts on board is associated with a very high risk. "

the 13th of November. Tomorrow, Probe-6 will circumnavigate the moon. The Americans announced: "On December 21, 1968, the Apollo-8 spacecraft with three astronauts on board will take off into space, make 10 revolutions around the Moon and return to Earth" ... Tyulin, Mishin, Mordasov and I consulted with experts, reported:

1.we must continue to carry out our flight program without adapting it to American tricks .

2. The Apollo-8 flight announced by the Americans is a gamble that can end very sadly : the United States has no experience in unmanned flights of the Moon, and besides, of the two launches of the Saturn-5 rocket, one was unsuccessful.

3. It is necessary to widely publish our flight program for the L-1 spacecraft (six technological launches) and show the whole world the seriousness and thoroughness of our preparation for human flights to the Moon, as well as the huge risk that the United States is taking by sending astronauts to fly around the Moon without the necessary checking the rocket, ship and flight path.

November 14. The cosmonauts agree to fly in December as well, but the manned spacecraft will not be ready by this date, and besides, we need to launch another technological spacecraft according to the plan . We will prepare a manned flight around the Moon for January 1969, and if the Americans successfully fly on Apollo 8, then we will postpone such a flight until April.

November 26. "We must admit that we are overwhelmed by the US intention to launch Apollo 8 to fly around the moon on December 21. **We are much closer to a manned flyby of the Moon :** already three of our technological ships have returned to Earth at a second cosmic speed (two of them - after the flight of the Moon), but we need to perform 1-2 more technological launches in order to have the degree of confidence that will allow us say, "Yes, we are ready."

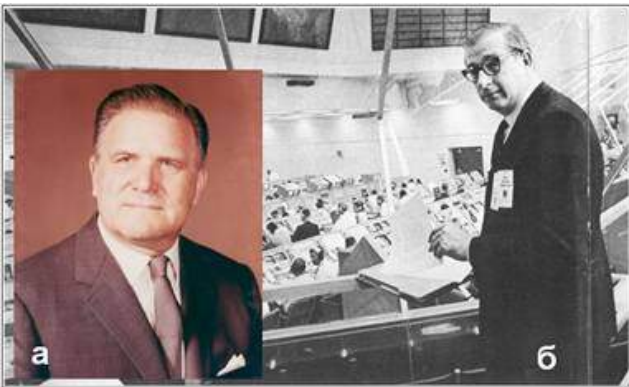
The Apollo 8 flight is much more risky than we could have admitted. Our L-1s have already flown to the region of the Moon and returned to Earth without crews on board, and Apollo cannot fly around the Moon in an unmanned version. To test their ships, the Americans are forced to risk the loss of the crew, but we, having ships of the Zond-6 type, can work them out without such a risk. "

What can be said about these statements, as soon as the fact that, in general, it is a sober, sustained position. Unfortunately, as we will see below, when the Apollo 8 flight actually took place, soon nothing remained of this position.

USA strikes first

As we remember, on April 4, 1968, the final unmanned tests of the Saturn-5 rocket ended unsuccessfully, and no further unmanned tests were planned. It was with great surprise that the decision, which followed after 19 days, was taken to stop unmanned tests of the rocket, and on the next flight to send it with people on board and immediately to the Moon (A8). "Stupidity, gamble ..." - such was the reaction of not only ours, but also foreign specialists to this decision (section 1).

And, as if in agreement with them, a month and a half before the launch of A-8, on October 7, 1968, the then NASA director D. Webb resigns and hands over the reins to his deputy T. Payne (see Appendix). For 7 years, from the very beginning of the Apollo program, D. Webb led NASA with a firm hand to victory in the lunar race. However, in early 1968, D. Webb "notified President Johnson of his desire to retire soon." D. Webb seemed to have no particular problems with health, since after leaving NASA he lived such a long life that many would envy him. Maybe D. Webb was fired for poor performance? It seems unlikely: too many services to the fatherland and corresponding honors are listed in his biography. The beginning of 1968, as we know, was marked by the failed Saturn 5 test. Was it not this grief that made D. Webb "think" about his resignation? But who then gave the order to send astronauts to the moon on a failed rocket?



The answer to this question hides a new surprise: it turns out, *"during the absence of Webb, who left for a conference in Vienna, Dr. Payne made changes to the launch program of the Apollo 8 spacecraft: he decided to put it into a near-lunar orbit, which was implemented in December 1968. "I can imagine the position of Webb," says Dr. Payne, "when I, having been in command for only six months, suddenly inform him by phone that I have decided to fly around the moon" [2] .*

III.1.

Change of directors of NASA on the eve of the start of flights of "lunar" "Apollo"

- a)** James Webb, Director of NASA since the beginning of the Apollo program. He retired shortly before the start of Apollo 8
- b)** Thomas Payne - head of NASA's "lunar" victories, replaced D. Webb

Indeed, there is something to be surprised at. For 40 years of working life, communicating in various instances, the author of the book has never met such a case in his life that a deputy, without consulting his boss, makes a decision of such importance and informs him about it by phone. It seems that by the moment described, D. Webb had been held in a leading position in the well-known role of "Zitz-Chairman of the Pound" so as not to attract other people's attention by the

fact that something out of the ordinary is happening at NASA? But just before the flight of the A-8, Webb chose to retire altogether.

The new NASA director showed that his appointment was not mistaken: the Apollo program failures ceased, and a chain of messages of continuous success began.



Fig. 2. First knockout from USA

a) the crew of the Apollo-8 spacecraft;

b) according to NASA, A-8 made 10 revolutions around the Moon

On December 21, 1968, in the presence of hundreds of thousands of spectators, a Saturn 5 rocket was launched from the Kennedy launch site, carrying an Apollo 8 with a crew of three (Fig. 1a). According to NASA reports, A-8 made 10 revolutions around the Moon (Fig. 1b) with a total duration of 20 hours and happily returned to Earth [3,4]. As in westerns - without zeroing in, we hit the top ten at once.

USSR cancels manned flyby of the Moon

No matter how full of concern the above diary entries of N.P. Kamanin, the principled line of Soviet specialists was clearly visible in them: to continue the preparation of the flight around the Moon in accordance with the plan, even if the A-8 flight was successful. In the latter case, the flyby of the Moon can even be postponed a little: (for April) after all, the championship has already been missed anyway, so it will be possible to better prepare.

But when the Apollo 8 flight took place, the nerves of Soviet specialists and political leaders could not stand it. Let's not condemn them. Modern Russia (and we are its citizens) does not do even a tenth of what they have done in space. But let's try to understand them.

Let us recall from section 1 about the reaction of the chief designer, academician V.P. Mishina: *"And suddenly a message comes - "Apollo 8 went to the*

Moon ... Vasily Pavlovich got up, looked at the screen, and everything is shown there well. I went and slammed the door. "

And here is what N.P. Kamanin on the start day of A-8 [1]:

"We lost the primacy in space. The flight of Apollo 8 to the Moon is a world-historical event, it is a holiday for all mankind. But for us this holiday is overshadowed by the realization of missed opportunities and regret that now it is not Valery Bykovsky, Pavel Popovich or Alexei Leonov who are flying to the moon, but Frank Borman, James Lovell and William Anders. I cannot cope with my mood - today I have it disgusting. "

Grief also permeates the memoirs of Academician B.E. Dash [5] :

"December 21, 1968, Saturday, good weather, but there was no festive mood. In NII-88 we admired the launch of Saturn-5 with Apollo-8 on the big screen. To watch the broadcast from the United States available to the whole world, we had to go to NII-88, where the image was transmitted via cable from the television center. The TV center itself received it on the Eurovision channel ... "



Fig. 3. Academician B.E. Chertok is one of the closest collaborators of S.P. Korolev.

The above entry was quoted by N.P. Kamanina: *"I must admit that we are dominated by the US intention to launch Apollo 8 on December 21 to fly around the moon ..."*. Psychological pressure from the United States occurred at a much higher political level: pressure came directly from the White House to the Kremlin. Here is what the reserve officer V.M. Shishkin:

"In those years (late 1968 - AP) I worked on the Moscow-Washington Direct Line (LPS) in the Kremlin. Remember the reports of the hotline set up shortly after the 1961 Cuban Crisis to resolve global crises? It was intended to organize an immediate connection between the White House, i.e. the President of the United States, and the Kremlin, i.e. the highest leadership of the USSR, primarily the General Secretary of the CPSU Central Committee, who was then actually the leader of the country. In those years, it was a telegraph communication, and the terminal station of the American side, i.e. the teletype was installed right in the Oval Office, and the tech support station appears to be in the Pentagon.

So, exactly on the day of Apollo 8 launch to the Moon, our colleagues from the American side unexpectedly began to transmit information about the launch to the Moon by teletype on-line, accompanying it with emotional remarks (on a tape of paper, of course). I worked that day at the LPS station. We were surprised to receive this information, which did not fit, in general, into the procedures of duty verification messages or, even more so, urgent messages between the heads of state. Looking back, it can be assumed that the Americans really wanted our political leadership to receive this information "first-hand". "

And the US efforts were not in vain. Despite the previous statements (NP Kamanin: *"we must continue to fulfill our flight program without adapting it to American tricks"*), the Soviet position began to change rapidly. We read from Chertok [5] :

*"December 28 ... **From our point of view, this launch devalued our lunar program by the very fact of a manned flyby of the Moon.** This was the first time a Saturn 5 rocket was used to launch a manned spacecraft. The flight on the route to the Moon and around the Moon was accompanied by numerous television sessions. The images of the Earth, the Moon, the cockpit interior, the work of the crew, the situation in the flight control center were transmitted Finally, the United States managed to outstrip the Soviet Union in space. "*

"December 30th. "How can we answer the Americans?" Discussion of work on 7K-L1 was not carried out . The main task of this pre-New Year meeting was the approval of the program for the delivery of lunar soil to the Earth by an automatic vehicle. "

*"Throughout July 1969 we discussed the Apollo 11 flight, which flew to the Moon on July 16th. **Such a combination of their own defeats with other people's victories has not been experienced since the time of the war.** "*

As you can see, the mood of despondency became dominant in the reasoning of Soviet specialists. In 1969 - 1970 Translation z z. The USSR made two more completely successful launches of unmanned "Probes" (Nos. 7 and 8). But this was done, rather, by inertia. Two ships equipped for manned flight remained on Earth. **A fully prepared flyby of the Moon by Soviet cosmonauts was canceled [6].**

The flight of Apollo 8 caused general admiration, but among some skeptics, on the contrary, it gave rise to distrust. They believed that success in such matters comes as a result of the gradual, step by step, implementation of predetermined stages. For the Apollo program, if you believe what NASA reports, these laws are not written. As it is written in [7], *"Flight (A-8) pursued the goals of a comprehensive check of the performance of the Saturn V launch vehicle, the command and service compartments of the Apollo spacecraft ..."*. Similar information can be found in [8] .

What happens: unmanned rocket tests have failed, new tests are not assigned and after that, guys - astronauts, fly to the moon. And at the same time you will test the rocket "on yourself". Complex. Wasn't N.P. Kamanin, when did he call this approach a "gamble"? But, after all, they say that the winners are not judged. Yes, but did Apollo 8 and others fly around the moon?

Let's see what evidence NASA has provided to support the presence of this and other "lunar" Apollos near the Moon. For us, separated from those events for decades, in some ways it will be even easier to conduct such a consideration, because we do not experience the emotional pressure that all participants in the lunar race experienced.



"Images of the cockpit interior, crew work" mentioned by B. Chertok will not be considered at all: this can be filmed in flight in near-earth orbit, or simply in the studio (Fig. 4).

Fig . 4 . In the cockpit of Apollo 8

Moreover, *"the situation in the flight control center"* is not of interest as evidence either . It can be seen in ill.1b, but there is nothing "from the moon" in it. We are interested in what the astronauts presented that, firstly, characterizes the flight to the Moon, and, secondly, what would not have been done by automatic spacecraft by that time (Sections 4 and 5). We'll focus on the A-8 flight, but let's not forget the other Apollo. Let's get acquainted first with what is described on the NASA website " Apollo Image Gallery " about the A-8 flight [9].



General view of the site about "Apollo 8"

According to the description of the site [9], it contains "106 best and unique photos." In fact, the vast majority of these photos can not be called unique because it used **on** most of the ones filmed on Earth.

Dozens of monotonous photographs show the crew of the ship: in blue spacesuits, in white spacesuits, in casual clothes, with ties, etc. (ill. 5a). A series of images show astronauts donning helmets (Figure 5b). And these are not all pictures of banal content.

Fig. 5. 96 photos from 106 - everyday life of astronauts and rocket launch

a, b) dozens of photographs of the A-8 crew; **c)** 14 photos of the same type of a launching rocket

In contrast to these ordinary pictures, the photographs of the launching rocket are of course interesting. The site contains about two dozen photographs of the rocket (ill. 5c). Many of them are very effective, but they are not confirmation that the A8 flew to the Moon. In addition, these images often duplicate each other, so one gets the impression that the site's compilers lack material on the most important part of the flight. It is interesting to see what exactly says about the flight to the Moon and around it. But on this topic, the selection of pictures posted on the site is strikingly scanty.

Only 7% of all photographs are devoted to the flight to the Moon and around it. There are two types of the last stage of the rocket on the site [9] against a silent dark background. We do not even present them, since in Section 5 it is enough said about the absolute lack of evidence of such images. There are two types of complete Earth on the site. One of them is shown in Fig. 6a.

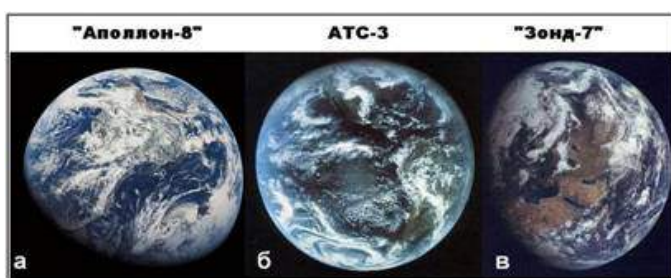


Fig. 6. Nothing special -1.

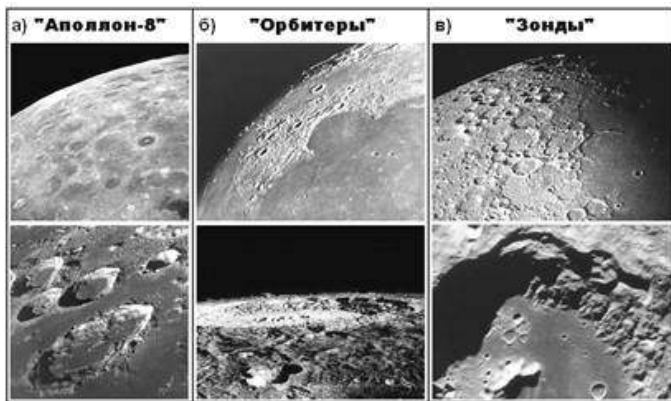
Full Earth views captured:

a) allegedly by astronauts A-8

b) American satellite ATC-3

d) Soviet ship "Zond-7"

But, by the time of the A-8 flight, NASA already had color images of the entire globe from the ATC-3 satellite (Fig. 6b). The view of the Earth taken by the unmanned "Zond-7" (ill. 6c) is no worse. So the snapshot of Fig. 6a does not fundamentally differ from the snapshots taken by automatic machines (Fig. 6b, c).



There are three types of lunar surface on the site, two of which are shown in Fig. 7a. They should indicate the approach of A-8 to the Moon.

Fig. 7. Nothing special -2.

Moon views captured:

- a)** supposedly astronauts A-8;
- b)** satellites "Orbiter - 1 and 5";
- c)** "Probes-7 and 8"

But by the time the A-8 flew, NASA had thousands of Orbiter images of the Moon, such as those shown in Figure 7b. And the photographs of the Soviet "Probes" (ill. 7c) are no worse.

Finally, there are three high-quality images of the Earth rising above the lunar horizon on the site, submitted on behalf of astronauts A-8 (Figure 8). *"The Apollo 8 crew members were the first people to see the Earth rise over the lunar horizon,"* is the original NASA caption on these images.

But it is useful to remember that NASA received the first images of the Earth over the lunar horizon from Orbiter-1 more than two years before the A-8 flight (Section 4). And the photographs received from the Soviet "Probes" (Fig. 9), in principle, do not differ in any way from the photographs (Fig. 8). So the USSR could have announced that Soviet cosmonauts were flying around the moon. It was only necessary to show how our cosmonauts start from Baikonur, and after their return from near-earth orbit, present the lunar photos delivered by the Probes, as proof that the cosmonauts flew around the Moon

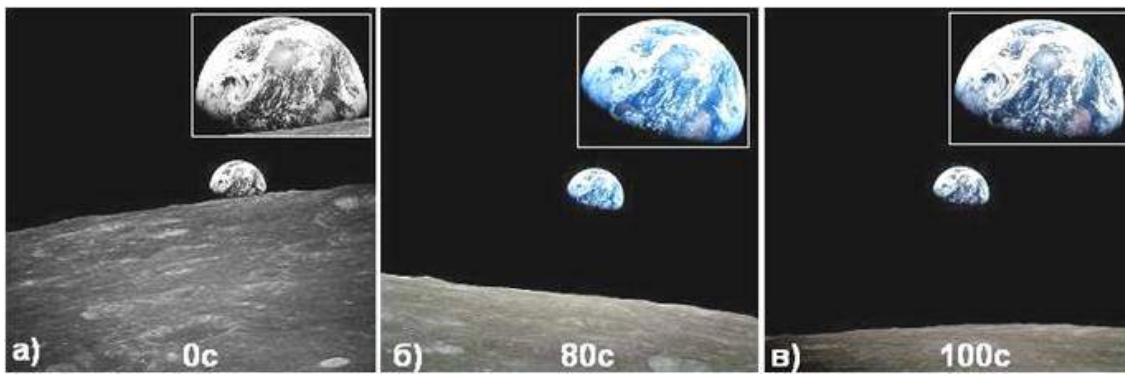


Fig. 8. It is supposedly filmed by people.

Three images of one Earth rise, allegedly taken by astronauts A-8

What else, what makes the pictures from the machines with the pictures of Fig. 8 "related" is the fact that there are not many of them: "one, two, and it's gone. Let us emphasize that we are talking about a small (piece by piece) number of high-quality images. (We learn below that NASA has a lot of low quality sunrise images.) For automata, the small number of high-quality photographs is understandable: the corresponding automatic photo-television technology is very inefficient (Section 4). But why are astronauts no different from automata in this regard?



Fig. 9. It was filmed with machine guns. Images of Earth swoops taken by the automated spacecraft Zond-7 and 8

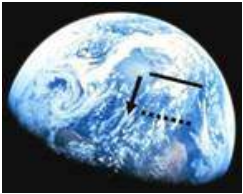
In general, to confirm the fact of the flight of astronauts to the Moon, simply presenting photographs of the Earth's rise (Fig. 8) is not enough. I would like to get some evidence that the pictures of Fig. 8 were taken by astronauts, and not by the next Orbiters. Therefore, let us begin a thorough study of precisely the "lunar" pictures taken according to NASA by the astronauts of the "lunar" "Apollo".

Earth rise over the lunar horizon

If astronauts orbited the moon 10 times, why did they photograph only one Earth rise?

The number of high-quality images of the Earth's rises (and sets) is an important feature that distinguishes the capabilities of astronauts from the

capabilities of automatic vehicles. So "Probes", each of which went around the moon only once, could bring to the Earth photographs of only one approach of the Earth. The Orbiters, despite the fact that they circled the Moon for a long time, had extremely limited possibilities for transmitting high-quality images of the Earth's rising and setting. This was hindered by the already mentioned low productivity of the photo-television technique, and some other circumstances outlined below. But astronauts could "click" and bring to Earth dozens, if not hundreds of such high-quality images.



According to NASA, Apollo 8 has orbited the moon 10 times. Consequently, the astronauts had the opportunity 10 times and in many images for each sunrise to show us this breathtaking picture. But astronauts A-8 for some reason presented only three high-quality images of Fig. 8 and they all relate to only one sunrise. It is very easy to verify the latter .

Fig. 10. The image of the Earth's cloudiness is a unique autograph of the time.

...

The arrow indicates the magnitude and direction of the displacement of the cloud pattern within 2 hours due to the rotation of the Earth (fragment of Fig. 8b)

If these frames belonged to different sunrises and were accordingly shot at different revolutions around the Moon, then the type of cloud cover of the Earth on them would be noticeably different due to the rotation of the Earth. Even during one revolution around the Moon, this view will change very noticeably. In the orbit that, according to NASA, A-8 circled the Moon, one revolution around the Moon takes 2 hours. In two hours, the globe will complete 1/12 of its daily revolution, and all the details on the visible disk of the Earth will noticeably shift - approximately as shown in Fig. 10.

But since in all the frames of Fig. 8 the cloudiness pattern of the Earth is the same, this suggests that we have three frames of one Earth rise in front of us. By the difference in the height of the Earth above the lunar horizon, you can even establish that they were captured within 100 seconds (more on this below). Considering that there are no other similar frames on the site [9] , then it can be noted that the astronauts, if they were taking pictures of Fig. 8, behaved surprisingly restrained in circumlunar orbit: they spent 100 seconds to obtain three high-quality images of sunrise, and that's ...



Astronaut Bormann presented a snapshot of this sunrise to US President L. Johnson at a ceremony after returning to Earth (Fig. 11a). This single sunrise graces the screensavers of many NASA Moon films (Figure 11b). Isn't this too modest proof for such a historical event as the first manned flight around the Moon?

Fig. 11. One and the same shot in all guises

a) Astronaut F. Borman presents a photograph of the Earth's sunrise to the President of the United States L. Johnson

b) the screen saver of the movie "Apollo 8"



Perhaps, to prevent such questions, the following unusual story appeared: "When the crew commander, Colonel Bormann first saw the bright blue disk of the Earth rising above the lunar horizon, and asked Anders for a camera, the punctual major answered briefly: This is not planned. We managed to convince him with difficulty" [10] .

Fig . 12 . Strict major and obedient colonel

Since when have majors command colonels among the American military (Fig. 12)? As the defenders *put it*, "NASA was well aware that the images were the most important documentary material" (Section 4). This is also evidenced by the full dignity of the original NASA signature under the images of Fig. 8: "The crew members of Apollo 8 were the first people to see the Earth rise over the lunar horizon"? And how can you imagine that NASA did not plan to shoot such images? In general, a rather absurd story.

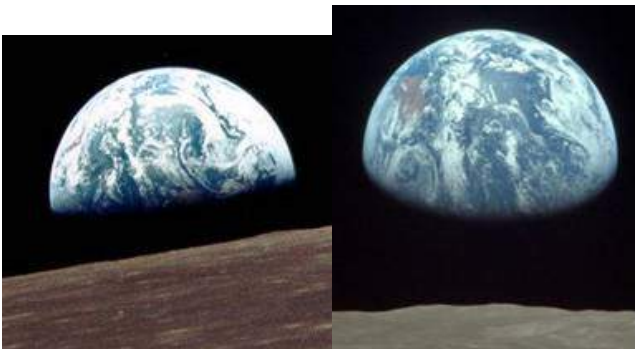
Meanwhile, the lack of high-quality images of the Earth's risings did not leave the subsequent Apollo, and it took on such an acute character that NASA propagandists had to use the same sunrise image to illuminate the flights of two lunar Apollos: A-10 and A-11.

One sunrise for two flights

Figure 13 shows a snapshot of Earth rise from the special issue “ A Look ” [11]. It is shown there without a signature and comments, and since the magazine is dedicated to the A-11 flight, this picture is also perceived as taken by the A-11 astronauts. And in our time, the same image titled *"Earth Rise as seen from the Apollo 10 spacecraft"* appears on the site [12] , as taken by their predecessors in the A-10 flight. That is, in August 1969, NASA used a snapshot from one flight (A-10) to illuminate another (A-11).

At the same time, at the present time on the site A-11 [13] there are six high-quality images of the sunrise of a completely different type at once (Fig. 14). Why did NASA issue only one and only one and, moreover, "alien" species for publication in the hot issue of the special issue?

According to skeptics, this oddity has a simple explanation: at the moment when the A-11 astronauts allegedly returned from flight, NASA had a single, previously unpublished high-quality image of the sunrise. This was a snapshot of Fig. 13 and was "sent" by one of the Orbiters. He had to be inserted into the special issue. And a little later "Orbiter" sent new images of the new rise of the Earth. And then the snapshot of Fig. 13 was uploaded to the site A-10 [12] , and Fig. 14 and five of its brothers - to the site A-11 [13] .



Ill.13 (left).

The only image of the Earth's rise, published in August 1969 in a special issue dedicated to the A-11 flight.

Currently present on the site A-10 [12]

Fig. 14 (right). One of the six frames of the Earth's rise, which are now present on the A-11 website [13] and which were not in the special issue dedicated to the A-11 flight.

Cartoon "Rise of the Earth"

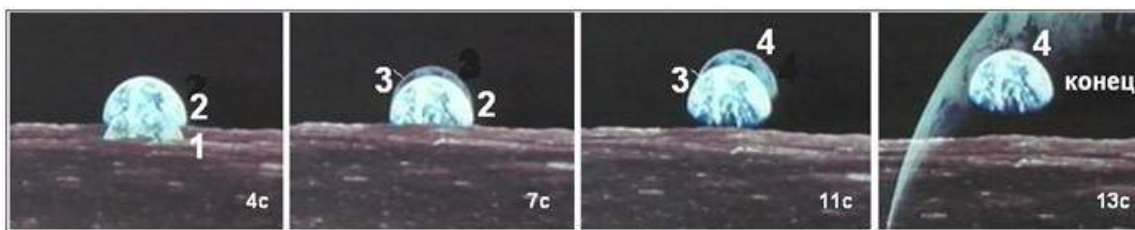


Fig. 15. The episode about the rising of the Earth in the movie " The Eagle has landed " edited as a cartoon from only four shots

As said, the site A-11 currently has six high quality footage of one Earth rise. Four of the six frames used in the film NASA " The Eagle has landed " («Eagle landed») [14], which shows the rise of the Earth above the lunar horizon . ("Eagle" is the proper name for the lunar module A-11). Replacing them by the method of "influx" of the next shot to the previous one, the directors depicted the rise of the Earth for 13 seconds as if in dynamics (Fig. 15). This is a fairly common artistic technique when creating cartoons, but why was it needed? After all, astronauts A-11, according to NASA, were equipped with movie cameras and could shoot a full movie episode of sunrise? However, for some reason, such was not found in NASA materials. And such a cartoon can be composed from the pictures taken by "Orbiter".

There are many more low-quality sunrise images than high-quality ones. The earth does not stay in the frame.

According to the story above, Colonel Bormann worked under the strict supervision of Major Anders, who only allowed him to take three high-quality images of the Earth's rise (Figure 8). However, how then can one understand that in addition to them, on another site there is a whole series of twelve frames of the same sunrise, only of much worse quality ([15] from AS 08-14-2385 to AS 08-14-2396). Four consecutive frames from this series are shown in Fig. 16. Could it be that the colonel was taking them off from under the floor?

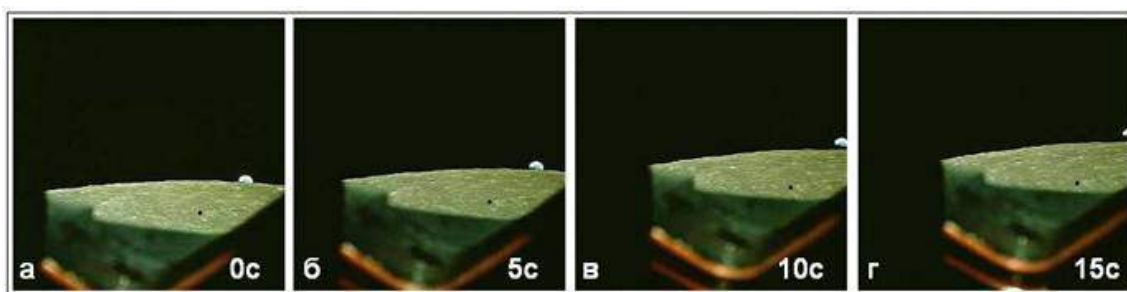


Fig. 16. Man doesn't work like that. The ground from frame to frame leaves "out of the lens"

A series of low-quality images of the Earth rising, allegedly taken by astronauts A-8.

And this situation takes place on the sites of all the lunar "Apollo": single high-quality images of sunrise are accompanied by dozens of low-quality images on the same topic.

So, for A-10, there is only one high-quality frame for 40 low-quality sunrise frames **[15]** (Fig. 13). In total on the most extensive site **[15]** there are about three hundred low-quality frames of the Earth's rise, referring to all the "lunar" "Apollo". But the high-quality images of the sunrises on the demonstration sites of NASA **[16]** - ten times less: about 25 for all Apollo. It turns out, on average, 3 high-quality images per "lunar" "Apollo", although according to NASA, 8 "lunar" "Apollo" made a total of 373 revolutions around the Moon **[3]**.

How could this happen if all these pictures were taken by astronauts who are both trained in photography and armed with excellent photographic equipment? But automatic devices can transmit images of different quality from the Moon if different methods of transmitting images to Earth are used. Moreover, the law applies to them: the higher the efficiency of image transmission, the more images are transmitted to the Earth in one and the same time, the lower the image quality (Section 4).

If we return to the presented four frames of Fig. 16, then two more strange circumstances can be noted.

First, the rising Earth on them leaves the frame from shot to shot, but we do not see an attempt to "correct" the direction of the lens. In section 5, on a similar occasion, it was noted that a person does not take pictures like that, since he will immediately correct the direction of the lens. But an automatic camera can make such a series if its lens orientation system does not work well.

Secondly, the entire series of 12 frames was shot with some kind of punctuality in time, strange for a person (but not for an automaton): the frames follow each other with the same interval of 5 seconds. Although NASA does not report this interval, it is quite easy to recognize it by studying the frames of the specified series. The angular diameter of the Earth in the sky of the Moon is approximately 2° . Knowing this, it is easy to determine that in Figure 16d the Earth rises by just about 1° .

According to NASA, A-8 makes one revolution (360°) around the moon for 2 hours i.e. in its movement along the orbit passing one $^\circ$ of the arc for 20 seconds. The Earth would rise at exactly the same speed. And as for the time of recording four frames ill.16 Earth has risen by 1° , it means that it took the same 20 seconds. Therefore, the frames in Fig. 16 follow each other with an interval of 5 seconds. It is interesting to note that it is with such an interval in time that the images transmitted, for example, by the TV camera "A" of the "Rager", follow one after another (section 4).

We can say that low-quality images (Fig. 16), taken according to NASA by astronauts, have features that are easier to understand if we assume that they were taken by automatic machines.

A person trained in photography doesn't work like that

Where did the calls go?

As you know, there are no sunrises without sunsets. Astronauts A-8 for 10 revolutions should have seen not only 10 sunrises, but also 10 approaches of the Earth. The first of all people to see the setting behind the lunar horizon - isn't that a reason to grab a camera? But astronauts A-8 did not provide a single picture of the setting Earth. In the general "warehouse" of lunar images **[15]** Among the thousands of images reviewed for all the "lunar" "Apollo" was found only a few very low-quality images, which supposedly filmed the Earth's setting over the lunar horizon. A fragment of one of them is shown in Fig. 17. The image on it is so low-quality that one cannot be sure even that in front of us is really the Earth in the lunar sky, and not the crescent of the Moon, peeping out from behind a cloud in our native sky. Compare this image with the images of the Soviet Probes (Fig. 9) and it will become clear that there is no need to seriously discuss such images as Fig. 17.



Fig. 17. What it is?

Fragment of a NASA image designed to show the approach of the Earth, allegedly taken by astronauts A-17

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Watching the NASA film, "The Moon: old and new" **[17]**, we come across a short episode of the Earth's setting over the lunar horizon. Figure 18 shows one frame from this sequence. The blue arrow and the inscription "sunset" are put down by the author and show what cannot be conveyed on a static frame - the direction of the Earth's movement relative to the lunar horizon. The picture also marked with the numbers 1,2 and 3, three noticeable details on the lunar surface, which will be useful in subsequent analysis. The poor quality of Fig. 18 cannot be improved as it is determined by the poor quality of the episode itself. The image throughout the sequence is blurry and out of focus.



Fig. 18. Sunset made from sunrise

(shot from the movie episode)

Nevertheless, it would seem that the very fact of the presence of an episode of the call significantly reduces the severity of the question posed. However, as it is easy to be convinced, before us - another "artistic" reception from the side of NASA. This "entry", oddly enough sounds, is made from sunrise. To establish this, we take from the NASA website [12] a snapshot of the sunrise of Fig. 19 under the familiar name "Earth rise as seen from the Apollo 10 spacecraft." The above image of Fig. 13 is nothing more than a fragment of Fig. 19. If above this shot of the sunrise was used to propagate the non-"own" flight of the A-11, now it is used to get frames of the movie in question. A fragment of interest is outlined in white in Fig. 19.

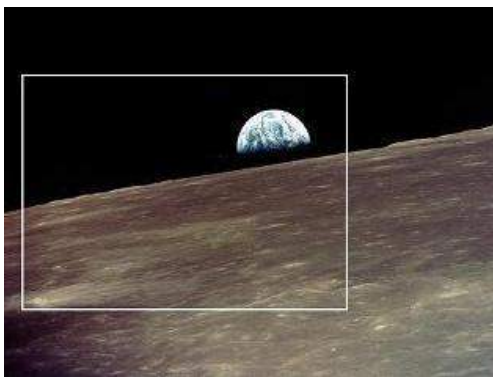


Fig. 19. The Earth rise snapshot used to create the sunset episode Fig. 18

Cut out the selected fragment from Fig. 19, flip it from left to right and stretch it to a scale that approximately corresponds to Fig. 18. You will get what is shown in Fig. 20 (the yellow arrow emphasizes the fact that we have a view of the rise of the Earth). As it is easy to see, all the main features - the pattern of the Earth's cloudiness and the marked characteristic features of the terrain in Fig. 18 and Fig. 20 coincide. This indicates that the considered "approach" is "made" on the basis of the specified sunrise frame. Several measures have helped to keep this operation unnoticed. From the original frame (Fig. 19), only a part of the image was taken and mirrored. The images of the "entry" are given in a changed color and with a degraded quality in relation to the original material - a high-quality image of the sunrise Fig.19.



Fig. 20. A fragment of the sunrise image Fig. 19 coincides with the sunset frame Fig. 18

The just revealed fact of the substitution once again testifies that in the NASA archives there are no frames of the Earth's setting behind the lunar horizon, which could be imagined as taken by astronauts.

The lack of photographs of the approaches is an important circumstance, since NASA, it seems, could not entrust the automatic Orbiters with the simultaneous shooting of both sunrise and sunset.

According to NASA, Apollo circled the Moon in low (~ 110 km) circular orbits **[18]**. When moving along such an orbit, the astronauts would see both the rise of the Earth and the setting of the Earth, being at the same height above the Moon (Fig. 21).



Fig. 21. The curvature of the lunar horizon at the rising of the Earth (**a**) and at its setting (**б**) for astronauts would look approximately the same

The "Orbiters", on the other hand, circled in highly elongated orbits with a change in altitude from several tens to several thousand km (Section 4). Therefore, they "saw" images of the Earth's rising and setting from significantly different heights (Fig. 22).

Let, for example, the Orbiter's orbit is planned so that the Earth rises at the moment the satellite passes the lowest point of the orbit (point "a" in the diagram of Fig. 22). Then, in his photograph of sunrise, we will see the Earth against the background of a close lunar surface and an almost straight horizon line (Fig. 22a).

Such a picture will not differ from what astronauts would see from their low circular orbit (Figure 21a). Therefore, the photographs of the rising of the Earth, made by the "Orbiter" from the perilune, could be attributed to the authorship of astronauts.

But the Orbiter will shoot the Earth's approach at point "b" from a much greater distance, and this will be seen by the greater curvature of the lunar horizon and the reduced size of the lunar mountains and craters (ill. 22a). Such pictures cannot be shown. They will "give out" that the apparatus producing the survey did not move in the circular orbit declared by NASA for all Apollo "s." And immediately the thought of an automatic photographer may arise.



Fig. 22. The curvature of the lunar horizon at the rising of the Earth (**a**) and at its setting (b), taken from the "Orbiter", would look significantly different

So, if NASA decided to use the Orbiters and with their help depict the presence of astronauts in circumlunar orbit, then with the Orbiters NASA could show either only sunrises or only approaches. This is what we observe: on the NASA sites for all "lunar" "Apollo", with a few rare indistinct exceptions (like Fig. 17), only sunrises are presented.

At this conclusion, the study of sunrise images ends. Let's see what the views of the nearby lunar surface look like, which, according to NASA, numerous lunar astronauts filmed while flying over the Moon.

Nearby lunar surface views

TV shows from Apollo 8: why broadcast bad images when you know how to broadcast good ones?

Let us recall what rather high-quality images of the close lunar surface were transmitted in 1965 by automatic Rangers during their fall on the Moon (Fig. 23a). And now, 3.5 years later, according to NASA, Apollo-8 flies to the Moon, from the board of which it is no longer automata, but people are broadcasting images of the approaching lunar surface. Figure 23b shows one frame from a TV show **[19, 20]**. On it, judging by the blurry ring-shaped spots, a close lunar surface is shown. Such are the quality of all frames from the TV show in question .

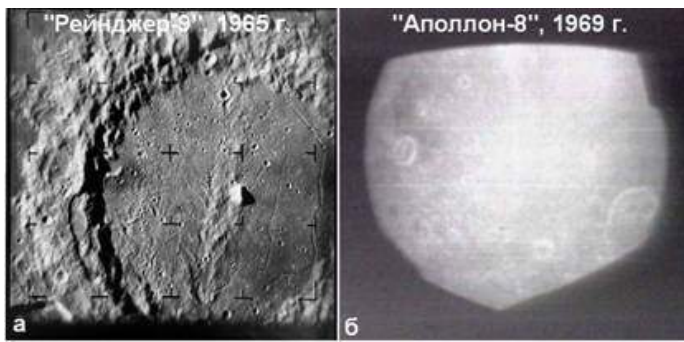


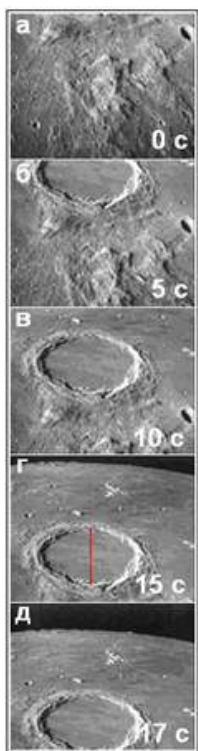
Fig. 23. Why transfer bad images when you know how to transfer good ones?

a) TV image of the lunar surface transmitted by Ranger-9 3.5 years before the flight of A-8

b) a television image of the lunar surface, allegedly transmitted from Apollo 8

The fact that the image quality is so low looks strange. Three and a half years have passed since the rapid progress of comic technique and apparatus. It is not a small automatic Ranger that flies to the Moon, but a large ship with more powerful energy, which is essential for long-range radio communications. The TV camera is directly controlled by a trained person. And with all these favorable factors, the quality of the TV broadcast has deteriorated sharply? Why?

At this point, during the discussion of the work, one respected colleague objected: *"but the TV broadcast of the Ranger was conducted at a frame rate of 1 frame per 5 seconds, and the TV broadcast from the Apollo board - at a frequency of 10 frames per second, i.e. the difference is 150 times - this explains the deterioration in image quality. I suppose you shouldn't blame NASA for the poor quality of TV programs. "*



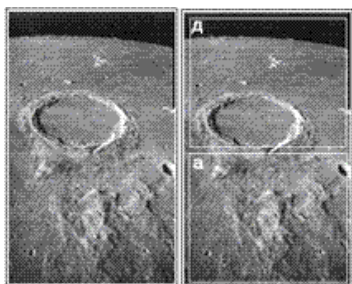
However, what was the need to transmit images of the lunar surface at 10 frames per second? The approaching moon does not jump in the frame like a grasshopper, and a frequency of 1 frame in 5 seconds would be more than enough. It was enough to take on board the A-8 the television equipment from the Rangers so that the earthlings would see the close lunar surface almost as well as the astronauts. And since this has not been done, the conclusion suggests itself that NASA is fooling people by showing such "TV programs" as evidence of a flight to the Moon.

However, no matter how to explain the poor quality of the images, the TV frames considered cannot serve as evidence of the A-8 flight near the Moon. With this quality, any picture of the lunar surface can be used for a television camera in kind, and no one will be able to check it.

Such a video clip can be made from one photo.

"What a fantastic view ... This video clip shows a beautiful view of the Moon from a circumlunar orbit. It is taken from the NASA film Apollo 15: Among the Mountains of the Moon - this is how NASA presents an 18-second video clip [21], five frames of which are shown in Figure 24.

Fig. 24. Stills from the video clip "What a fantastic view ..."



At the 5th second, a large crater appears in the frame (ill. 24b). For 12 seconds, he floats through the frame. At the same time, the complete

impression is created that the ship is flying over the Moon, and new views are opening up from its window. But such a clip can be made by any reader who has a video camera one picture of the Moon. Please note that the type of crater (size, degree of ellipticity) is the same in all frames. This suggests that it was filmed practically from one point, from one direction, from one distance. Such a picture can be obtained by moving only one photograph in the field of view of the lens of a movie camera - for example, such as the one in Fig. 25. The lower part of the photograph will "provide" the frame of Fig. 24a, and the upper one - the frame of Fig. 24d. And between them you can get all the intermediate frames necessary for editing a continuous video clip.

You can leave the photo still, and shift the field of view of the lens along it. The result will be the same. One thing is clear: since the clip, shown on behalf of the A-15 astronauts, the clip can be made even at home, it does not prove anything in terms of the reliability of flights to the moon.

Fig. 25. The video clip in question can be made from one such photograph
(editing by the author)

"Flight" over the lunar globe?

In the film "For All Mankind" there is an episode [22] lasting 20-30 seconds, where the ship, in its motion in a circumlunar orbit, seems to cross the border of light and shadow (terminator) and switches from the illuminated part of the Moon to the night one (Fig. 26). Near the terminator, a semi-circular structure (1) is visible, which will help to follow the change of light and shadow. In Fig. 26a, the half-ring is still in the illuminated area of the terrain, and after 11 seconds it is dark around it (Fig. 26c).

Such a rapid darkening is surprising, because the Moon rotates around its axis very slowly (in 27 days) and the terminator shifts by only 70 m in 11 seconds . And, if in 11 seconds the shadow covered the previously illuminated section of the lunar terrain, then the section itself should have dimensions of the order of tens of meters. However, it is easy to calculate that from an altitude of 110 km , at which

according to NASA, the A-8 flew over the moon, a view with a horizon range of 600 km opens up . 70 m and 600 km is a very big discrepancy. The second contradiction can be seen if we compare the frames of Fig. 26c and Fig. 26d. In Fig. 26c, darkness almost completely enveloped the area, and suddenly, just 0.16 s later, the area under the ship is brightly lit again (Fig. 26d). As if the Sun decided to jump over the lunar horizon, once again illuminate the area, and then disappear completely. How to understand all this?



Fig. 26. Plaster Moon?

It is known that NASA created lunar globes of unprecedented size (Fig. 27) [23]. If we assume that the frames of Fig. 26 show not a real lunar terrain, but a section of such a lunar globe, then the unexpected enlightenment of the "terrain" in Fig. 26d can be explained by a slight violation in relation to the direction of the light beam, which can occur even with a slight accidental jolt or globe or illuminator.

And the fact that American directors without any announcements can show its dummy instead of the real moon during the supposedly documentary film is known.

Here is what Wikipedia [24] tells about some of the techniques used in the filming of the film "For All Mankind": *"There is an episode in the film with the view of the moon appearing in the window of the ship. Director Al Reinert says they didn't actually have a matching picture. Therefore, the film crew went to the Space Center. Johnson (to the museum), overlaid a photo of the moon on an image of the hatch cover (ship) and inserted it into the film to accompany (astronaut) Ken Mattingly's description of what he saw on his flight. "*

So, without a shadow of embarrassment, it tells about a fake in the film, on the credits of which it is written: *"Filmed on location."* True, strictly speaking, in the credits it is not specified on what nature. By naivety, one might think that it was filmed "on the nature of the moon", that is, on the moon itself and in flight to it. But it turns out, filmed in a natural space museum.

In any case, the noted two contradictions in the intersection episode do not lend credence to NASA's lunar films.

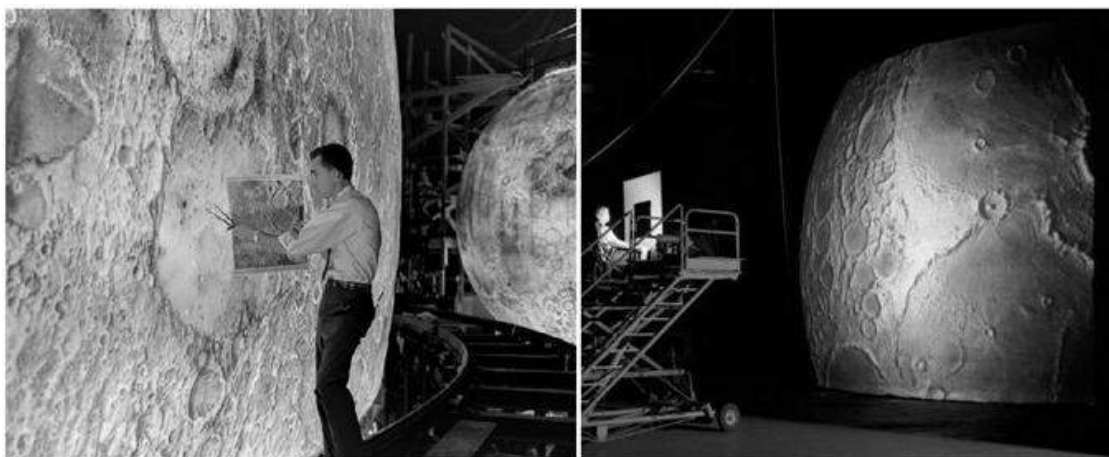


Fig. 27. NASA Moon Globes

Where is the movie about the flight over the Moon "from terminator to terminator"?

Gagarin was in space for only 1 hour, and he had no time for cinema. But already the second cosmonaut G. Titov took a high-quality movie camera into flight [25]:

"On August 6, 1961, Vostok-2 was launched with pilot-cosmonaut G.S. Titov. A professional film camera was installed on the ship, modified for on-board filming. A 10-minute survey of the Earth was made through the ship's windows. The resulting high-quality footage was widely demonstrated on television and cinema screens. "

And all this was 7 years before the Apollo 8 flights. Astronauts A-8, according to NASA, circled above the moon for 20 hours. There was enough time for filming. And according to a NASA report [26] *"Four cassettes of 16mm color film were shot through the window. This turned out to be enough to shoot a segment from terminator to terminator... the surface was shot with good spatial resolution and the shutter speed was right. "*

The entire flight over the illuminated hemisphere takes approximately 1 hour. From a flight altitude, a view opens up about a thousand kilometers from horizon to horizon. Filmed on film, it would be a gripping picture. And the second and his colleagues watched more than a dozen films about the flights of the "lunar" "Apollo", including the film about the flight of the A-8 [20], and could not see anything like a full-fledged film "from terminator to terminator". Instead, a mosaic of a number of lunar views is shown, sometimes of satisfactory quality, but more often very muddy and illegible. It looks like the film is "sculpted" from a small number of individual images from NASA, which were obtained by automatic machines. It is very difficult to get a complete impression of the flight over the Moon from such a film. Compared to it, the four-minute television coverage of the automatic "Kaguya" [27] looks like highly artistic, full-length and high-quality films. And it should be the other way around if, as NASA claims, only during the Apollo 8 flight were "four cassettes of 16-mm color film" filmed through the window. So this proof did not take place either.

Here you can see the handwriting of machines

In general, the strange facts discussed above are in good agreement if we assume them to be the fruits of the work of the American automatic lunar technology already familiar to us, namely:

1) low-quality frames like Fig. 15 were transmitted to the Earth by an automatic apparatus equipped with a "direct" TV camera transmitting images with

a frequency of 1 frame per 5 seconds (as in the case of the “Rangers”).

Sufficiently high performance of such transmissions made it possible to obtain those hundreds of low-quality images of sunrise, which the site is filled with [15]. If the system for aiming the cameras of this device on the ascending Earth malfunctioned, it floated out of the frame;

2) high-quality images of the Fig. 7 type were received and transmitted to the Earth using a low-performance photo-television technique (like in the Orbiters). Therefore, there are much fewer such high-quality personnel;

3) both of the above methods were most likely used on one circumlunar satellite. One of the possible options for the operation of such a satellite “for astronauts” is described in more detail in Section 19.

4) the approaches of the Earth beyond the lunar horizon, possibly captured by automatic machines, were not published by NASA, since they would have produced a sharply elliptical ("not Apollo's") orbit (Fig. 21);

On the site [15] you can find other examples indicating the "automatic" origin of the images presented there on behalf of the astronauts. For example, here are 6 consecutive frames of space blackness, where the frame is filled by the Moon by 5-10 percent in the very corner (Fig. 28).



Fig . 28 . Hasselblad atlas images - the work of non-astronauts

A series of completely black shots can be found in the atlas (Fig. 29a), as if the astronauts had completely forgotten what they were filming. There is a series of blown-out frames (Fig. 29 b-d). And the series of Fig. 29d is interesting in that the camera began to rotate rapidly. If it was in the hands of the astronauts, what was it like for them?



Fig . 29 . Hasselblad Atlas Pictures - The Work of Non-Astronauts (continued)

Man doesn't work like that. Having made a mistake, he corrects it in the next frame. In the atlas **[15]**, **the** mistakes come in series, as if the photographer is waiting for a command to correct. Well, if this photographer is an automaton, then until he receives a command from the operator, he may not "correct". All this indicates that the images presented in the Hasselblad atlas on behalf of the astronauts were in fact transmitted to Earth via live television by spacecraft.

Summarizing all our analysis of both the views of the Earth above the lunar horizon, and the views of the close lunar surface, and the final images, it can be noted that no convincing evidence has been found that all these illustrative materials were made by astronauts. On the contrary, there are numerous indications that this is all the result of robotic spacecraft.

Thus, NASA's claim about the manned flight of Apollo 8 and other Apollo around the Moon is not supported by convincing evidence.

Application.

First Director of NASA ([28]). *D. Webb was born in 1906 . He began his career in Washington in 1932 . In 1961 he was appointed director of NASA. Under his leadership, the agency began working on the Apollo program - the landing of an American on the moon. For 7 years up to October 1968, Webb successfully fought to support NASA's efforts to achieve this goal. Under his leadership, NASA has evolved from a group of loosely coupled research centers into a coordinated organization. He played a key role in the creation of the Houston Manned Space Flight Center.*

Webb learned from the CIA that the USSR was developing its own heavy carrier for a manned lunar mission, and ordered the preparation of the Apollo 8 flight. Webb left NASA in October 1968, just as Apollo was approaching its success.

After retiring from NASA, Webb remained to work in Washington. In 1981 he was awarded the prestigious US Military Academy award for his loyal service to the country. He died in 1992 at the age of 86. Buried at Arlington Cemetery (very honorable - A.P.) . In 2002, one of NASA's large telescopes was named in his honor (an honor that very few Americans have received - A.P.).

7

15-19 minutes

To the moon. Chapter 7.

Has the lunar module been tested?

Ahead - landing on the moon. It's time to remember if the lunar module has been tested enough?

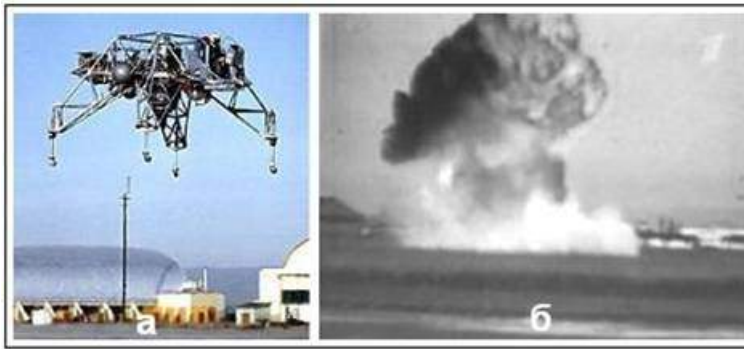
Skeptic: "landing and takeoff without a background"

Six times landed on the moon and took off from it lunar modules. According to the author [1], this is a very unexpected example of multiple, trouble-free functioning of the most complex system, which has never been tested before in those real conditions for which it was designed. Here is an abridged excerpt from his article with a slight correction of chronological inaccuracies made according to the data [2]:

"The Americans are sending robotic stations to the Moon. Get to the moon only from the twelfth time in 1962 ("Ranger-4"). The Soviet Luna 2 hits the moon in 1959. In 1966- 68 g z. 5 out of 7 sent Surveyors (weight - 0.3 tons) gently land on the moon. So far, everything is plausible. Failures alternate with successes. Not a single American automated station takes off after landing. This is all that the Americans had before manually landing the 15-ton apparatus (lunar module) and the subsequent manual takeoff. The moon landing and takeoff turned out to be without prehistory. "

As you can see, the opinion is very skeptical. But there are other opinions as well.

Defenders: "the entire landing process was imitated"



Ill.1.

Moon landing training and its ending

a) training on the simulator of the lunar module,

b) the end of the workout,

There were training sessions on Earth - write defenders V. Yatskin and Yu. Krasilnikov [3] :

"A simulator specially built for astronauts flew on Earth (Fig. 1a). There were four or even five of these simulators. Three of them crashed (ill. 1b). On one occasion, Armstrong was forced to eject . But thanks to numerous flights on these simulators, as well as the training of piloting skills on ground flightless simulators, all astronauts confidently coped with the control of the lunar module. "

"Nobody has tested the lunar module on Earth. It cannot fly with the earth's gravity - the thrust force of its engine is much less than its weight, so it simply will not get off the ground. Therefore, it could only be tested in space. There were whole tests before the first landing. 3. First, it was tested in unmanned mode during the Apollo 5 flight in January 1968. ... Then there were two more manned tests - in near-earth orbit during the Apollo 9 flight and in the lunar one during the Apollo 10 flight '". Let's get acquainted with the information about these tests.

Not tested for the main purpose

According to NASA, in space, the lunar module was first tested in unmanned mode in flight with the code designation "Apollo 5". Here is what Y. Golovanov tells about these tests [4]: *"... the engines for soft landing on the Moon worked only 4 seconds instead of the prescribed 39. Repeated switching on did not give anything. The lunar lift engines passed the test. In general, from the flight of "Apollo-5" - as it was called - the testers left the impression of unfinishedness, full of confidence that the lunar cabin would work well for the Moon, they did not have. "BUT where does the confidence come from when the engine is running 10 times less than it should be? It will not extinguish the speed of falling to the Moon at all, and after hitting the surface with a speed of ~ 1 km / s, nothing will be left either from the astronauts or from the module.*

After such a failure, it would seem that it was necessary to carry out at least one more, but necessarily successful unmanned flight, and only after that put

people in the lunar module . But, as reported by NASA, the next Apollo (No. 9), flying in near-earth orbit, conducted manned tests of the lunar module **[5]** . Here is what Y. Golovanov tells about this **[4]** : *“Soon after the launch and entry into low-earth orbit, the astronauts had to make rather complex evolutions with the module ... McDivitt and Schweikart got into a lunar boat and set sail from the ship. During these tests, the entire process of landing on the moon was simulated: first they descended, and then, dropping the landing stage, flew "home" to Apollo. The maximum distance of the modules from each other exceeded 175 km. ”*

In the opinion of BE Chertok **[6]**: *“The Americans performed a very risky experiment. In the event of a failure in these systems, two cosmonauts in the lunar cabin were doomed.”* And, nevertheless, according to NASA, the A9 successfully tested the lunar module. The A-10 flight, as Y. Golovanov put it , in relation to the tests of the lunar module, was "the same" compared to the A-9 program, but it took place in a circumlunar orbit.

Let us assume for a moment that the information from NASA, which Y. Golovanov retold, is correct. And can all this be called, as "imitated the entire process of landing on the moon"? Unlikely.

The fact is that there were no tests for the main purpose of the lunar module: for the actual landing and for the subsequent takeoff. Landing is one of the most dangerous stages of space flight **[7]**. On Earth, after the crash of the primitive Armstrong simulator , a parachute saved. Parachutes do not work on the moon. Shortly before the start of the "lunar" "Apollo" flights, two of the seven "Surveyors" crashed while landing on the moon **[2]**. Surveyor is 50 times lighter than the lunar module and much simpler in design. Moreover, the Surveyors did not take off. NASA had the only opportunity to test the lunar module for landing and takeoff from the Moon: to do it in automatic mode. But such tests, as noted, were not.

How, then, did the astronauts successfully land on the moon six times and take off from it six times ? Their courage and amazing luck are surprising. But the surprise will disappear if we assume that, in fact, no modules have flown to the moon. Then real tests are not needed either. They can be simulated from start to finish. The basis for such decisive doubts is provided by a careful study of some film materials about the A-9 flight.

Simulated tests?

Figure 2 shows the author's montage from two NASA images. In the foreground is the A-9 ship with a docked lunar module. Astronaut D. Scott leaned out of the ship's hatch. At this time, another astronaut, R. Schweikart, allegedly also went into open space and was placed on the site of the lunar module (inset). *"Scott, leaning out of the hatch, filmed Schweikart, who ... was also filming" **[4]** .*



Fig. 2. Ship A-9 with a docked lunar module,

astronaut D. Scott leaned out of the hatch; **inset:** astronaut R. Schweikart stands on the footboard of the lunar module

Below are shots from the movie episode (ill. 3,4,5), which, according to the described plot, was shot by the astronaut Schweikart [8]. In this episode, astronaut Scott, leaning out of the hatch, performs some action. We are not interested in these actions, but in the white patch that is visible not far from the astronaut's hand. (In Fig. 3e, another flap is also in the field of view. It is crossed out so as not to distract attention). Let's follow the movements of our flap.

Let's see Figure 3. The moment corresponding to frame 3a is taken as the time origin. In an airless space, nothing prevents objects from moving by inertia, and therefore any object thrown from the ship is removed from it in a straight line. But the flap behaves differently: it quickly (in 0.36 s) moves clearly along an indirect, broken line 1-2-3-4-5. The impression is that he is spinning in a whirlwind of air.

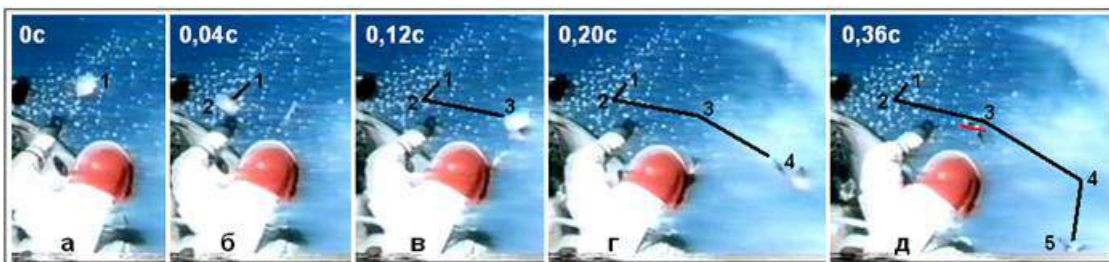


Fig. 3. Air vortices in "space" - 1: the flap thrown out of the cockpit moves in a zigzag

Here is another series of shots on this topic (Fig. 4). Here, another flap describes an almost closed trajectory in just 0.5 seconds. What is circling him if not a whirlwind of air?

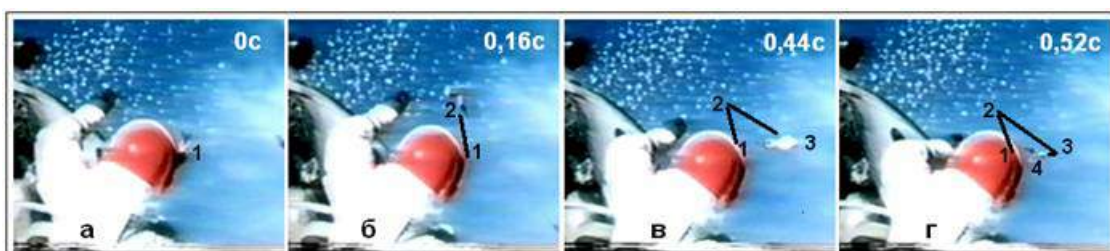


Fig . 4 . Air vortices in "space" - 2: this flap moves in a closed path

In a series of frames in Fig. 5, the flap moves away from the ship (Fig. 5a, b), and then completely disappears behind the edge of the hatch cover (Fig. 5c). After 3 seconds, he returns from behind the hatch cover (Fig. 5d, e), bounces off the astronaut's helmet (Fig. 5f) and disappears from the frame. What made the flap return, if not the movement of air? Strictly speaking, the flaps on frames 5a, b and 5d, e, f can be different: that is, one flap flew away, and another flew in. But this does not remove doubts, because in space all objects thrown out of the ship only move away from it ("what fell from the ship is lost").

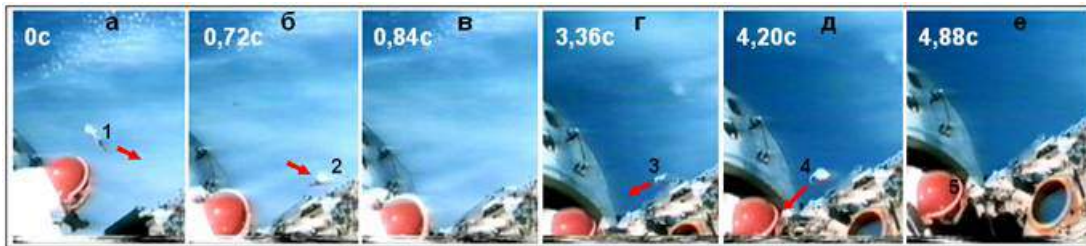


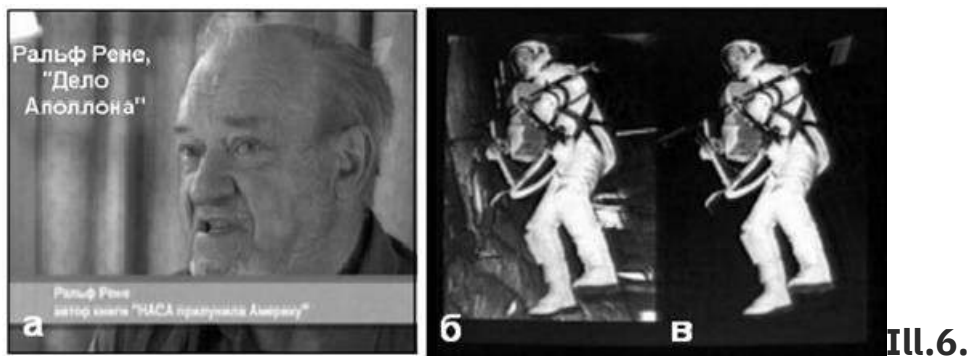
Fig. 5. Air vortices in "space" - 3: this flap returns from "space" to the cockpit

The entire patchwork episode, only partially reflected by the frames of Fig. 3-5, lasts 15 seconds in the film [8] . And, if all this time mysterious vortices are circling around the ship, then **this ship is not in space** . Is NASA capable of showing a simulated spacewalk? And there are similar examples.

Ralph Rene: "Who needs this lie?"

Here is what R. Rene (ill. 6a), the author of the book "NASA Lunned America" [9], says :

“When I started my investigation, I came across a book by the astronaut Collins (Fig . 6a) . It contained a photograph of him training in an airplane in zero gravity (Fig. 6b) and a photo of the spacewalk during the flight of the Gemini 10 spacecraft (Fig. 6c).I took a close look at both of these photos and, although they are different in size and have a mirrored image, it seemed to me that something was wrong here. I went to a professional photo studio and asked them to turn over the photo from the training plane and enlarge the second photo so that both were the same size. This was done and it turned out that both photos are completely identical right down to the inside of the aircraft. That is, both photographs were taken in the same place, namely, on the plane. Collins wasn't hovering in outer space. Who needs this lie? ”



Who needs this lie?

- a) R. Rene talks about the book by M. Collins "Carrying Fire"
- b) M. Collins on the plane during weightlessness training
- c) M. Collins "goes into open space"

More details about such special aircraft are written in section 25. And the answer to R. Rene's question ("who needs this lie?") Can be found if we consider this fact in the light of the then realities.

It is in our time that astronauts into outer space have become commonplace. And 40 years ago, every such exit was an event. Therefore, the reports of NASA about the carried out spacewalks were very worried about the Soviet specialists. Relying on NASA reports, NP Kamanin [11] writes that the Americans have overtaken the USSR in the number of spacewalks, which means "our great lag behind the United States in space." The idea that "space walks" could be depicted using photographs taken on an airplane did not occur to Soviet specialists.

The author of the book, with the help of colleagues, got out the book in question. Fig. 7 shows photographs of the original pages from the book by M. Collins [10]. Everything in it is exactly as R. Rene writes. Both the mirror image, and the different scale of the pictures, and the fact that one picture is on the 5th page of the book, and the other is on the 196-197th page - all serve to prevent the reader from joining these two pictures together in his mind.

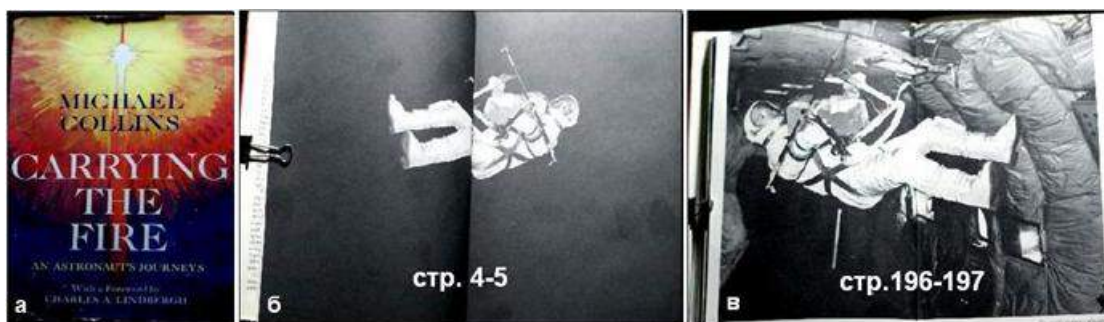


Fig. 7. That no one would have guessed: mirror reflection, different scales and distant pages

a) the book "Carrying Fire"; **b)** M. Collins soars in cosmic blackness **c)** he is during training in an airplane;

The revealed ability of the Americans for such substitutions, plus air vortices discovered around the supposedly space cabin of the A-9 (Fig. 4-6), suggest that the **real flight program of the A-9 did not correspond to the officially announced one.**

One can even doubt that the A9 spacecraft went into space at all, otherwise why was all this imitation of space flight required?

And after that, how can we trust the information from NASA **[5]** about the subsequent tests of the lunar module, allegedly carried out by astronauts A-10 already in lunar orbit? In addition, the illustrative materials about these tests are so scarce **[12]** that they are not subject to any critical analysis: there is simply nothing to study and nothing to criticize.

These are the thoughts that come after a detailed acquaintance with what is called "the whole process of planting was simulated." Well, according to the plot of our investigation, there is nothing left to do but, sitting in an untested module, start landing on the moon together with the astronauts.

Links:

1. " Life ", August 1969 , see un2 "References-2"

2. <http://www.milkandcookies.com/links/4608/>
<http://rutube.ru/playlists/play/699.html?play=37077>

3.

<http://www.telegraph.co.uk/news/main.jhtml;jsessionid=1NVDPGB4IYP4JQFIQMFCIxml=/news/2006/08/14/wmoon14.xml> and <http://www.rambler.ru/db/news/msg.html?mid=8458177>

<http://lenta.ru/news/2006/08/14/tapes/>
<http://news.sky.com/skynews/article/0,,30000-13537349,00.html>

4. <http://lenta.ru/news/2006/08/23/moon> (на русском)

5. <http://www.manonmoon.ru/>

6. [http://rnd.cnews.ru/tech/news/line/index_science.shtml?](http://rnd.cnews.ru/tech/news/line/index_science.shtml?2007/09/10/265541)
[2007/09/10/265541](http://rnd.cnews.ru/tech/news/line/index_science.shtml?2007/09/10/265541) 10.09.07

7. [http : //www.hq.nasa.gov/office/pao/History/alsj/a11/a11.landing.html](http://www.hq.nasa.gov/office/pao/History/alsj/a11/a11.landing.html) see entries 102: 45: 17 and 102: 45: 44

8. Ya. Golovanov, "The truth about the APOLLO program ", M .: Yauza - EKSMO-Press, 2000, chapters 6-8, p. 165, 222, 244, 264-267; see also <http://www.epizodsspace.narod.ru/bibl/golovanov/apollo/obl.html>

9. [http : // www . legislative . nasa . gov / alsj / a 14 / a 14 land 24 fps _ DivX . avi](http://www.legislative.nasa.gov/alsj/a14/a14land24fps_DivX.avi)
see also iv17 "Links-2"

10. ф3 "Links-2"

11. Yu. Krasilnikov. "The Whole Truth About Americans on the Moon." The magazine " Paradox ", No. 4, 2004, p. 10-25 (LLC "Publishing House of Rodionov"), see also ip5 "Links-2"

12. V. Yatskin and Y. Krasilnikov. "Did the Americans fly to the moon?" <http://www.skeptik.net/conspir/moonhoax.htm> p. 33,34,30

13. NASA <http://www.apollosaturn.com/ascom/Lmnr/gn.htm> - control systems for the lunar module.

14. " A Look ", August 1969 , see un1 "References-2"

15. Yu.I. Mukhin. Antiapollo. Lunar scam of the USA. - M .: Yauza, Eksmo, 2005, p. 282, 314, 315

16. E.A. Viktorov. "Psychological War", "Duel No. 52/143 (1999)

17. F7, iv16 "Reference 2"

18. f3 "Reference 2"

19. E.V. Mokhov [http : // www . sciteclibrary . ru / rus / catalog / pages / 325 . html](http://www.sciteclibrary.ru/rus/catalog/pages/325.html)

20. A .D. Landau, E.M. Lifshits. Theoretical physics, V.6, M. "Nauka", FML, 1988, p.38

21. Sov. enz. dictionary, M., SE, 1988, p. 1389

III.1. [1]

III.2. [2]

III.3. [4]

Илл.4. <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5873HR.jpg>

Илл.5. <http://www.hq.nasa.gov/office/pao/History/alsj/a14/AS14-66-9258HR.jpg>

Fig. 6. f3 "Links-2"

Fig. 7. <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5921HR.jpg> and <http://www.hq.nasa.gov/alsj/frame.html>, insert on the picture - by the author

Ill.8. Fragment ill.7

Илл.9.

<http://science.ksc.nasa.gov/mirrors/images/images/pao/AS16/10075865.jpg> и

<http://science.ksc.nasa.gov/mirrors/images/images/pao/AS16/10075865.htm>

Video clip http://www.hq.nasa.gov/office/pao/History/alsj/ktclips/ap16_rover.mpg (2MB)

Fig. 10. author's drawings

Ill.11. [17]

Ill.12. [1,14, 18], <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5880.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5877.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a12/AS12-57-8448HR.jpg>

Ill.13. Fragments **a)** <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5915HR.jpg>

6) <http://www.hq.nasa.gov/office/pao/History/alsj/a12/AS12-47-6988HR.jpg>

7

24-30 minutes

To the moon

8. On landing!

Retouching on pictures

According to NASA, the first to descend to the moon were astronauts A-11 N. Armstrong and E. Aldrin , and the pilot of the command and service module M. Collins , who remained in circumlunar orbit, allegedly took a picture of the "Eagle" - lunar module A-11 through the window. This image is presented on two NASA sites [1,2]. By eye, both of these variants of this image do not differ at all, and therefore they are represented by one illustration (Fig. 1a).

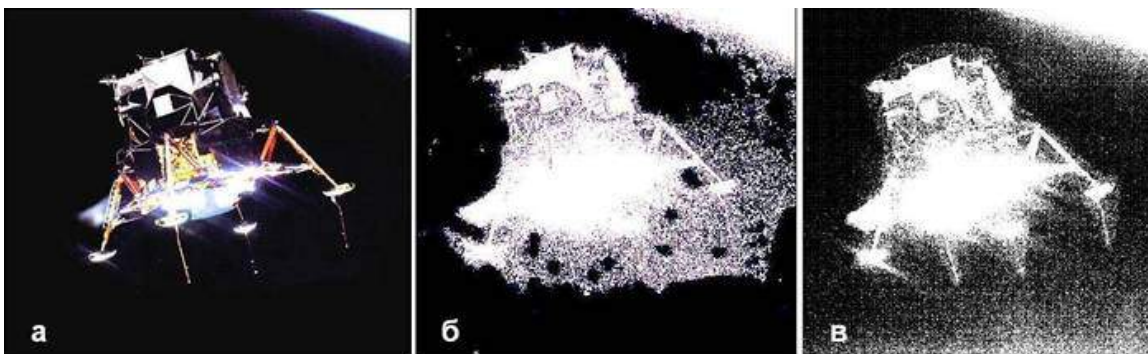


Fig . 1 . Retouched "space"?

a) module "Eagle", allegedly filmed in a circumlunar orbit - one illustration for two seemingly indistinguishable images from [1] and [2] ;

b) photo [1] with increased contrast - traces of retouching are visible;

b) photo [2] with increased contrast and in black-and-white image - traces of retouching are also visible, but made in a different manner

If we take the original image from the address [1] and increase its contrast on the computer, then a lighter area with a clear border in the form of a broken line appears around the "Eagle". The picture looks like it has been retouched.

If we take the original image from the address [2] and also increase its contrast, then the retouching line will also appear, but made in a different manner

(it is better seen in a black-and-white image).

Here is another example with another lunar module (Orion, A-16). According to NASA, astronaut A-16 T. Mattingly also photographed his Orion before its descent to the moon (Figure 2a). If, following the author [3], and in this image to increase the contrast, then clear traces of retouching will also become visible (ill.2b).

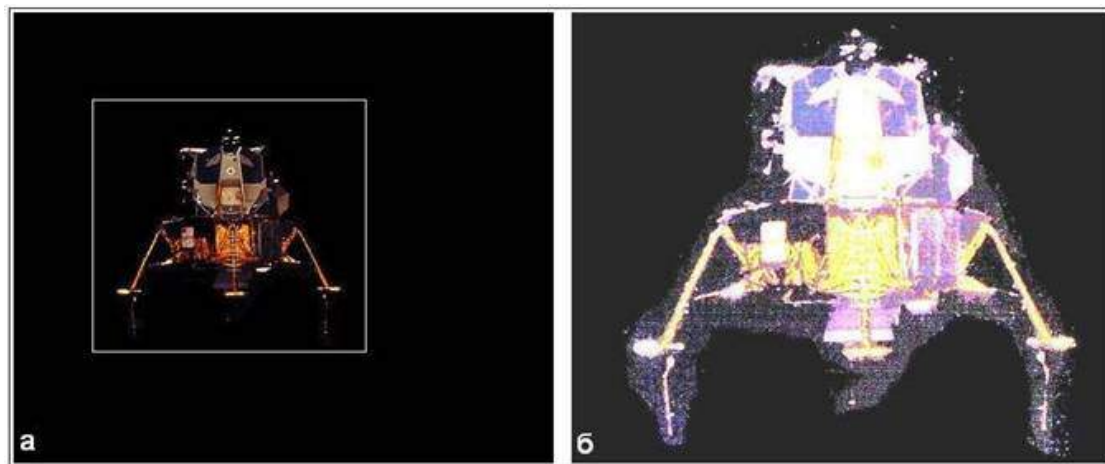


Fig . 2 . Retouched "space" - 2

a) the Orion module, allegedly filmed in a circumlunar orbit;

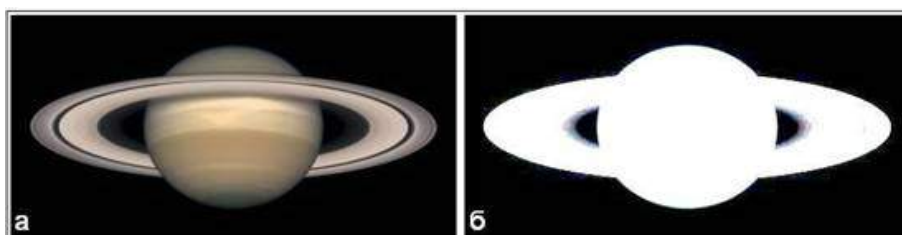
b) a fragment of the image "a" with increased contrast,

traces of retouching of "space" are visible

It seems that both "Eagle" and "Orion" are hovering not in space, but against the background of a black screen. The blackest screen, in contrast to the emptiness of space, reflects about 4-5% of the light falling on it. The illumination from spotlights is difficult to make uniform across the entire screen area. Therefore, in reflected light, its screen will be unevenly black. So the masters tried to emphasize the "space" where the screen showed itself too light. And the fact that at the addresses [1] and [2] the pictures can be retouched in a different manner, explained the defender Yu. Krasilnikov [4]:

"... the photographs on different sites are quite independent of each other in that they are usually scanned and processed differently by different people."

Real space does not need retouching



Ill.3.

Real space does not need retouching

a) the planet Saturn;

b) the same picture with increased contrast;

For comparison, the author applied the procedure of increasing the contrast to more than 20 space images, also belonging to NASA, but not related to the Apollo flights. As an example, Fig. 3 shows how the view of the image of the planet Saturn changes with increasing contrast. Neither in this photograph, nor in any of the other 19 studied photographs, traces of retouching were found. This is understandable: after all, real space does not need retouching, since from the optical point of view, space is a void that does not reflect any light and it cannot have darker or lighter places.

"Eagle" in the spotlight?

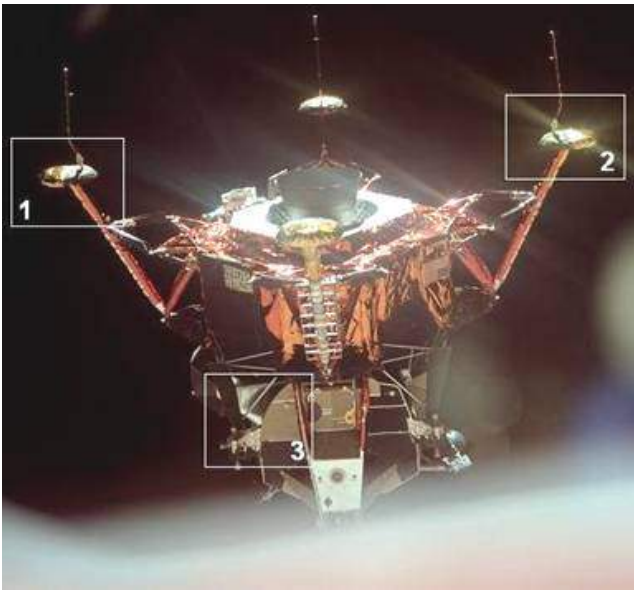
Figure 4 shows two pictures of the city courtyard. Shot "a" was taken in sunlight, from which all subjects give clear shadows. Photo "b" was taken when the sun went down behind a cloud. The light now comes from the wide blue sky. And, although it is also bright, almost all the shadows have disappeared, because the sky is shining from all directions. Only under low benches and in other tight corners are blurred, dull shadows without clear boundaries visible.



Ill.4.

a) when illuminated by a point source (the Sun), objects cast clear shadows;

b) when illuminated by a wide source (sky), shadows are formed only in tight corners and at the same time they are indistinct



Now let's look at the photo of the "Eagle" (Fig. 5). According to NASA, it was also made in circumlunar orbit. Fig. 6 shows enlarged fragments of 1, 2, 3 of Fig. 5.

Fig . 5 . Another shot of the Eagle, allegedly taken in circumlunar orbit;
fragments 1, 2 and 3 are highlighted by the author

From fragments 1 and 2 you can see that the shoes of the lunar module supports are illuminated in the direction "towards us" by a certain light source. The shadows from it are sharp, which means that this is a point source.

And fragment 3 shows us that there is also a second point source of directional light. It shines in the direction "away from us" and also gives quite distinct shadows. Where did this second source come from, if the moon has the only overwhelming source of light during the day - the sun? If the "Eagle" really hovers above the Moon, then somewhere nearby, behind the frame, its surface, wide from horizon to horizon, should extend. (Recall that, according to the flight scheme, the Eagle parted with the command-service module, being at a distance of only 100 km from the Moon, while the Moon's diameter exceeds 3000 km). But a wide surface cannot be a point source in any way.

If we assume that the first source of light is the Sun (it is very bright), then what served as the second source? The next brightest point light source - our Earth, shines about 5000 times fainter. The shadows from its light would be completely invisible, just as the shadows from the headlights of a car on a sunny day are invisible (the comparison of brightness here is not literary, but confirmed by calculation).

And if "Eagle" is still illuminated by two point light sources, then this again indicates that it was filmed in the studio.



Fig . 6 . Fragments 1, 2 and 3 show that the "Eagle" (Fig. 5) is illuminated by at least two point sources of directional light, which cannot be on the Moon

After finding such dubious images as Figures 1, 2, 5, is it difficult to trust other images of American lunar ships, supposedly taken in lunar orbit? They are in a variety posted on NASA sites and are executed, it seems, flawlessly. But is that supposed to be soothing? What we saw in Figures 1, 2 and 5 are rare examples of when masters make mistakes. Yes, and these errors were revealed decades later, when computer methods of image processing appeared, and according to the level of technical development of that time, the NASA masters did their job perfectly.

The impression of animation ...

Now, "sitting" with the astronauts in the lunar modules, let us look back at the command and service modules (KSM), which are supposed to remain in circumlunar orbit and wait for the return of the conquerors of the Moon. Figure 7 shows images of three CSMs allegedly taken in a circumlunar orbit. Everything about them is beautiful and impressive, if not for one circumstance, to which the author drew attention [5].

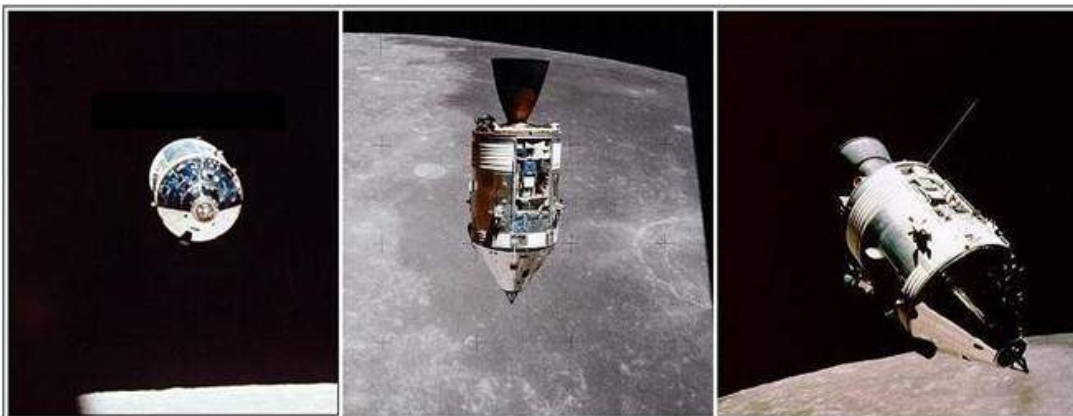


Fig. 7. Ships or layouts?

Ships A-10, A-15 and A-17, allegedly filmed in circumlunar orbits.

In these and dozens of similar images, not a single flash from the orientation motors is visible

When spaceships maneuver relative to each other, they use comparative attitude thrusters. What their work looks like was perfectly shown by the photographs of the mutual maneuvers of the Soyuz and Apollo spacecraft made by astronauts and cosmonauts during the joint flight of the ASTP (Fig. 8).

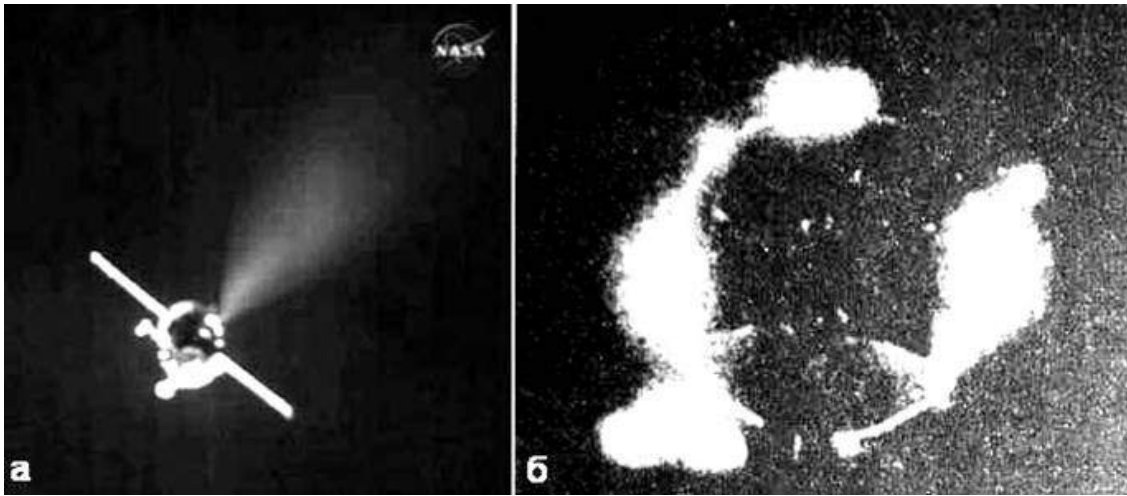


Fig. 8. These are real ships.

a) Soyuz removed from Apollo. The exhaust jet of a running orientation engine is visible

b) Apollo removed from Soyuz (rear view). The white spots are the exhaust from the attitude control engines.

The cosmonauts A. Leonov and V. Kubasov, who participated in this flight, also left a description of how the flashes from the Apollo attitude thrusters look like [6]: *"The fiery particles flying from the Apollo were clearly visible in the window. its jet engines stabilize. Particles, like large reddish stars, flew at a speed of several meters per second "*

NASA websites contain dozens of images of spacecraft in circumlunar orbits, similar to Fig. 7, but in none of them we will not see *any "particles that look like large reddish stars", or "flashes of control engines", or "a colorful picture of jet engines" jets.*

It is clear that not in every such image we should have seen the exhaust jets of the orientation engines. But somewhere they have to work out. The astronauts themselves would readily capture such moments, as shown in the images of Fig. 8. After all, the orientation engines of the Soyuz and Apollo did not work all the time, and, nevertheless, both the cosmonauts of the Soyuz and the astronauts of the Apollo took pictures of the ships with working orientation engines and left them as a keepsake. The lack of images of the "lunar" ones with operating orientation engines indicates that Fig. 9, like other similar images of NASA, shows not real ships, but mock-ups photographed against the background of photographs of the lunar surface.

Well, we have no choice but to write down the revealed oddities in our notebook and “follow” the astronauts who, judging by the next episode from NASA's chronicles, are already landing on the Moon [7].

"Eagle" went to land

H Beginning in about 1986, NASA published in his films and the Internet a series of kinoepizodov and clips of the moon landing of the lunar module. [7] Of course, publishing such a collection decades after the events looks a little strange. Keeping in mind the last time line of "receiving" new evidence from NASA (1989, see Introduction), the author nevertheless chose for analysis in this book the clip about the Apollo 11 landing on the Moon (issue of 2001). The fact is that it differs little from what is shown in the film "For All Humanity" (the same 1989), but it is more accessible for dating on the Internet. So, let's get acquainted with the frames from the clip [7b] entitled “Landing in the Sea of Tranquility” (ill. 9).

You watch this clip, and one after another questions arise. Why is the approaching lunar surface shown from some close angle, from where there is no view? How did it happen that there were no places with a good view in the entire multi-meter colossus of the lunar module (three stories high)? For comparison, look again at the images of the lunar surface, transmitted, for example, by the Orbiters (sections 4 and 6). No interfering extraneous details in the frame. Take a look, finally, how beautiful and wide is the view of the rising of the Earth over the lunar horizon, allegedly taken by the same astronauts A-11 from the height of the circumlunar orbit (Fig. 10).

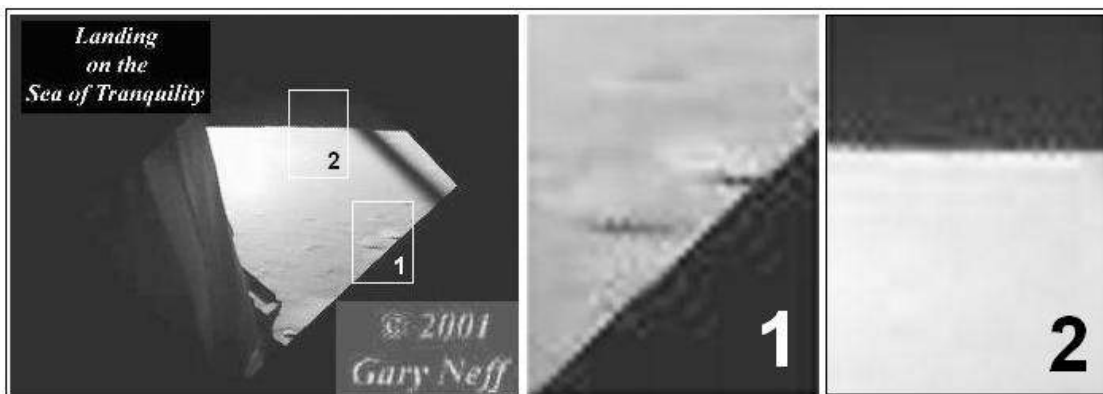


Fig. 9. A still from the clip about the landing of the "Eagle" with built-in screensavers and two enlarged fragments

And why does the landing clip have such a bad (one might say, disgusting) quality, as evidenced by the enlarged fragments 1 and 2 in Fig. 11? It does not stand up to any comparison with the quality of images taken from a circumlunar orbit (Fig. 10).

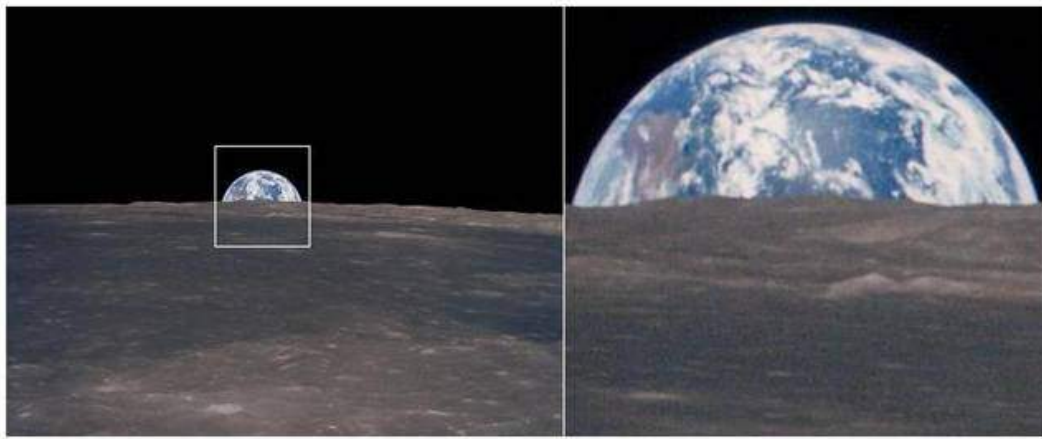


Fig. 10. A snapshot of the rising Earth, allegedly taken by astronauts A-11

However, if we assume that the image of Fig. 10 was taken from a circumlunar orbit by the Orbiter, and the muddy shots of Fig. 9 are all that the masters of Hollywood could depict about the landing on the Moon, then the questions are removed.

Where did the "Eagle" go?



Already according to the plot of the clip **[7b]** there are only a few seconds left before the lunar landing. Below, pits and pits of various sizes are visible (ill. 11).

Ill.11. Footage from a NASA clip. Almost a crew

If these shots "came" to us through the approaching wide and clear lunar landscapes, then the necessary confidence would be. But instead of such views, we saw only "white fog" (Fig. 9). And from near, the pits on the Moon and on the Earth look the same. Moreover, as it became known recently, NASA was conducting blasting operations to create moon-like terrain with a large number of craters of various sizes (Fig. 12).

And there are terrains on Earth with a lot of pits and holes



Fig. 12. Creation of "lunar" craters on Earth (Flagstaff, Arizona)

Such work, carried out in the Arizona desert, was described in detail by the veteran of the Apollo program (Fig. 12), Doctor of Boston University Farouk-el-Baz [8]. More recently, in September 2007, an article on the same topic was published on the Internet [9].

Figure 13a shows what the blast site looks like from above. Already a good "lunar" landscape. And when, in the course of the film [8], the skilled hand of the master puts a light veil on this view, it turns out to be a downright cosmic view (ill. 13b).

Now take a look at the snapshot of Fig. 13c. According to NASA, it shows a section of the lunar terrain in the Eagle landing area. Doesn't it look like a completely terrestrial snapshot 13b? Only the grid has been imposed, and the corresponding inscriptions have been supplied .

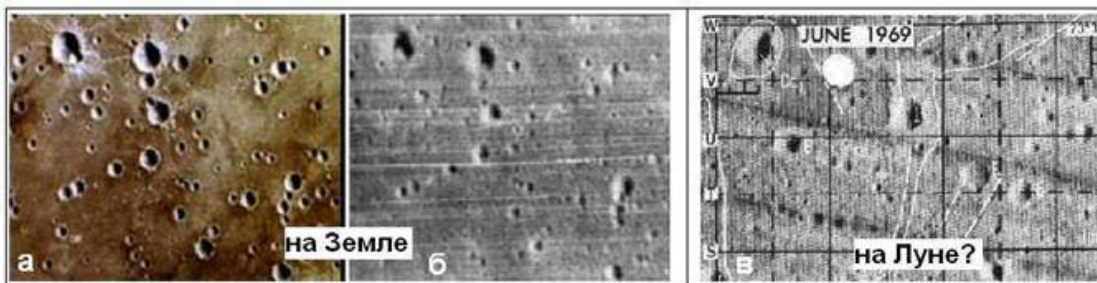


Fig . 13 . a) view of the desert area after the explosions, **b)** the same view after professional processing of the image; **c)** a section of the terrain in the landing area of the "Eagle" (according to NASA)

What prompted NASA decades later to reveal in such detail about the work to create a moon-like terrain? Perhaps, the insistence of skeptics [8] , who have long argued that NASA was doing such work to make a movie about landing on the moon. And it was decided to fend off these suspicions with ostentatious openness. Say, since we are not hiding anything, it means that they did not mean anything shameful.

However, the past decades of silence devalue this openness. It would have come in very handy in 1969, when the moon landing shots excited the world community. If the public knew that NASA and Earth have areas similar to the

Moon, then they might evaluate these footage differently. But in the then special issues of American magazines [10, 11] there is not a word about these explosive works.

It was possible to use the television equipment of the "Rangers"

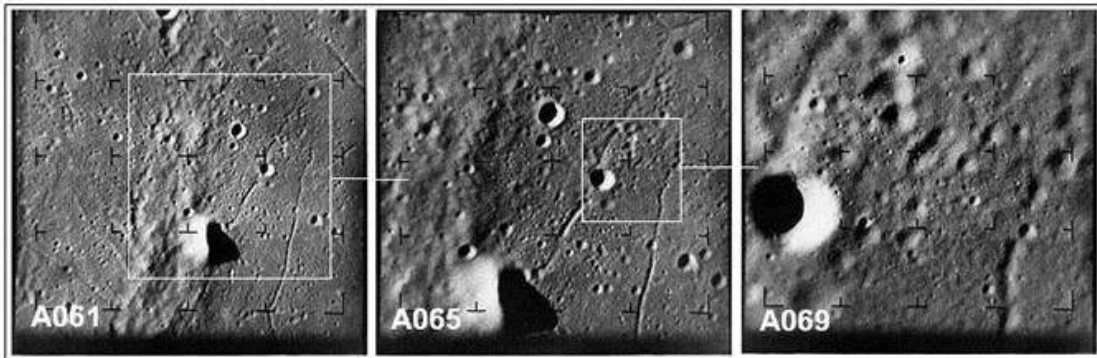


Fig. 14. A "thinned" slideshow of the approach to the lunar surface, made from images transmitted by the "A" TV camera of the "Ranger-9"

Perhaps one of the readers will decide that the author is picking on NASA when analyzing the clip about the landing of the "Eagle": they say, it was so difficult for the astronauts when they went down to the moon, so the video about the landing failed. So after all, NASA already had a worked out version, which makes it possible to do without the participation of astronauts altogether.

It was enough just to use the three times proven Rangers technique (Chapter 4). The Rangers' television cameras provided images from the moon four to five years before the Apollo. They couldn't show a continuous TV movie, but they did broadcast a quick slideshow at 5 second intervals from one camera. The format of the book does not allow showing long series of such frames. Therefore, Fig. 14 shows only 3 images transmitted by the "Ranger-9" TV camera and selected with an interval of 10-15 seconds. And already we get a visual picture of approaching the surface of the Moon.

According to NASA's schedule, the lunar module landing on the moon took about 10 minutes. The module descends from a height of 100 km and flies several hundred km in the horizontal direction. During this time, automatic television cameras of the "Ranger" type could transmit to Earth about a hundred images of the approaching surface. It would be both a visual and a high-quality TV report about the landing of lunar modules, and, moreover, almost in real time. But there are no such reports for any of the six announced launches of lunar modules (from A-11 to A-17).

The criticism that was voiced above about the clip about the landing of the "Eagle", to a large extent applies to the rest of the clips about the landing of lunar modules. An interested reader can himself watch these clips at the indicated links

[7]. Now, let's take a little time for some interesting information about the Apollo 12 descent to the Moon.

Where are the limits of trust?

The story about the landing of the lunar module A-12 "Intrepid" ("Undaunted") is so curious that the author decided to submit a copy of the corresponding note in the newspaper "Izvestia" for November 20, 1969 (Fig. 15). Izvestia's correspondent M. Sturua was at that time in New York and watched what was shown on local television. Here is what he writes [12]:

"When the lunar cabin (Intrepid) approached the surface as close as possible and was over the area chosen for landing, the engine of the landing stage was turned on. 11 minutes later, the Intrepid landed on the moon. Since at that moment he was out of the field of view of the main ship's television camera lenses, we saw on the screen only an animation of the maneuvers being made and heard the voices of the astronauts. The voices were cheerful and upbeat . "



Fig. 15. A copy of a note from the Izvestia newspaper for November 20, 1969

From the distance of the past decades, much of this article seems surprisingly naive. First, the TV camera of the command and service module (KSM) cannot show the landing process, even if the lunar module is purely geometrically in its field of view. The fact is that according to the flight scheme, the KSM is in a circumlunar orbit, at an altitude of 100 km. From this distance, the camera will not distinguish the lunar module.

Secondly, it is not necessary. If the "Intrepid" really went down to the moon, then the astronauts sitting in it could turn on their television cameras, which they had according to the description [13]. There was a connection with the Earth, because the "cheerful and uplifted voices" of the astronauts sounded on the air. Finally, let us repeat that the report on the descent could have been carried out by television cameras of the "Ranger" type instead of the astronauts.

But most of all, it is surprising that the public was shown a "cartoon" under the cheerful voices of astronauts, and this did not cause the slightest shadow of healthy skepticism. How is it necessary to skillfully prepare public opinion so that such profanation of "evidence" does not cause the slightest doubt? Where are the limits of trust?

Report inconsistencies - a lapse in the memory of astronauts or a cost to the imagination of NASA writers?

Here is what NASA reports about the Intrepid landing at the suggestion of astronaut Ch. Konrad [14]:

*"... I extinguished the horizontal speed **at an altitude of 300 feet (about 100 m - A.P.),** we raised an enormous amount of dust. Perhaps this happened because we hovered above the surface and descended vertically. The dust rose as far as I could see. In the end, the dust became so strong that I absolutely could not determine the roll of the apparatus, looking out the window at the lunar horizon "*

Recall that the astronaut's direct responsibility is to be able to give an exhaustive and accurate description after the flight, after which we will look at Fig. 16, where from another NASA report [15] is given the descent curve of the lunar module A-12 just before landing.



III.16.

The descent curve of the A-12 module contradicts other NASA materials;

Let us compare what C. Konrad said about the raised dust clouds and the descent of the module [14] with what we see in Fig. 16 [15] .

According to [14], Konrad extinguished the horizontal speed of the module at an altitude of 100m and after that the module descended vertically. According to Fig. 16 [15] , at an altitude of 100 m, the module was located almost half a kilometer from the landing site and descended not vertically, but along a very flat trajectory (point **A**). In [14] Konrad says that "we raised dust, being probably 100 m away", and on the graph in Fig. 18, the mark " DUST FIRST SEEN - dust was

noticed for the first time” corresponds to three times the height of 30 m (point **B**). And how to believe all this, if such contradictory information comes from one source - from NASA?

We got acquainted with NASA materials on the descent of several lunar modules. There are a lot of dubious places and just contradictions in them. The inability or unwillingness of NASA to conduct live TV reports from the descending lunar modules like "Ranger" slideshows, as well as to demonstrate, upon the return of the astronauts, a high-quality film of the entire landing process, is alarming. And this, despite the fact that there were six such landings, according to NASA.

Links

1. <http://dayton.hq.nasa.gov/IMAGES/MEDIUM/GPN-2000-001210.jpg>
2. <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-44-6581HR.jpg>
3. <http://www.geocities.com/sergximage/>
4. 7-40 (V. Pustynsky), Yu. Krasilnikov "Did the Americans fly to the moon?"
http://menonthemoon.narod.ru/photos_2_14.html ,
http://menonthemoon.narod.ru/photos_2_12.html ,
5. <http://gosh100.boom.ru/moon1.htm#пламя>
6. A. Leonov and V. Kubasov "Union and Apollo", ed. Bushuev. M., Ed. polit. literature, 1976, p. 268
7. Some clips of NASA on the theme of "descent and landing of lunar modules":
 - a) 1997 <http://www.hq.nasa.gov/office/pao/History/alsj/a11/a11f1023820.mov>
 - b) 2001 <http://www.hq.nasa.gov/office/pao/History/alsj/a11/A11Landing.mov> , Landing in the Sea of Tranquility, see also
iv15 "Links-2"
 - c) 1999 <http://www.hq.nasa.gov/office/pao/History/alsj/a12/a12.landing.mov>
 - d) 2002 http://www.hq.nasa.gov/office/pao/History/alsj/a14/a14land24fps_DivX.avi

e) 2001 http://www.hq.nasa.gov/office/pao/History/alsj/a15/ap15_descent.mpg

f) 2000 http://www.hq.nasa.gov/office/pao/History/alsj/a15/a15_descent.mpg

g) 2001 <http://www.hq.nasa.gov/office/pao/History/alsj/a15/a15f.1044006pd.mov>

h) 2000 <http://www.hq.nasa.gov/office/pao/History/alsj/a15/a15v.landing.ram>

i) 2001 <http://www.hq.nasa.gov/office/pao/History/alsj/a16/a16.landing.mov>

l) 2004 <http://www.hq.nasa.gov/office/pao/History/alsj/a17/a17.landing.mov>

8. f7, iv14 "Links-2"

9. <http://pruned.blogspot.com/2007/09/simulated-worlds.html>

10. "A Look", avgust 1969 g of ., U 1 " Links -2"

11. "Life", avgust 1969 g of ., U 2 " Links -2"

12. M. Sturua. Izvestia, 20.11.1969, (New York, by phone 19.11.1969); see also ip3 "References-2"

13. Ya. Golovanov, "The truth about the APOLLO program ", M.: Yauza - EKSMO-Press, 2000 , chapter 7, p. 206.

See also <http://www.epizodsspace.narod.ru/bibl/golovanov/apollo/08.html>

14.http :

<http://www.hq.nasa.gov/office/pao/History/alsj/a12/a12.landing.html#1102741> time 110: 32: 06

Translated into Russian: <http://www.skeptik.net/conspir/moonhoax.htm>, page 31

15. <http://www.hq.nasa.gov/office/pao/History/alsj/a12/images12.html#7024> далее Surveyor III Images далее Apollo 12 ground track during the landing (101k), [прямая ссылка http://www.hq.nasa.gov/office/pao/History/alsj/a12/landpath.jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a12/landpath.jpg)

III.1 . a) <http://dayton.hq.nasa.gov/IMAGES/MEDIUM/GPN-2000-001210.jpg> and

<http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-44-6581HR.jpg> ;

b) <http://dayton.hq.nasa.gov/IMAGES/MEDIUM/GPN-2000-001210.jpg> with increased contrast;

c) <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-44-6581HR.jpg> with enlarged contrast and black and white

Fig. 2. a) <http://www.hq.nasa.gov/office/pao/History/alsj/a16/AS16-118-18894HR.jpg> **b)** fragment of the image "a" with

increased contrast, see also <http://www.geocities.com/sergximage/>

Fig. 3.

a) <http://zavasek.narod.ru/sistema/saturn007.jpg>

b) the same image with increased contrast

Fig. 4. Courtyard lighting (author's photo)

Илл.5. NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-44-6574EN.jpg>

Fig. 6. Fragments of Fig. 5

Илл.7. <http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS10-27-3856.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a15/AS15-88-11972.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a17/AS17-145-22261.jpg>

Илл.8. <http://gosh100.boom.ru/pics/souz.jpg>
<http://gosh100.boom.ru/pics/08.jpg>

Илл.9. [7b]

Илл.10. Sunrise A-11 <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-44-6547EN.jpg>

Илл.11. [7b]

Fig. 12. f7, iv14 "Links-2", [3] and http://farm2.static.flickr.com/1015/1358195595_32736a55a3_o.jpg

Fig . 13 . a , b) f7, "Links-2", **c)** <http://www.hq.nasa.gov/alsj/a11/a11-lam2g.jpg>

Ill.14. NASA

<http://ilewg.lpi.usra.edu/resources/ranger/images/browse/9/A/061.jpg>

<http://ilewg.lpi.usra.edu/resources/ranger/images/browse/9/A/065.jpg>

<http://ilewg.lpi.usra.edu/resources/ranger/images/browse/9/A/069.jpg>

Fig. 15. Izvestia for November 20, 1969 , see also ip3 "References-2"

Fig. 16. NASA [http : // www . hq . nasa . gov / office / pao / History / alsj / a 12 / landpath . jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a12/landpath.jpg) , Russian text - by the author

9 first time on the moon

26-33 minutes

On the moon. Chapter 9

First time on the moon

So, the first lunar module landed. Let's see how NASA showed the first steps of astronauts on the Moon and everything connected with it .

Four decades ago

Figure 1a shows one of the first American TV footage about the first landing on the moon **[1]** . With bated breath, people watched this program (ill.1b).

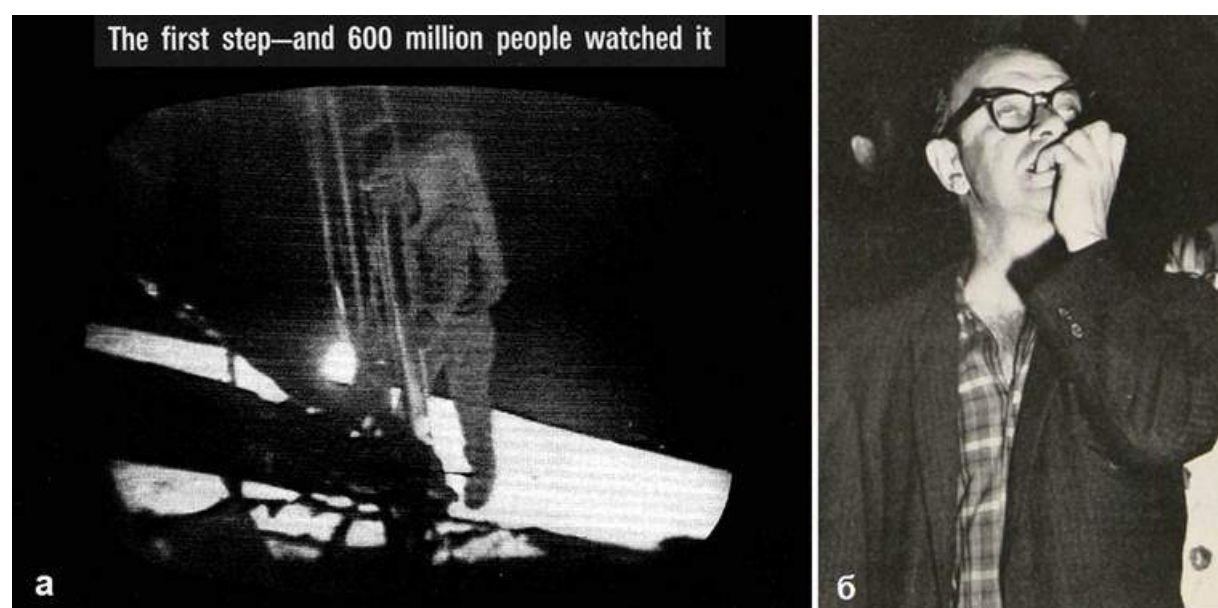


Fig. 1. a) a snapshot from the TV screen from the program about the first landing (" Life "); **b)** one of the spectators (" Life ") **[1]**

Here is what Life magazine (special issue, August 1969) wrote about these first shots:

"Live TV broadcast of images from the Moon - they flickered on tiny TV screens in bedrooms and on huge outdoor (outdoor) screens around the world, blurred and somewhat unintelligible at first, then showed the dark silhouette of Neil Armstrong, holding on to the gangway and carefully probing the surface of the Moon with his foot ... These first frozen images, transmitted by a camera installed behind the exit ramp, were seen by more than 600 million people on Earth. "

The television camera that broadcast the event, Life explains , was designed for vacuum conditions and cost \$ 400,000. To receive its signals on Earth, a 60-meter radio telescope in Australia (Parkes) was used. From it, the signals went via satellite to Houston, and from there they were broadcast on television to the whole world. This is how NASA took this telecast seriously. Here it is already not hundreds of thousands, but tens of millions of dollars "smells".

Of course they were very illegible in those first shots. But everyone intuitively understood that television transmission of moving images from the moon is possible only with a great loss of quality. And then, there was no doubt that the astronauts would bring high-quality films from the Moon.

However, after the return of the astronauts, beautiful "lunar" photographs were published, but the **public did not see high-quality footage** . And without them, the vague TV footage about the first step was perceived with increasing doubt. After all, photographs are easier to fake than movies. A similar unintelligible episode can be filmed on Earth. This was demonstrated by the English film director A. Stewart [2] , who filmed in his studio a television report about the "landing on the moon" (ill. 2). During the descent "to the moon", the "astronaut" was lightly hit by a broken ramp. A joke - a joke, but why should we still believe that the hazy picture shown in Fig. 1 is actually transmitted from the Moon? Is it just because it doesn't have a broken ramp?



Fig. 2. This landing can also be filmed in the studio.

A comic clip by the English filmmaker A. Stewart about the "first step to the moon" [2]

NASA loses, Clifton finds

"So where is the quality film about the first moon landing?" - skeptics did not appease. Didn't NASA make sure that the film about this historic event, firstly, was filmed, and, secondly, remained intact as a keepsake for future generations? After all, NASA did not spare tens of millions of dollars for organizing a worldwide

television broadcast. And with a movie camera, everything is as simple and as cheaper! Filmed the film, brought it to Earth, and here you are not at all superfluous confirmation of the truth of the first step. And there was no doubt that the quality of the footage would be excellent, one had only to look at the beautiful "moon" photographs of NASA. If cameras on the moon worked fine, if television cameras weren't afraid of the lunar vacuum, then what could interfere with the work of movie cameras?

For 37 years, NASA did not answer such questions, and, suddenly, in August 2006, it told such a sad story [3] :

*“Filming of Neil Armstrong's landing was one of the most important artifacts of the 20th century. Although the television coverage, which saw 600 million people in July 1969, will be preserved for posterity, the **original footage of the footage is lost** in the vast archives of NASA. These footage could change the way we think about landing on the moon, providing clearer images than the hazy grainy footage that is being replicated around the world ... as the operating staff took turns, retiring and leaving, the location of the film was forgotten. ”*

But less than ten days have passed before a new, this time joyful message arrives [4] :

«



A copy of the lost tape was found in Sydney. Australian producer Peter Clifton received this footage from NASA in 1979. Clifton commissioned a recording of the Apollo 11 crew landing on the moon in America for use in the video for Pink Floyd's *The Dark Side Of The Moon*. When Clifton received the box, instead of the two or three minute clip he expected to see, he found a half-hour film in the package . Clifton began work, but was never able to complete it due to lack of time. The film from NASA ended up in the Sydney Archives. Seeing on the TV news a story about the loss of the original recordings, Clifton remembered the copy he had received. The lost films show the highest quality images of a man's landing on a celestial object . ”

III.3. “Hello, NASA! The artifact has been found! ”

P. Clifton with a copy of the lost note [4]

So, veterans quit NASA archives, and irresponsible young workers sent “the most important artifact of the 20th century” to Australia and forgot about it for 17 years? What, according to the author, does this strange story testify? Most likely, NASA never had the mentioned tape, and it is quite possible that under the guise of a "find" an "improved" record of the "first steps on the moon" will be presented. Do I need to remind you that nowadays, thanks to computer methods, you can depict anything?

The paragraph just read by you, the reader, was first published in December 2006 [5] . Less than a year later, the forecast contained in it came true. Here is a post on this topic [6] : *“According to Space, a new documentary film “In the Shadow of the Moon ”about the program of astronaut flights to the Moon has been released. The 100-minute film contains specially processed videos of flights to the Moon that survived a strange loss. The release of the film is timed to coincide with the 50th anniversary of the launch of the first artificial Earth satellite ”.*

Well, let's leave those who wish to wait for the arrival of the new NASA film in wide distribution, while we ourselves return to the astronauts, who, according to our narrative, are already on the Moon. Having descended to the lunar surface, the astronauts must look around, inspect the module. Is he okay - the only vehicle to get back home? It is during this inspection that the first surprise is discovered.

Why is the dust under the nozzles of the lunar modules untouched?

Published stories of astronauts about landing on the moon are full of colorful references to clouds of lunar dust lifted from the surface by approaching modules.

A-11 (N. Armstrong): *“ we disturbed the dust on the surface when we were below one hundred feet (30m) ... there was a lot of moving dust in front of our eyes ”* [7] .

A-12 (P. Konrad): *“... we raised a huge amount of dust . The dust rose in all directions as far as I could see, I could not see what was below me ”* (section 8).

A-14: *“a huge cloud of brown dust rose during landing ”* [8] .

Now, let's see what the lunar dust looks like under the lunar modules that have landed. Figure 4 shows a fragment of a photograph in which the astronaut stands near the Eagle, the A-11 lander. And all around is a smooth, undisturbed layer of dust, disturbed only by the imprints of the astronauts' shoes. As if the "Eagle" landed with the engine off, that is, it simply fell on the moon. But after all, N. Armstrong told differently: *“In fact, the engine worked until it touched. The touch is very soft. I didn't even feel when it happened. He descended like a helicopter and sat down ”* [7] .

According to him, given just above, from a height of 30 m, the dust *“flew in all directions . ”* How hard the Eagle must have blown away this dust when he sat on it

with the engine running. And where are the traces of this powerful process? There is a flat dusty surface under the nozzle of the module that has landed (Fig. 4).



Fig. 4. Untouched dust under the lunar module A-11 <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5873HR.jpg>

Here is an example from another "lunar" "Apollo" (A-14). If you look at the NASA video clip about the landing of "Antares" (A-14) [9], you will see that after landing the engine runs for 7 more seconds and the dust jets flying from under the module are clearly visible. So - in the "movie". But where are the traces of this blowing off in the photograph of the dust cover under the Antares nozzle (Fig. 5)? And weren't those three small holes, marked with a question mark, that "huge cloud of brown dust" that the astronauts talked about? And the nozzle is exactly blue, as if it had just been painted. As if streams of incandescent gases rushed through it during lunar landing.



Fig. 5. Untouched dust under the lunar module A-14 <http://www.hq.nasa.gov/office/pao/History/alsj/a14/AS14-66-9258HR.jpg>

"This structure was put on the ground with a crane"

Naturally, such questions could not remain without explanations from the defenders.

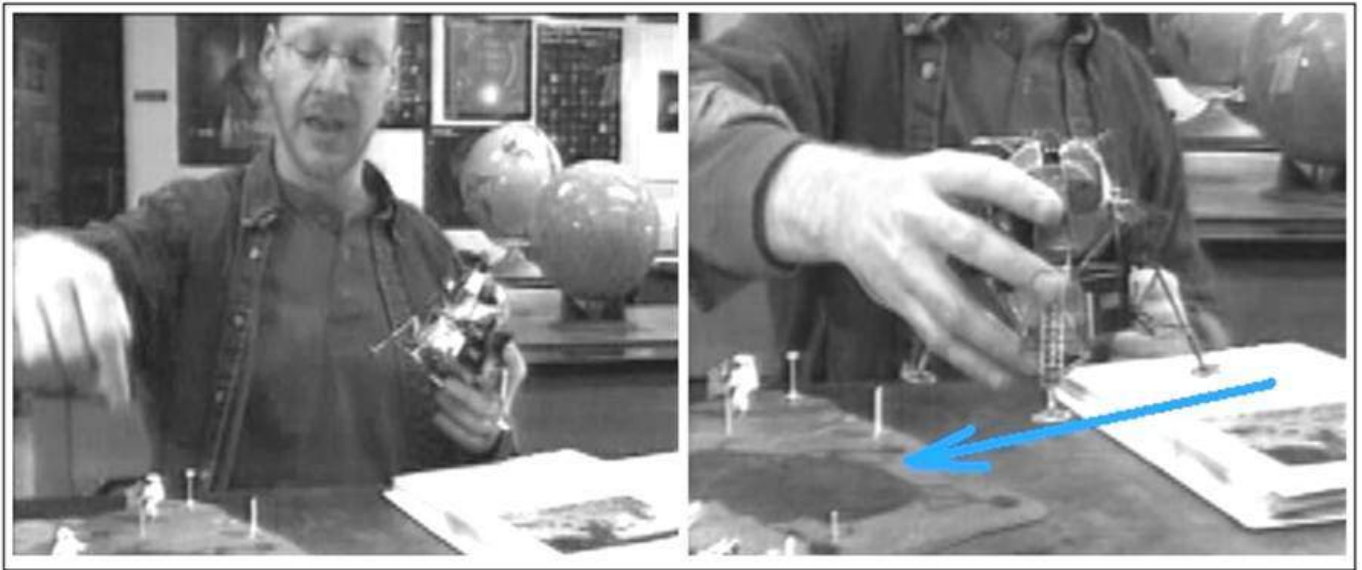


Fig . 6 . Defender Phil Plate: *"The Lunar Module is descending on an inclined line with the engine off"* [10] .

***"The lunar module for the last ten to twenty meters before landing approaches the lunar surface along an inclined trajectory with the engine turned off. Therefore, at the final lunar landing under it there should be no trace of the operation of the engine "* - so says defender Phil Plate [10] .**

Alas, this explanation is inconsistent with Armstrong's above words: *"In fact, the engine was running until it touched."* Such inconsistencies occur when many people participate in the composition of a great legend. And it is difficult to avoid them, since one person cannot create such a voluminous work. It is also interesting, and in what form would the lunar module appear after having flown by inertia these 10-20 m, it would have caught on with its supports on the lunar surface? Wouldn't you roll over? What would be left of the module and the astronauts? And Phil himself would like to sit in the lunar module with this method of landing?

Another NASA defender, Yuri Krasilnikov, apparently appreciated the naivety of Phil's fantasies. And he came up with another explanation [11] : ***"The dust lies as if glued, and even a mighty rocket engine is unable to scatter it to the sides,"*** he writes. What an amazing dust: from a distance of tens of meters, according to the stories of astronauts, it swells like "huge clouds", and when the same engine blows at it point-blank, it lies like "glued". But at the same time, the pressure of the gas jet has tenfold the strength of an earthly hurricane (see the calculation in the appendix). The problem is obtained.

There should be strong traces of dust blowing off under the nozzle of a shrunk module. Finally, the defenders found them. True, the traces turned out to be such that it is just right to examine them through a magnifying glass. Around 2003, defenders V. Yatskin and Y. Krasilnikov [12] posted an interesting photo on the Internet (ill. 7a). Shown here is the dust directly below the nozzle. The original NASA caption for this image is:

"Baz took a snapshot of the area below the landing stage to document the effect of the engine. The radial structure of the erosive effect is clearly visible. Note the groove made by the probe hanging from the southern support. The lunar module was sinking southward in the final moments of landing."

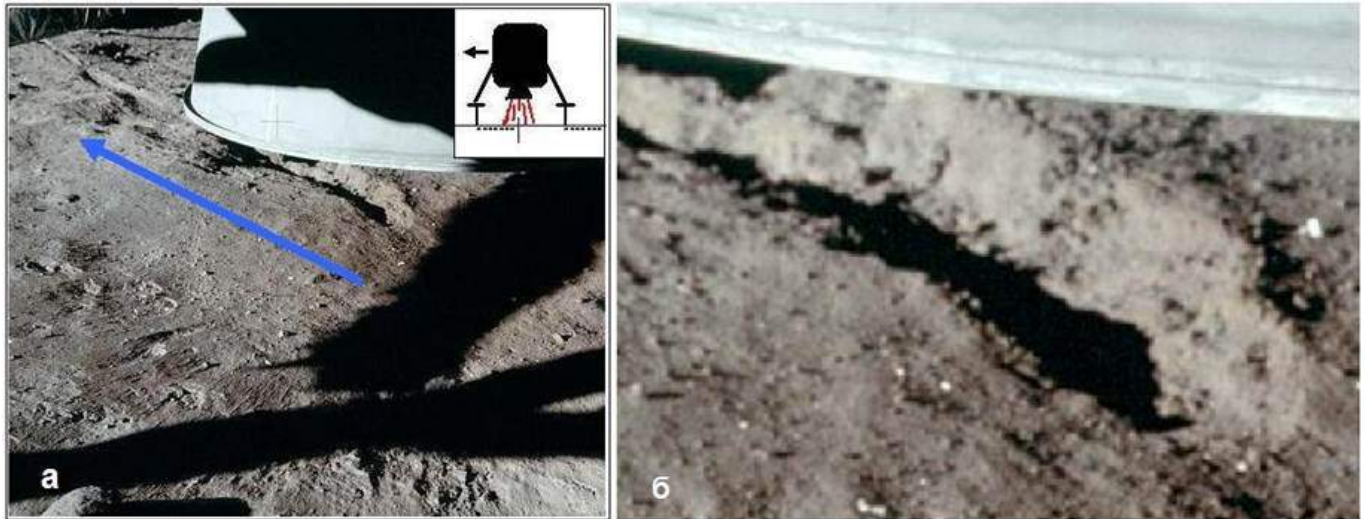


Fig. 7. a) under the nozzle of the A-11 module <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5921HR.jpg> and <http://www.hq.nasa.gov/alsj/frame.html>, inset - the diagram was made by the author of this book. It shows that just before planting, the nozzle blows at the point where the furrow begins;

b) an enlarged fragment of Fig. 7a. The loose furrow remained intact after the alleged impact of a gas jet blown at close range from the engine.

Indeed, small stripes are discernible, diverging from the nozzle. However, there are serious inconsistencies in this image as well. They are indicated by the very long groove (Fig. 7b), which NASA advises to pay attention to.

A small insert in Fig. 7a shows that before seating, special so-called contact probes hang down from each of the module supports (see also section 8, Fig. 1, 2, 5). When these probes touch the surface, a "contact" light is lit in front of the astronauts " [13]

If the module sits down, shifting in the horizontal direction, then the probes draw shallow grooves in the dust in the same direction. At the same time, first a probe crawls through a layer of dust and draws its own furrow, and only then a working nozzle approaches this place. And, judging by the photograph, at the very

last moment of this supposedly landing, the nozzle just hangs over the initial section of the furrow. According to N. Armstrong's story, the engine worked for some time after landing. This means that the nozzle was blowing on the already drawn furrow with all its force of "10 hurricanes". But then why does the furrow look so intact (Fig. 7b)? Again we get a discrepancy.

In general, it is very likely that both this furrow and these stunted streams, denoting the blowing off of dust, were specially modeled. And this was done many years after the "landings" on the moon to counter propaganda critics. This is evidenced by the fact that in the special issues "Life" [1] and "A Look" [14], despite the obvious lack of "lunar" pictures, the picture under discussion is not.

And the author [15] very correctly put it this way about this : ***"Photos with dust blown out from under the engine should have been taken in 1969, and not in 2003"***. And against this background, the opinion of E.A. Viktorov [16], who writes about the image in Fig. 4 as follows : **"This structure was placed on the ground with a crane."**

Where is this rover going?



Fig. 8. Racing on the Moon?

Original caption: *Astronaut John Young's Lunar Rover undergoes speed tests (Grand Prix) during the third exodus of the Apollo 16 Expedition. Note that the front wheels of the rover are not touching the surface.*

<http://science.ksc.nasa.gov/mirrors/images/images/pao/AS16/10075865.jpg> and
<http://science.ksc.nasa.gov/mirrors/images/images/pao/AS16/10075865.htm>

Video clip http://www.hq.nasa.gov/office/pao/History/alsj/ktclips/ap16_rover.mpg

In front of you is an interesting shot, in which, according to NASA, a lunar car rushes across the lunar plain, otherwise it is a rover. This frame is present on NASA websites both as a separate image and as part of the clip indicated in the caption [22]. And since the Americans always tried to make clips "on the Moon" of poor quality, so that nothing could be disassembled properly, then one should not be surprised at the poor quality of Fig. 8. However, the picture shows that the astronaut (or the one that depicts him) is driving very dashing. The left front wheel even bounced.

If a stone falls under a wheel, a ride with raised wheels may result in injury. On the moon, joking with such things is just stupid. Maybe this action was filmed on Earth. Below, an experienced cameraman will speak on this matter. In the meantime, we will continue to consider the named clip from a physical point of view.

Let's look at other frames, how soil particles fly out from under its rear wheels of the rover. To begin with, let's imagine, using a school physics course, along what trajectories on the Moon and on Earth particles of different masses should fly out from under the wheels.



Fig. 9. What and how flies from under the wheels:

- a)** there is no air on the moon, and therefore both pebbles and the smallest particles must fly along strictly symmetrical trajectories (parabolas);
- b)** on Earth, small particles (for example, grains of sand) fly along sharply asymmetric trajectories, reminiscent of a triangle, due to air resistance. And only large enough stones, overcoming this resistance, fly along approximately parabolic trajectories;
- c)** the triangular shape of the trail behind the supposedly lunar rover [17] corresponds to the deceleration of grains of sand in the air

There is no air on the Moon, and nothing interferes with the free flight of the emitted particles. Therefore, on the Moon, all particles (heavy stones, light grains of sand, and moon dust) will fly out from under the wheels along symmetrical parabolic trajectories (Fig. 9a).

On Earth, air slows down the movement of particles flying out from under the wheels. But it slows down to varying degrees depending on the mass of the

particles (Fig. 9b). Heavy particles (pebbles) are decelerated by the air relatively weakly and therefore fly the car approximately along parabolas. The sand particles are much lighter, and therefore the air slows down their movement more strongly. They fly out at the same speed as the pebbles, but then, stopped by the resistance of the air, they fall. This makes the flight path of the grains of sand asymmetrical and similar to a triangle.

Now let's see (ill. 11) how the trail of particles escaping from under the wheels of the lunomobile looks like on a freeze frame taken by the author from the movie episode **[17]** . This episode depicts the same race with raised wheels, but with slightly better quality than the clip **[22]** . We see in this frame a clearly asymmetrical triangular train. And this indicates that this lunomobile was not driving on the Moon, but on the Earth, on the sand. And the black sky only says that the shooting was carried out in the cinema pavilion.

This conclusion, as is clear and what has been said, is made on the basis of simple physical laws known to the student. And what do cinema professionals say about this episode? It turns out that in the essence of their conclusions they say the same thing (and even more sharply), although they proceed from their "cinematic" experience, and not from physical laws.

Cinematographer V. Yakubovich, who shot 80 films, believes:

"This rover was filmed in the cinema hall with a doll sitting on it"

Оператор комбинированных съемок о ровере на Луне.



Recently, a short clip was posted on the Internet **[23]** , in which the well-known *"operator of combined filming"* Vsevolod Yakubovich, who made combined shots for more than 80 films (" The Diamond Hand ", " The Same Munchausen ", " Midshipmen, Go! ", " Aibolit- 66 "and others) expressed his opinion about the footage of the Americans staying on the Moon with the participation of the rover. This clip is in front of you, but for those readers who, for whatever reason, cannot open this clip, the verbatim text of the maestro's speech is given:

"As an operator of combined filming, I believe that it was a doll filmed with a radio controlled model. It is similar to shooting in a large pavilion using fluor -

projection, using a radio-controlled mock-up that simulates the movement of a rover along the lunar surface.

Что вызывает сомнение? Очень сильно мотается камера на ровере. Это видно. И в то же время никакой реакции у человека, сидящего на ровере, нет. Он работает так, как будто у него связана, прикреплена кисть руки и локоть к туловищу или к роверу. Камера движется и абсолютно не движется рука. Двигается блокнот, хотя не очень понятно, почему блокнот может двигаться. Он, тем не менее, он движется, а рука - нет. Это вызывает сомнение. Кроме того, есть участки, где очень хорошо читается разница между насыпным грунтом и грунтом, находящимся на заднем плане. Они и по цвету, и по свету, и по фактуре отличаются одно от другого».

Thus, both the physicist (the author of this book) and the most experienced cameraman come to the same conclusion: the footage of the rover was filmed on Earth. And at the same time, everyone used completely different areas of knowledge. Such a coincidence does not favor the legend of the landing on the moon .

The moon dust shoeprint argument isn't worth a damn

P redstavitel NASA B. Welch (ill.10) during the film [18] put it: *"There is one fact that is very difficult to challenge. These are our tracks. Shoe marks on the surface of the moon! "*

In the special issues “ Life ” and “ A Look ” [1,14] and on the NASA websites, there are many pictures of footprints of astronauts' shoes, allegedly left in the moon dust. Dust prints are shown in both retail and wholesale (Figure 11). The author believes that such "arguments" of NASA are not that difficult to dispute, they are not even worth spending time on them. Because anyone who has grooved shoes, a camera and a pile of sand or dust in the yard can take such prints a stone's throw from their home. And there is no need to fly to the moon.

There has long been a controversy over whether such clear prints can be obtained in dry lunar dust [15] . According to the author, here the skeptics, and among them very famous and respected, succumbed to the propaganda trick of NASA. Allowed to be drawn into an unproductive, tenacious and long discussion on a subject that is not worth it. **Because there is nothing stopping you from taking off your boot mark without flying to the moon?**



Fig. 10. Do I need to fly to the moon to remove the boot trail?

Author's editing based on photographs from [1,14, 18] , <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5880.jpg> , <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5877.jpg>

"Dusty" NASA topics: we read one thing, we see another.

The narrator of a dubious story supplements it with small details to make it more convincing. This technique comes to mind when reading some of the stories of astronauts. So, according to astronauts A-11, their *"feet slipped in a shallow layer of dust"* [8] , while astronauts A-12 complained that their *"feet are falling into the dust"* [19] . And more than one person will think: "Well, since such subtleties are reported, it means that the astronauts trampled on this very lunar dust."



Fig. 11. "Dusty" NASA topics: we read one thing, we see another.

фрагменты а) <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5915HR.jpg> и б) <http://www.hq.nasa.gov/office/pao/History/alsj/a12/AS12-47-6988HR.jpg>

But compare the two pictures of Fig. 11. Figure 11a shows the dust near the support of the lunar module A-11, and Fig. 11b shows the dust near the support A-12. The dust cover on them seems to be quite the same in thickness. This can be clearly seen in the shoe prints. So the pictures allegedly taken by astronauts on the Moon do not confirm their own stories about the same Moon. And after that, how can you trust both stories and pictures?

Let's summarize the first acquaintance with what NASA reported and showed about the astronauts' stay on the Moon:

1) The film, allegedly filmed on the moon and dedicated to the first landing, was hidden from the public for more than 30 years, then a suspicious story happened with it with a ridiculous loss and with a quick happy find. At the same time, those low-quality images of an astronaut allegedly descending a ladder to the lunar surface (Fig. 1), which NASA had represented for all the past decades, could have been made in an Earth studio (Fig. 2);

2) According to the stories of astronauts, lunar dust scatters in the form of huge clouds when the lunar module is still tens of meters from the lunar surface, and in the photographs under the nozzles of the landed lunar modules, traces of this dust blowing off are difficult to detect without the help of a magnifying glass and without a tip from NASA (Fig. 4 , 5, 7);

3) The rover, supposedly driving around on the moon, leaves behind itself completely earthy trails of sand (Fig. 9), and a doll seems to be sitting on the rover itself;

4) Finally, as indisputable evidence, we are presented with traces of shoes in some kind of dust, which can be made anywhere (Fig. 10) and at the same time get confused in the stories and shows about these traces (Fig. 11).

Thus, the very **first acquaintance with NASA materials on astronauts' stay on the Moon gives quite enough reasons for distrust.**

Application. The excess pressure of the air flow **p** during a hurricane can be calculated by the formula $p = \frac{1}{2} \rho v^2$, where **ρ** is the air density and **v** is the flow velocity [17] . If **p** is measured in atmospheres, and **v** is in m / s and we take into account that the normal air density **ρ** is 1.3 kg / m³, then the value of **p** is calculated as **0.000007 v²** . It is easy to calculate that during a hurricane (**v** > 35 m / s [18]) the objects are affected by excess air pressure **p** = 0.01 atm.

Let us estimate the exhaust gas pressure at the nozzle exit. The diameter of the nozzle is 130 cm. Hence we find its area equal to 13000 cm² . The thrust force of the landing engine during landing is about 1T. We divide this force by the area and we get the pressure **p** ~ 0.08 kg / m, or about 0.1 atm, about 10 times more than with a hurricane wind.

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<http://news.sky.com/skynews/article/0,,30000-13537349,00.html>

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2007/09/10/265541 10.09.07

7. [http : //www.hq.nasa.gov/office/pao/History/alsj/a11/a11.landing.html](http://www.hq.nasa.gov/office/pao/History/alsj/a11/a11.landing.html) see
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23. Видеоклип «Ровер на Луне» http://www.youtube.com/watch?feature=player_embedded&v=rbdR6XLCzBY

Last edited 10/4/2012

Theme: Light and Shadow

20-25 minutes

On the moon. Chapter 10

Walking around the lunar modules

"Antares" near and far (A-14)

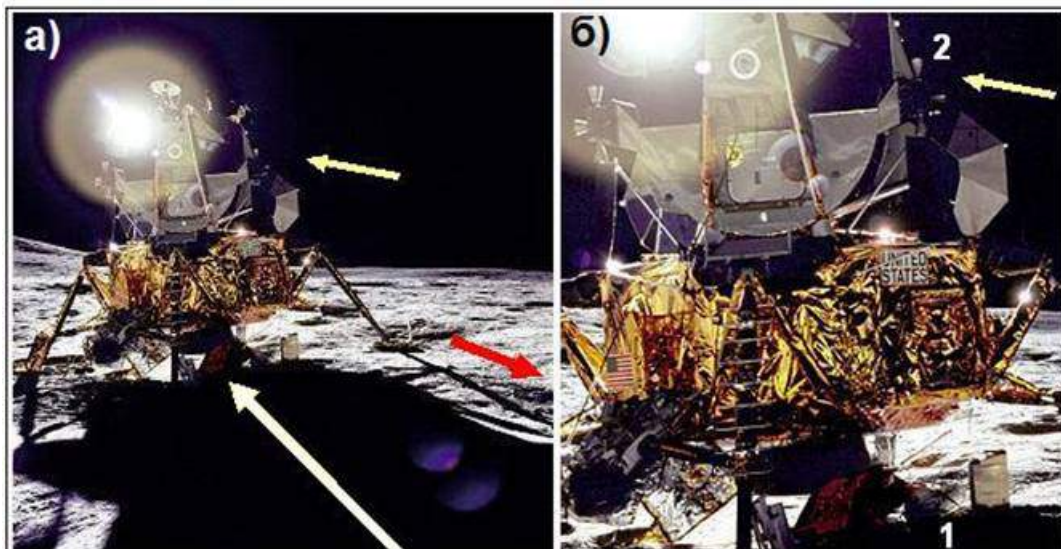
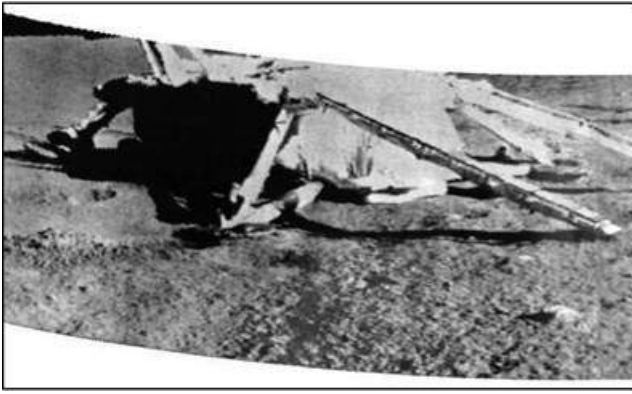


Fig. 1. "Antares" is illuminated by directional light from different sides.

On the NASA websites there is a beautiful image of the lunar module "Antares" (A-14) (Fig. 1). NASA's signature to it reads like this: *"Front view of the Antares module." The round halo is caused by the shining sun. The unusual ball of light was, in the astronauts' expression, like a vision of a precious stone. "* Let's note some oddities in the coverage of Antares.



The sun (or the source that represents it) shines in the direction towards us (red arrow), so that the side of the module facing us is in the shadow of the Sun. But why is everything so clearly visible on this shadow side?

For comparison, look at Fig. 2, which shows the landing platform on which ... 1970 the first mobile lunar "car" in the history of mankind, the Soviet automatic "Lunokhod-1", gently landed on the moon.

Fig. 2. Lunokhod-1 landing platform. The image was transmitted from the moon. Please note that **the shadow side of the platform is completely dark.**

Having driven away a little from the landing platform, Lunokhod-1, on command from the Earth, directed the lens of the TV camera at it and transmitted its image to the Earth. Please note that the shadow side of the platform is completely dark.

On Earth, during the day, we perfectly see what is in the shadow of objects. This is because in addition to the Sun, which plays the role of a powerful point illuminator, we are surrounded on all sides by a wide and rather bright illuminator - our earthly sky. There is no such illuminator on the Moon, because the sky there is black.

Of course, some part of the sunlight is also reflected by the surrounding lunar surface. But this light is very weak. It is worth to note, as Mr ome advocates admit such expressions as " the bright lunar surface -" bright lunar surface »and believe that the Moon - a very bright celestial body **[1]**.

This is what science says about the color of the lunar surface **[2-5]**. However, against the night sky, even a low-reflective object may appear bright. Astronomers have long measured that the moon reflects only 7% of the sunlight falling on its surface. Therefore, the **lunar surface can be compared with a black screen, with coal or soot, which reflect about 5% of the incident light. The color of the moon's surface is dark brown, about the same color as the crust of rye bread or chocolate.**

Let's try to imagine what you can see in the shadow of a spaceship if there is a black sky overhead, and the area around is made of rocks slightly lighter than coal. Most likely, nothing, especially if next to this shadow are brightly lit by the sun

parts and parts of the ship. This is exactly the situation we see in Fig. 2, where the deep darkness of a black shadow is adjacent to the brightly lit parts of this platform of the Soviet automatic apparatus. And in the Antares photo (Fig. 1), golden foil and other details of the module, located in the shadows, are brightly lit (Fig. 1b). Was it really a faint scattered light from the lunar surface? Then why did he leave so many unlit areas on the same foil? Does he shine from all sides?

No, most likely, "Antares" from our side is illuminated by a rather powerful source of direct light, which shines in the direction indicated by the white arrow. And, apparently, it is he who illuminates from behind our back an object that somewhat resembles a canister (Fig. 3, number 1). This "canister" is turned towards us by its shadow side in relation to the "Sun".

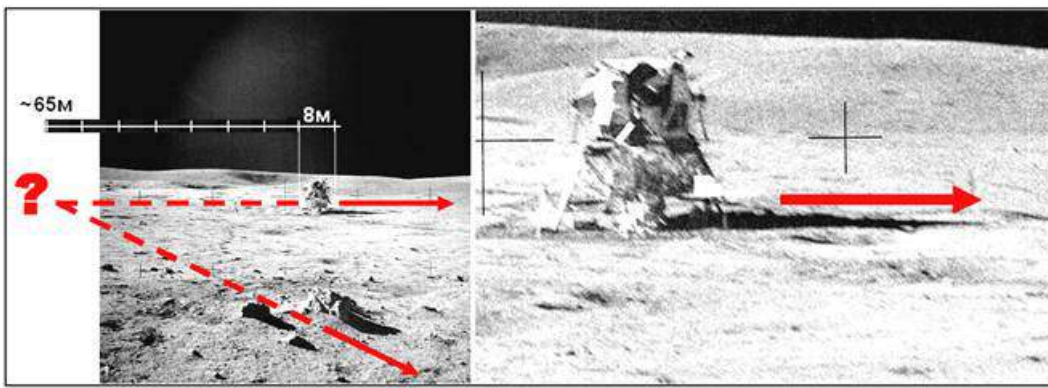
Fragment 2 in Fig. 1b and Fig. 3b is also interesting. Here you can see the familiar funnel of the orientation engine nozzle, clearly illuminated by a directional light source shining from the right, that is, towards the "Sun". In addition to this, in the rays of this "right" source at a considerable distance from the funnel, its distinct shadow is visible. This is the third source of directional light, which cannot be found on the Moon.



Fig. 3. Sources of illumination of "Antares" in addition to the "Sun" (fragments of ill. 1)

a) the "canister" is illuminated with light coming in the direction of the white arrow; **b) the** funnel is illuminated from the left by a directional light source and casts a shadow in its rays on the window of the lunar module

Now let's look at Antares from the other side. According to NASA, while walking on the moon, the A-14 astronauts shot their Antares against the background of the lunar landscape, and named it "Lunorama" (Fig. 4). Let's study this spectacular image, which is named on NASA websites with an interesting name "Lunorama".



III.4. Lunorama

a) distant view of the Antares module; **b)** a fragment showing the direction of the shadow from the module

Note that the shadows from the stones in the foreground and from the lunar module in the background are not sharply parallel to each other. Their extensions towards the light source converge beyond the left border of the frame. According to many skeptics, this is because, in fact, the site in question is illuminated by a spotlight located beyond the left edge of the frame.



In contrast to this opinion, defenders Yu. Krasilnikov and V. Yatskin [6-8] remind of the well-known phenomenon of perspective. It is known, they say, that parallel lines going away from us, for example, railway rails, seem to converge (Fig. 5a). So the shadows from the stones and from the module seem to converge. In fact, the defenders say, these shadows are parallel to each other, just like the same rails. Are the defenders really so right when they bring the phenomenon of perspective to help? The photographs of Fig. 5b and Fig. 5c will help us to understand this.

III.5. To the analysis of the "Lunorama" image:

a) outgoing rails, there is a phenomenon of perspective;

b) rails passing by,

there is no perspective phenomenon;

c) shadows from sunlight with side lighting,

there is no perspective phenomenon;

Yes, indeed, in the case indicated by the defenders (Fig. 5a), when both rails move away from us, they seem to converge. But on the "lunoram" we have another case, for which the analogy with the receding rails of Fig. 5a does not work. The fact is that on the "lunoram" one of the shadows under consideration (the shadow from the module) does not move away and does not approach us, but walks past us at the same distance in the direction perpendicular to our gaze (ill. 4b). Therefore, if we are to compare the shadows from the rays with the rails, then it is necessary to take such a photograph of the rails, on which at least one rail would pass by in the same way as the shadow from the module. And such a photograph (ill. 5b) shows that in this case the phenomenon of perspective is not observed. In this case, all rails appear to be completely parallel.

Why doesn't the analogy of rails with shadows apply to the image in Fig. 4? Where did the defenders go wrong when explaining the divergence of the shadows with the help of a snapshot of the parallel rails receding? Using the parallel shadows parallel rails analogy? Obviously not: straight lines of very different origins spread in space and are seen by the eye in the same way. And the shadows from the sun's rays behave in the most expected way under side lighting. This is shown in Figure 5c, which shows an alley of trees. The sun's rays can be read with high accuracy (0.5°) parallel in the entire space illuminated by them. In this regard, the analogy of them (and their shadows) with parallel rails is quite appropriate. And it is not surprising that in the picture of Fig. 5 in the shadows both from the closest objects and from more distant objects run parallel to each other, like the same rails in Fig. 5b. There is only one thing left: in Figure 4, the shadows that the defenders are trying to explain are not parallel.

Parallel lines can show us both the picture of Fig. 5a and the picture of Fig. 5b. But the picture shown on the "lunoram", when one straight line approaches us, and the other passes at a constant distance, parallel straight lines cannot show. Such a picture is characteristic only of diverging straight lines.

So, the considered explanation of the defenders does not save the "lunorama" from criticism: the shadows from the stones and from the module really differ greatly. Therefore, the opinion of skeptics that the scene in question is illuminated by a spotlight hidden behind the left border of the frame looks quite acceptable. If

this is the case, then we can estimate the approximate size of the stage where Lunorama was filmed. Let's take advantage of the fact that the shadow of the ship goes past us, not moving away or approaching. Therefore, as you move along this shadow, perspective does not distort the perception of distance. The distance will be measured in "lunar ships". Using the ship's hull as a linear scale (8m), it is easy to make sure that the intersection point is about 40m from the module - a perfectly reasonable distance for a movie set.

Thus, both from the point of view of explaining the intersecting directions of the shadows from the stones and from the module, and in terms of assessing the possible size of the cinema platform, the terrestrial version of the origin of the "lunorama" looks quite passing.

Retouched sky over "Fearless" (A-12)



Fig. 6. a) "Undaunted" is illuminated by directional light from different sides,

b) the sky around him is retouched

Figure 6 shows a snapshot of an astronaut descending from the Undaunted lunar module (A-12). The shadows from the module supports and the illumination of its left side indicate that both the terrain and the module are illuminated from the left. But the already familiar funnel of the orientation engine nozzle again "suggests" that there is a second source of directional light, which shines from the right. This snapshot is also interesting in that when the contrast of the image is increased, traces of retouching are clearly visible on it (ill. 6b). But why did you need retouching if the real lunar sky is uniformly black in any direction? But if the role of the lunar sky is played by a black screen, then the retouching operation may be necessary due to the insufficient blackness of this very screen (for more details, see Section 8).

Beams around the "Eagle" (A-11)



The image ill. 7 shows an astronaut descending the ladder from the lunar module "Eagle" (A-11). The shadows from small stones show that the area is lit from the right. However, the familiar funnel of the orientation engine, surrounded by a white frame, judging by the clear shadow, is illuminated by a directional radiation source from the back side - to the left. Again, it looks like the module is illuminated by more than one direct light source. When the contrast of this image is increased, one more interesting phenomenon is observed, which was noticed by the author [9] : three well-defined rays of light

become visible in the image. But on the Moon, such a phenomenon is difficult to expect.

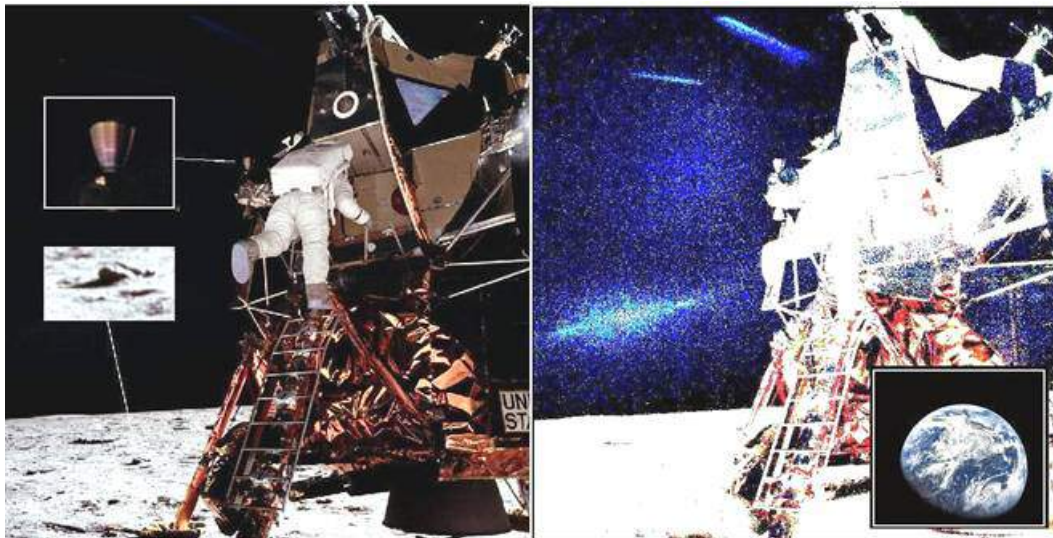


Fig. 7. Strange rays around the "Eagle"

The fact is that light rays are visible from the side only if some bodies or small particles meet in their path, which scatter the radiation incident on them. So, on Earth, we can see rays of light from the side only because the light is scattered in all directions by dust particles hanging in the air. In addition, light is scattered by the air molecules themselves. In space, there are practically no molecules of gases or dust, and therefore the sun's rays remain invisible until an object is encountered on their way. And then only this object is visible, and around it blackness reigns, filled, surprisingly, with bright, but invisible sunlight. For example, Fig. 7b (inset) shows our Earth taken from space. We know that all the space around her is filled with sunbeams, but we see them only there, where the globe is located in their path. The same cosmic emptiness dominates the surface of the Moon, in which there is nothing to scatter the light passing through it.

It can be assumed, although it is unlikely, that the astronaut who came out first and took this picture managed to raise a cloud of dust with his shoes, which enveloped the multi-meter module. But even with this assumption, we should have seen exactly a cloud of dust, that is, a more or less uniform light formation, but not sharply outlined rays. After all, the sun's rays evenly penetrate the entire space above the lunar surface, and do not spread along some selected directions. So it is very difficult to imagine that in Figure 7 we are seeing a scene illuminated by the sun's rays. If this scene was filmed in a studio under artificial lighting, then there can be many options for the appearance of such sharply defined and narrow rays.

The sun, unlike a searchlight, illuminates the entire area evenly

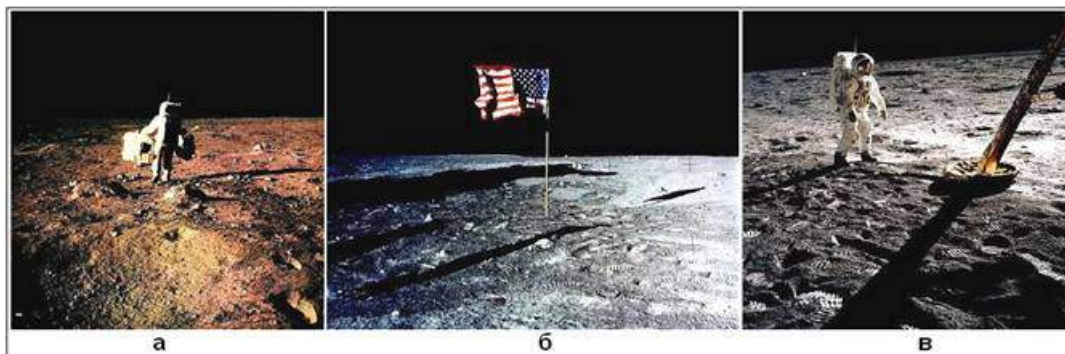


Fig. 8. The area being photographed is unevenly lit

A number of authors drew attention to the fact that among the photographs allegedly taken on the Moon, sometimes there are photographs with clearly uneven illumination of the terrain [10]. And this is strange, because the sun's rays illuminate any area evenly from edge to edge. Figure 8 shows three such "lunar" images. In these images, the contrast is increased using a computer, which helps to reveal differences in illumination.

In the images of Fig. 8a and Fig. 8b, the right half is illuminated noticeably brighter than the left. At the same time, the darkening in the left part is so great that the horizon line on the left is almost invisible. The power of the light source is clearly not enough for the entire area. But the Sun "has enough strength" to uniformly illuminate the entire Moon. In Figure 8c, the brightest area is in the center of the frame, highlighting the astronaut and the module support. It looks as if it is not the Sun that illuminates the astronaut, but the illuminator on the set decided to highlight the astronaut against the general background of the scene being filmed.

There were no reservoirs on the moon

And now, together with the A-15 astronauts, let's take a look at the surrounding lunar mountains. According to NASA, the A-15 astronauts landed in the area of the lunar Mount Hadley and allegedly repeatedly photographed this mountain and its neighbors. One such image is shown in Figure 9.

Many details of the lunar surface, visible from the Earth through a telescope, are included in astronomical atlases, but when studying the image in Fig. 9, this will not be useful to us. First, through a telescope, we see the details of the lunar relief for the most part as if from above, vertically, while astronauts would see them looking along the horizontal. Take a photo of the person from the top of the head and compare the resulting photo with his portrait - how much do you find in common? Secondly, in the best telescopes we from the Earth can distinguish details of at least 800m in size **[11]** , while in the image in Fig. 9, the sizes of individual details are many times smaller.

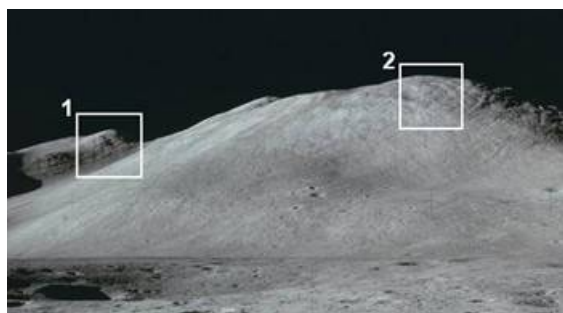


Fig. 9. Mountains allegedly photographed on the moon by A-15 astronauts

Therefore, let us try to find in Fig. 9 such relief features that would clearly confirm (or refute) its lunar origin. V.P. will help us in this. Yurkovets, a geologist with 15 years of experience, whose detailed report **[12]** the author of the book tried to present in an abbreviated form. Let us first recall what sedimentary rocks are.

“Sedimentary rocks (pebbles, sand, clay, limestone) are formed at the bottom of water bodies. They, as a rule, are deposited in clear layers and often contain imprints of leaves, shells of mollusks, bones of marine animals. And if someday sedimentary strata appear before us, we can be sure that there used to be a reservoir here ” [4] .

For many millions of years of the Earth's history, sedimentary layers could either remain horizontal or tilt strongly, but with all evolutions they retain their characteristic "layered". This is clearly shown by two terrestrial photographs of Fig.10a and Fig.10b. On the moon, there have never been reservoirs and therefore sedimentary rocks should not be found on it. And what do we see in Fig. 10b, which shows an enlarged fragment of 1 of the image in Fig. 9? NASA named this hill (or mountain) Silver Spur . The picture was supposedly taken on the Moon, but doesn't it resemble a completely terrestrial landscape with sedimentary rocks?

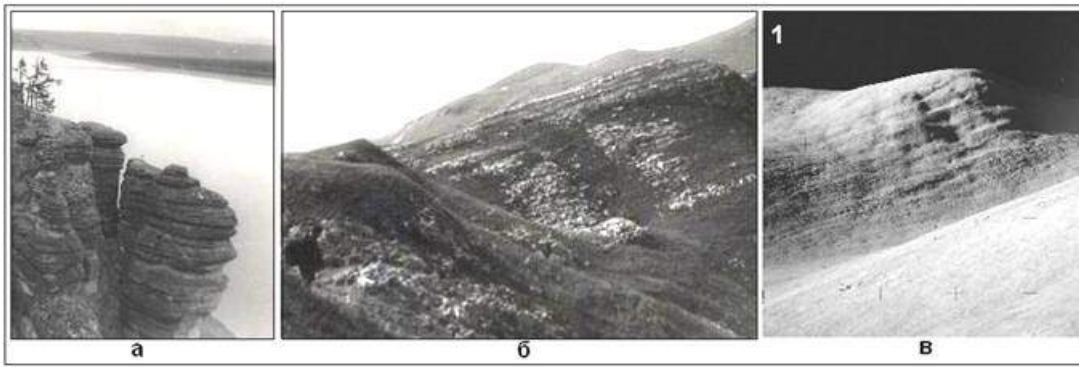


Fig. 10. a, b) two terrestrial landscapes with sedimentary rocks

c) the view of the Silver Spur mountain in the Hadley Delta region , allegedly filmed on the Moon, indicates that it is composed of sedimentary rocks (enlarged fragment 1 ill. 6)

Figure 11 shows an enlarged section of Mount Hadley of interest (marked in Figure 9 with the number 2). The layered structure characteristic of sedimentary layers is clearly visible along the entire slope of the mountain. V.P. Yurkovets writes the following about this: “... *Here everyone can see a huge outcrop of a layered rock mass, lying almost vertically. It is quite obvious that in this photo we see the marine sedimentary strata ...* ”. So, according to the conclusion of an experienced geologist, **before us is not a lunar mountain, but a completely terrestrial mountain, because there were no reservoirs on the moon.**



Fig. 11. There were no bodies of water on the moon.

Enlarged fragment 2 of the "lunar" mountain " Hadley " (ill. 9)

A layered structure typical of sedimentary layers is visible along the entire slope.

And what do NASA experts write about this image? The full NASA commentary is given in **[13]** , and, in short, American geologist Lee Silver notes that “linear” (ie layered) structures are visible on the mountain slopes, which “reflect the real

structure of the mountain". But these linear structures, that is, sedimentary layers, are visible even without the comments of a respected geologist. And whose structure should they reflect if not the mountain of which they are a part? Where on the Moon, where there has never been open water, such a structure could arise? - that's what is interesting to learn from Lee Silver . Instead, he speaks platitudes. Why?

So, what was the end of our mental "walk" around the lunar modules? We saw beautiful scenes, which, judging by many signs, are most likely filmed on Earth, and in the end we got acquainted with an interesting mountain, the structure of which is very similar to terrestrial sedimentary rocks. In order to present such "evidence", one could have stayed on Earth.

1. <http://www.bautforum.com/showthread.php?t=52909&page=2> и <http://balancer.ru/forum/punbb/viewtopic.php?id=52844&p=32#787>
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3. M.Yu. Shevchenko. "Journey through the Universe", "A.D. Selyanov ", Moscow, 2000, p. 34
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7. Yu. Krasilnikov. "The Whole Truth About Americans on the Moon." The magazine " Paradox ", No. 4, 2004, p. 10-25 (LLC "Publishing House of Rodionov"), see also ip5 "References-2".
8. 7-40 (V. Pustynsky), Yu. Krasilnikov "Did the Americans fly to the moon?" [http : // menonthemoon . narod . ru / photos _2_14. html](http://menonthemoon.narod.ru/photos_2_14.html) , [http : // menonthemoon . narod . ru / photos _2_12. html](http://menonthemoon.narod.ru/photos_2_12.html) ,
9. <http://bolshoyforum.org/forum/index.php?topic=41.msg276181#msg276181>
10. Yu.I. Mukhin. Antiapollo. Lunar scam of the USA. - M .: Yauza, Eksmo, 2005, p.306
- 11 F.Yu. Siegel. "Treasures of the Starry Sky", M., "Science", FML, p.203
12. <http://bolshoyforum.org/forum/index.php?PHPSESSID=0b183856251e9637fc427fd29b4d9590&topic=2370.msg76167#msg>

13 . <http://www.hq.nasa.gov/alsj/a15/images15.html#Mag84> , further see commentary on AS 15-84-11250:

Илл.1 . <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001144.jpg>

Илл.2 . http://www.mentallandscape.com/C_Luna17_Horz30.jpg

Fig. 3. fragments of Fig. 1

Илл.4 . <http://www.hq.nasa.gov/office/pao/History/alsj/a14/AS14-68-9487.jpg>

Fig. 5. photo of the author

Fig. 6. a) <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001317.jpg>
b) contrasting version "a"

Илл.7 . a) <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5866HR.jpg>

b) [9], **insert** - NASA

<http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS8-16-2593EN.jpg>

Илл.8. a) <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5944HR.jpg>

6) <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5905.jpg>

в) <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5902.jpg>

Илл.9 . <http://www.hq.nasa.gov/office/pao/History/alsj/a15/AS15-87-11749HR.jpg>

Fig. 10. a, b) photo of the author; **c)**

<http://www.hq.nasa.gov/office/pao/History/alsj/a15/AS15-84-11250HR.jpg>

Илл.11 . <http://www.hq.nasa.gov/alsj/a15/a15psrf5-14.html> ,
<http://www.hq.nasa.gov/alsj/a15/a15psrf5-14sm.jpg>

and <http://www.hq.nasa.gov/alsj/a15/AS15-84-11304HR.jpg> .

On the moon

29-37 minutes

On the moon

11. Is this lunar gravity?

"Galileo's Experience"

Quality alone raises doubts.

All bodies fall with the same acceleration, regardless of their mass. Science did not immediately come to an understanding of this fact. Everyday experience gives, it would seem, enough examples of a completely different property. So, a heavy brick is rapidly flying down, and a fluff can circle in the air for a long time until it falls. The point here is the air resistance, which slows down the fall (remember the parachute).

For the first time this was shown by the Italian scientist Galileo Galilei, studying the fall of compact heavy objects of different weights (cannonball and lead bullet), for which the air resistance is much less than the force of gravity.

There is no air on the moon, which makes it possible to repeat Galileo's experiment on any objects. And according to NASA, A-15 astronaut David Scott did it on the moon, dropping objects that NASA describes as a hammer and a feather. Galileo's "lunar" experience is shown in the film "For all mankind" **[1]** at the 50th minute and is presented on the NASA video clip **[2]** . It is used by the defenders as proof of the astronauts' stay on the moon. Figure 1 shows footage from this episode depicting the beginning and end of falling objects.

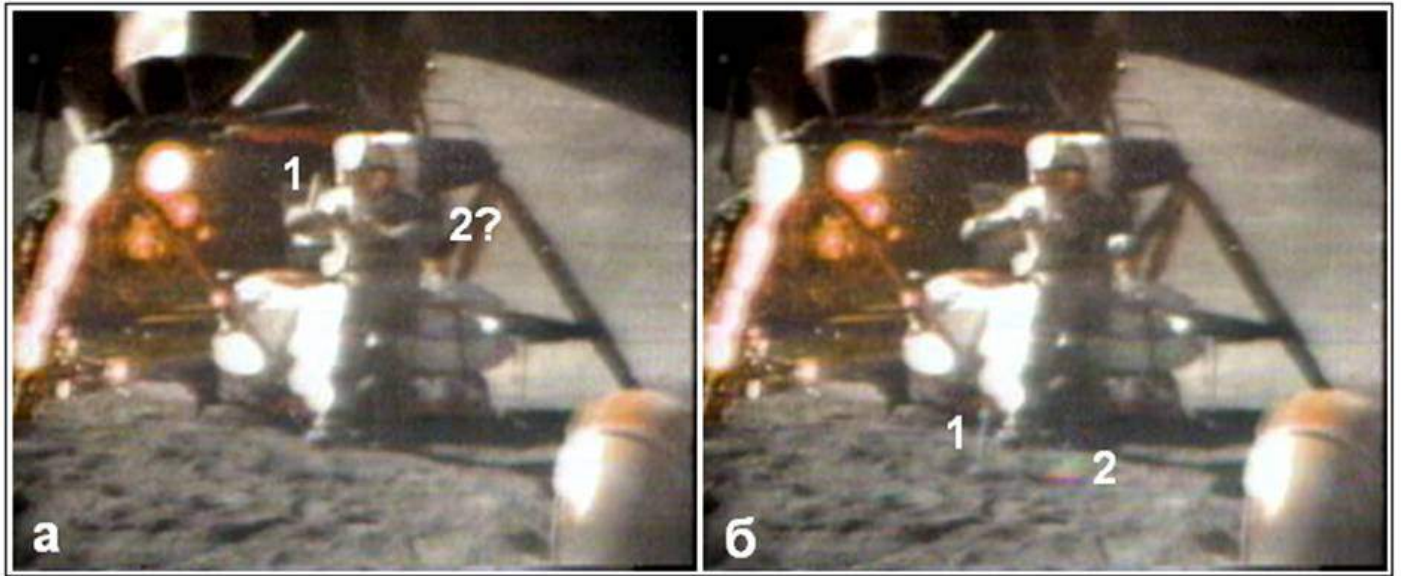


Fig. 1. The poor quality of the episode "Galileo's Experience" raises doubts about its reliability. ...

<http://www.hq.nasa.gov/alsj/a15/a15.clsout3.html#1672206>

Astronaut David throws a supposedly hammer (1) and supposedly a feather (2) : **a)** the beginning of falling objects, **b)** the end

It is not easy to make out in these frames, where is the feather, and where is the hammer. And such is the quality of all the frames of the episode. To help the reader, the author put the number 1 to the left of an object that looks like a hammer, and the number 2 to the right of a rainbow spot called a feather. In the opening frame, the feather cannot be seen at all, while in many frames the hammer becomes indistinguishable. Therefore, one has to partly guess that objects are falling at the same time.



The low quality of the clip raises doubts about its reliability. Indeed, the demonstrator of real scientific experience tries to make it as clear as possible to the viewer. Conversely, a magician or charlatan is interested in hiding the true springs of his action. In this regard, the question arises whether such an episode can be filmed on Earth?

Defenders V. Yatskin and Yu. Krasilnikov write categorically “no, you can't” [3]:
“To film this episode on Earth, the Americans would have to build a sealed film studio and pump out the air. The structure itself is not weak (and not very cheap): for every square meter of its walls, an atmospheric pressure force of 10 tons will act. Moreover, the entire film crew would have to be dressed in real space suits ... ”
 .

But they do not seem to be aware that in those very years NASA really created in one of its centers a vacuum chamber the height of a 15-storey building (40m) and a diameter of 30m (Lewis Research Center's Plum Brook Station, [4]) . It was intended for testing life-size spacecraft under vacuum conditions, as well as for training astronauts in real spacesuits. And the air is pumped out of it, and the force indicated by the defenders presses on the walls (ill. 2).

Fig. 2. Galileo's lunar experience could well have been filmed here.

Vacuum chamber for testing spaceships and training astronauts in spacesuits
<http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001462.jpg>

In such a spacious chamber, the Americans could well have filmed the "Galileo experiment" in an airless space, without having to fly to the moon for this.

Why is the playback speed of the clip slowed down?

After pumping out the chamber, both the hammer and the feather will fall in it simultaneously, but with one significant "but": they will fall noticeably faster than they would on the Moon. The reason is **the** greater force of gravity on Earth. In airless space (both on the Moon and in the chamber of the Lewis Research Center), all bodies will fall simultaneously. But the time of falling from the same height on the Moon and on Earth will be different. Because the magnitude of the acceleration g is determined by the mass of the planet. On the Moon, $g = 1.6 \text{ m / s}^2$, and on Earth, $g = 9.8 \text{ m / s}^2$. However, the fact of inconsistency in the time of the fall can be hidden. For this, the episode filmed on Earth must be shown in slow motion. And, as established by the author [5], that is exactly what has been done.

But, first, we read what the defenders Y. Krasilnikov and V. Yatskin write about this episode [3] (quoted with abbreviations of the text and additions of designations and formulas):

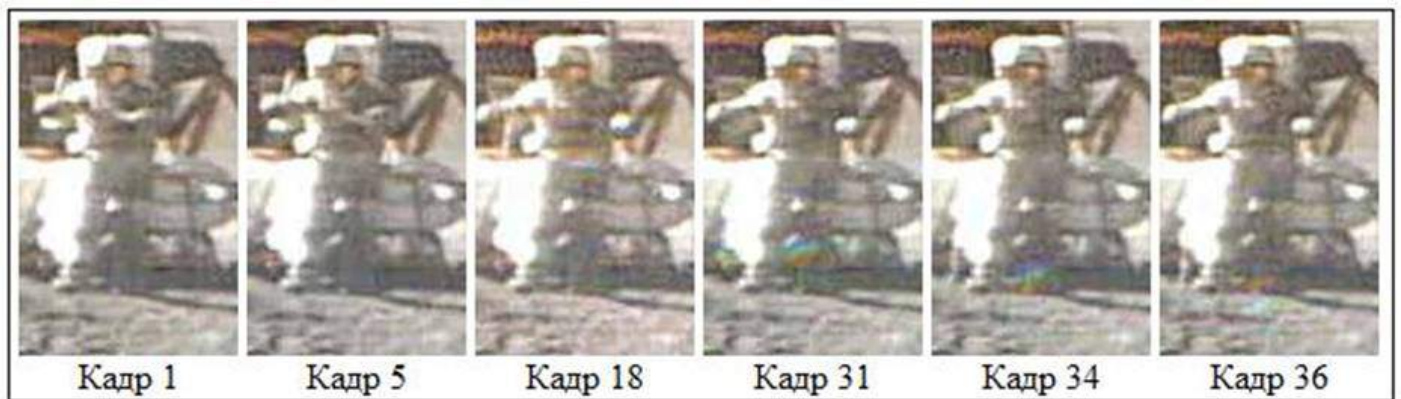


Fig. 3. A selection of still frames from the clip "Galileo's Experience" from the work of the defenders <http://www.skeptik.net/conspir/moonhoax.htm>

"If we are to analyze, then we need to look at how many frames are falling objects, find the time interval corresponding to this number of frames, and so on. There is a video on the NASA website, which depicts Galileo's experience on the Moon (the named clip [2] is indicated - AP). If you study it with the help of a video editor, you can establish that its frame rate is 30 per second, and the falling of objects on it lasts 36 frames. The first and fifth frames differ very little, because at the beginning of the fall, the speed of objects is insignificant, but the moment when the astronaut unclenches his hands is recorded quite clearly. The falling time of t objects is obviously $36/30 = 1.2$ seconds. Hence, if we assume that the height of the fall h was 1.4 meters, we find the acceleration $a = 2h/t^2 = 1.9 \text{ m / s}^2$. This is slightly more than 1.6 m / s^2 - the value of the acceleration due to gravity on the Moon. However, although we determined the fall time more or less accurately, we took the fall height "from the lantern", so a relatively small (20%) error should not surprise us. "

In general, the acceleration with such a general calculation for the defenders turns out to be quite lunar. On this, the defenders stopped their reasoning, and,

probably, not in vain. Otherwise, they would have to correct the value of acceleration to a completely terrestrial value.

In contrast to them, the skeptic [5] looked through the entire clip frame by frame and found that a significant number of frames in the clip in question are, so to speak, “dead”, that is, they repeat the same position of objects. The “hammer” and “feather” do not move on them.

Figure 4. shows a continuous sequence of seven frames (no intermediate frames are cropped out). Frame # 1 corresponds to the moment when the astronaut just unclenched his hand and released the hammer. The next two frames almost coincide with him. But this can be explained by the fact that the fall is just beginning, and the hammer is moving at low speed. But for the next four completely identical shots, this explanation no longer works: in frame No. 4, the hammer makes a small jump down and freezes in this position for three more frames (No. 5,6,7).

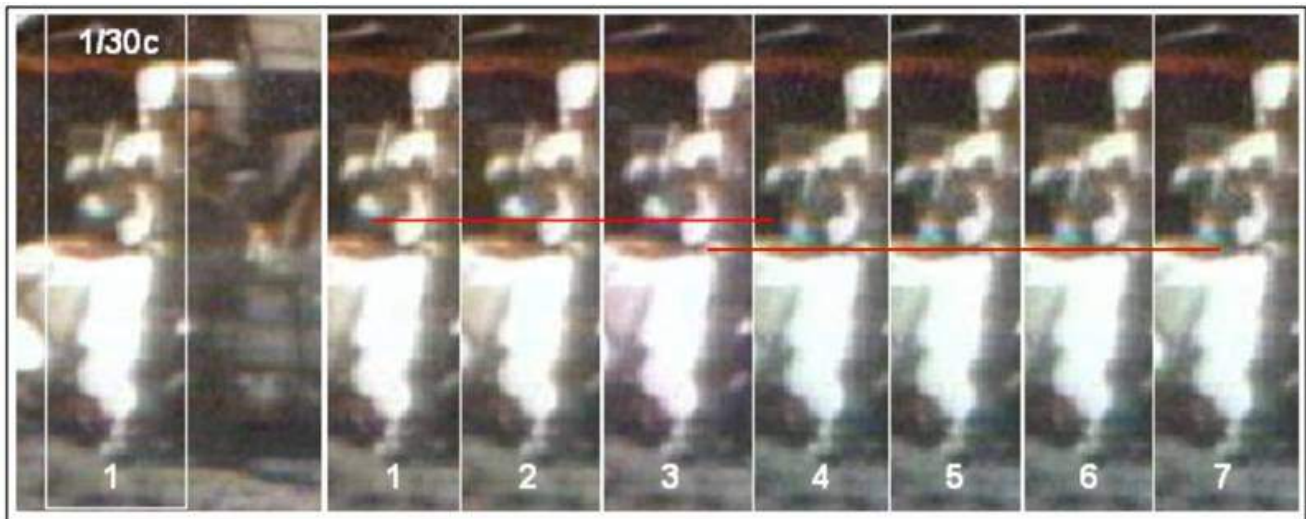


Fig. 4. The clip "Galileo's experience" contains many frames-repetitions of the image <http://www.hq.nasa.gov/alsj/a15/a15.clsout3.html#1672206>

Here is another continuous sequence: from frame # 20 to frame # 30 (Figure 5). Here, the hammer is completely invisible due to poor image quality, and we observe a rainbow spot denoting a feather. The author has put a white dot next to it. After frame # 20, the pen jumps down and then freezes for as many as six frames (from # 21 to # 26 inclusive). Then the pen jumps down again and freezes again for three frames (from No. 27 to No. 29 inclusive).

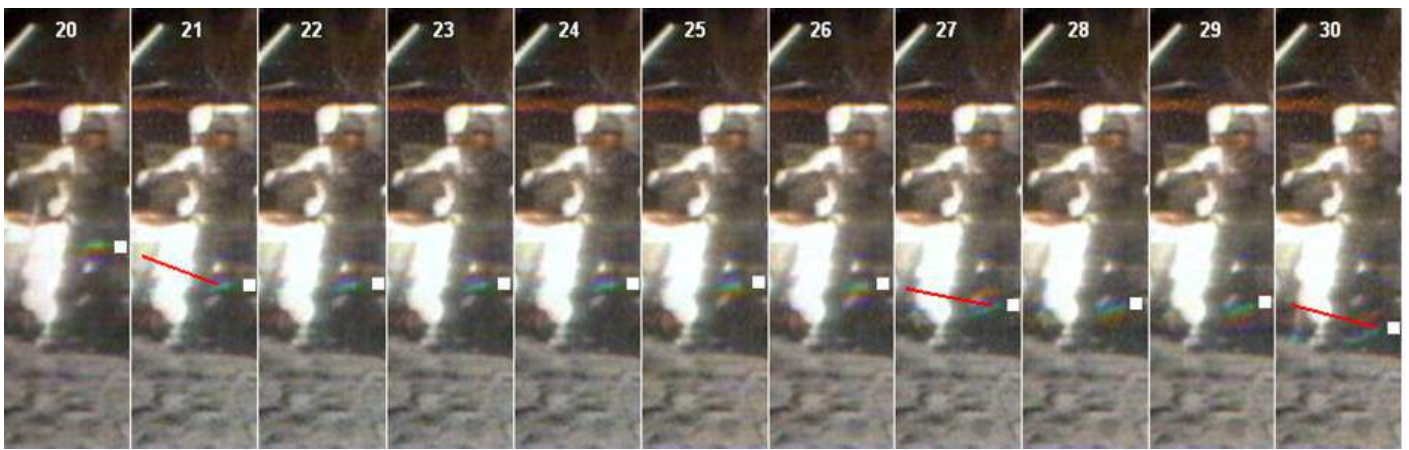


Fig. 5. The clip "Galileo's experience" contains many frames-repetitions of the image <http://www.hq.nasa.gov/alsj/a15/a15.clsout3.html#1,672,206> (continued)

Thus, a lot of repeat frames are embedded in the clip. As a result, the falling of objects looks more slowly than it actually was. This is how the "lunar" acceleration of the fall turns out. To determine the true acceleration of falling objects, it is necessary to take into account only "live" frames, excluding the embedded frames from the calculation. This is exactly what the author did [5] and as a result he got the most, that neither is the terrestrial value of acceleration $a = 10 \text{ m / s}^2$.

The author of the book repeated this calculation using live footage. Of the 36 frames of the episode, 15-18 frames were "live". The miscalculation is due to the terrible quality of the clip. So the true time of falling objects was $(15-18) / 36 \text{ s}$ or $0.4-0.5 \text{ s}$. Hence, according to the formula $a = 2h / t^2$, in full agreement with [5], we obtain a completely terrestrial value $a = (9.5 \pm 2) \text{ m / s}^2$.

Now it is clear why the quality of the clip is so terrible. Poor quality, or rather, lack of quality, allows you to hide how the image of falling objects twitches due to inserted "dead" frames.

And this picture is for the completely gullible



In addition to the clip and, as it were, to compensate for its terrible quality, NASA provided a quite high-quality and quite ordinary separate photograph of a hammer and a feather, supposedly lying on the Moon (Fig. 6). But

what's in this shot from the moon? Anyone can take such a picture just in their yard. There is always a hammer on the farm, but you will have to look for a bird's feather, which, however, is much easier and cheaper than flying to the moon. This picture is designed for the most gullible people. It is even somehow undignified to publish such images for such a solid organization as NASA.

Fig. 6. Hammer and feather as proof of a flight to the moon? Anyone can take such a picture.

<http://www.hq.nasa.gov/office/pao/History/alsj/a15/AS15-88-11890.jpg>

In general, it seems that the author [5] was right in asserting that the **"Galileo experiment" NASA conducted on Earth.**

You can jump like this on Earth

On the Moon, the force of gravity is six times less than on Earth. The weight of an astronaut in a spacesuit on Earth is about 160-170 kg , on the Moon it is 27-30 kg. The muscle strength of the astronaut remains unchanged, so one would expect astronauts to demonstrate high jumps on the moon. In their stories, astronauts report such high jumps. Here is what, for example, Neil Armstrong personally told in a report at the XIII Session of COSPAR (Leningrad, June 1970) and published *"with the kind consent of the author"* (that is, Armstrong himself - AI): *"Of course, in the conditions lunar gravity wants to jump up. Free jumps while maintaining control of movement are possible up to one meter. Jumping to high heights often ended in a fall. **The highest jump height was two meters**, that is, up to the third rung of the lunar cabin ladder. In this case, the astronaut managed to maintain balance only because he was able to grab the ladder with his hands "* [6].

Two meters - such a value for the height of the jump on the Moon for an astronaut wearing a spacesuit, is in good agreement with simple calculations [7]. Let's get acquainted, however, with what video materials NASA presented on this topic . Known video clip [8], showing two demonstration astronaut high jumps: astronaut John Young jumps high from a place in the presence of a colleague Charles Duke. It is understood that all of this is filmed with an automatic camera. In both attempts, the astronaut jumps up to about the same height. Figure 7 shows a few frames from this clip .

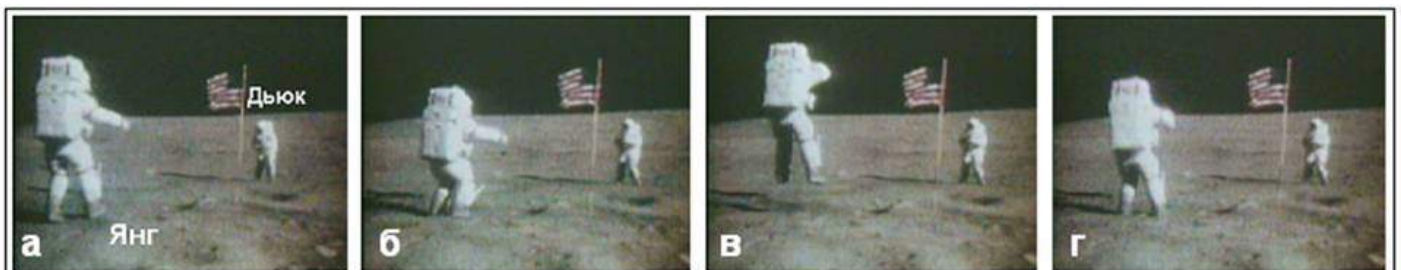


Fig. 7. Astronaut Young demonstrates a completely terrestrial high jump [http : // www . hq . nasa . gov / office / pao / History / alsj / ktclips / ap 16 _ salute . mpg](http://www.hq.nasa.gov/office/pao/History/alsj/ktclips/ap16_salute.mpg)

a) takeoff run, **b)** grouping, **c)** maximum jump height, **d)** jump is over

In Figure 8a, two images of the astronaut show that Young jumped to a height corresponding to the bend of the knee, that is, no more than 50 cm . But this is quite an earthly height, which young people demonstrate on the beach (ill. 8b).

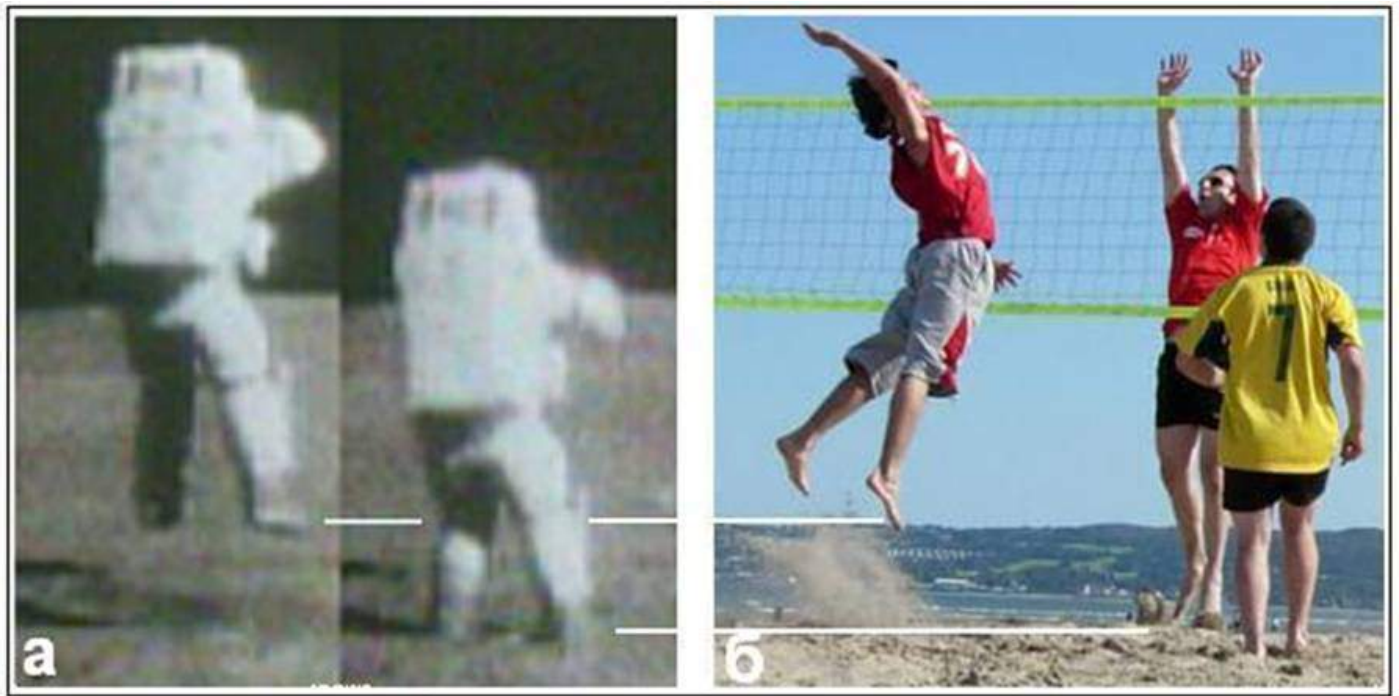


Fig. 8. To the estimation of the astronaut's jump height in Fig. 7.

a) enlarged fragments of ill. 7c, d; **b)** beach volleyball [7].

It should be noted that for volleyball athletes the standard for a high jump from a spot is slightly more than 60 cm [7]. And the astronauts in physical training are the same athletes. Of course, you can't jump in a full-fledged lunar spacesuit on Earth. But to imitate "lunar" jumps on Earth, a real spacesuit is not needed. Something similar, but lightweight, will do.

Figure 9a shows another jump of astronaut Young, which is very often featured in a wide variety of publications about flights to the moon. I must say that on the website [11] NASA correctly names the real height of this jump - 42 cm . But few meticulous readers will find this information, so the legend of Young's high jump is walking. *"Jumping high over the Moon, astronaut Young salutes the flag,"* writes G. Burba, Ph.D., about him in his article [10].

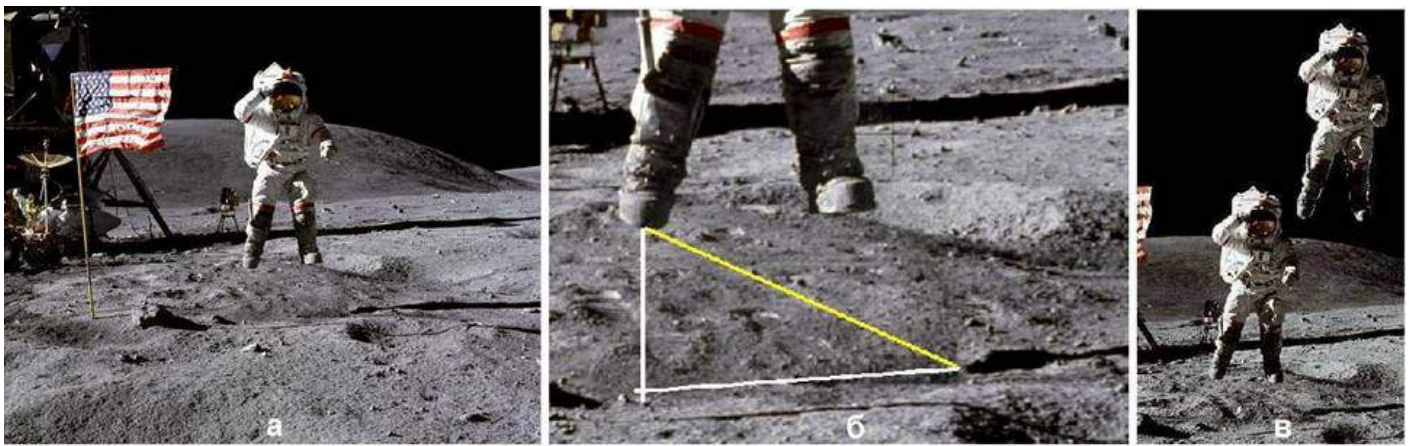


Fig. 9. Astronaut Young's Another Jump

a) “Jumping high above the Moon, astronaut Young salutes the flag” - G. Burba, <http://www.hq.nasa.gov/office/pao/History/alsj/a16/AS16-113-18339HR.jpg> **b)** enlarged a fragment showing the true height of the jump, **c)** this is how a 2m high jump would look like

In fact, the visual sensation of Young's "high" jump is a skillfully constructed illusion. An enlarged fragment of the image will help to understand this (Fig. 9b). Behind the astronaut is a small mound, from which, judging by the footprints of his shoes, he jumped. In front of the hillock there is a small hollow over which the astronaut hovered. This micro-relief gives the impression of a great jump height.

The constructed triangle 1-2-3, consisting of a hypotenuse 1-2 connecting the astronaut's shoe and his shadow on the ground, and two legs 2-3 and 3-1, will help to estimate the real height of the jump. It is easy to see that the distance from the soles of the jumping Young to the ground does not exceed the distance from the sole to the bend of the knee, that is, again, it is no more than 50 cm. That is, this jump of Young is quite earthly in height. Photo 9c shows the figure of an astronaut during a jump of 2 m in height, which astronauts only talk about in their memoirs, using montage.

So, it turns out that the height of the jump shown by Young is 3 or more times less than the maximum jumps that Armstrong talked about (2m). There is little point in wondering why NASA didn't tell astronauts to back up their stories of high jumps with relevant pictures and movie plots. You just need to state that the **demonstration of high jumps, as one of the possible evidence of astronauts on the moon, is absent in the photos and video documents of NASA.**

Surprises in pseudoscientific fantasy?

Only stories remained to posterity in memory of the high jumps of American astronauts on the moon. And these stories are such that ends meet different astronauts do not converge.



Above was quoted an excerpt from N.

Armstrong's public report on high jumps on the Moon [6]. Let's read it further from where we left off: *"The **falls had no unpleasant consequences**. Their speed is so low that there is no reason to fear any damage. Usually, if the balance is out of balance, a fall can be prevented by a simple turn, a step in the direction in which you fall. If you fall face down, you can easily get up without assistance. If you fall on your back, you need to make more effort to get up on your own. Of course, the easiest way to get on your feet is with the help of another astronaut.* This was the first "moonwalker" who spoke in 1970, just a year after his "landing" on the moon. One might say, he told in hot pursuit, while everything is fresh in his memory, as if he had jumped on the moon just yesterday.

Fig. 10. The stories of the astronauts do not make ends meet:

"The falls did not have unpleasant consequences" - N. Armstrong, 1970;

"(I) managed to feel the horror of impending doom" - Charles Duke, 1990

<http://next.nasa.gov/alsj/UL16panic.html>

Charles Duke, crew member (commander) of the A-16, visited the moon in 1972 according to NASA. If at NASA astronauts talked with each other, "then Neil Armstrong was obliged to tell Charles how it is safe to jump on the moon. Even if you fall on your back, then nothing terrible will happen. And, probably, in those years, Charles, talking about his moon jumping exercises, adhered to the same narrative line as Armstrong. But 20 years later, the Duke couple published the book "Moonwalker". Apparently, by this time all the agreements had already been forgotten, and therefore in this book Duke says something exactly the opposite of what Armstrong publicly said.

It turns out that jumping on the moon is deadly. This is described in detail in a short article by NASA [12]. A colorful picture of the dramatic fall of Fig. 10 is borrowed from the same place. Let's use a fairly accurate and laconic translation of this article by NASA defender Yu. Krasilnikov [9]: *"He soared up to a height of about a meter - and fell on the Moon with a knapsack down. Duke later recalled that at the moment of the fall, he "had time to feel the horror of impending doom ."*

Pay attention to the profound difference in the stories and impressions of Armstrong and Duke: *"The falls had no unpleasant consequences"* and *"managed to feel the horror of impending doom."* Let's consider the possible explanations for this contradiction.

Armstrong (A-11) and Duke (A-16) arrived "on the moon" with completely different physical and psychological training. Therefore, Armstrong fell, including on his back without *"unpleasant consequences"*, and in Duke the same thing caused *"the horror of impending doom."* We will discard this option out of respect for NASA. After all, they did not accept squabbles in the astronaut detachment there.

The second - Armstrong was given a sturdy spacesuit, and Duke - "used". And we will discard this option, believing that the Americans would not save on spacesuits.

The third - neither one nor the other was on the moon. Both are fantasizing. But fantasies (or fairy tales) can differ greatly, and not in details, but in the main thing, if they are made by different storytellers, and even with an interval of 20 years. This is a more likely explanation. And it is quite consistent with what we learn below.

H and ill.11 shows three frames of the movie "For all mankind" **[13]** . Here the astronauts were naughty with might and main: they run, jump and at the same time fall more than once, and not twice. Say, know how dashing they are - American guys. True, one of them, remembering during the film what he was taught and that he was "on the moon", in a pause between the fun says: *"It was almost dangerous. If we forget that there is a vacuum and that the spacesuit can leak and after that the astronaut will inevitably die. "* And after these words, the astronauts, under their own cheerful "trum-trum", again jumped "on the moon".



Fig . 11 . Astronauts frolic **[13]** . On the moon?

Jumping on the "Moon", astronauts have excellent control over their bodies, despite the fact that the force of lunar gravity is six times less than that of the earth. In the course of the same film, the astronaut easily demonstrates the

exercise "fell on his hands - wrung out - got up". He does it, apparently, twice for persuasiveness, and is no worse than it can be done on Earth (ill. 12).

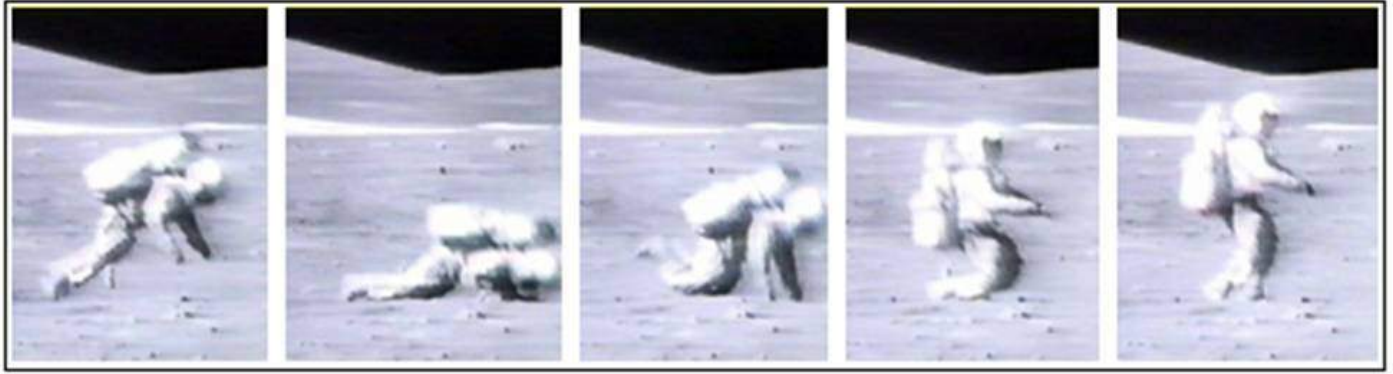


Fig . 12 . Movement coordination just like on Earth **[13]**

Why are astronauts so reckless and brave in their walks on the moon? After all, any injury 380 thousand km from Earth is extremely dangerous until the tragic end of the expedition. And how did the astronauts manage to achieve such a complete adaptation of their bodies to the conditions of weak lunar gravity in the short hours of their stay on the Moon? No, it doesn't look like all of this is happening on the moon.

Why are high object throws not demonstrated?

The article **[14]** says that while on the moon, A-12 astronaut Alan Bean *"threw a package of one of the instruments, and it flew away to a height of about 100 m."*

On Earth, no one can throw even a very light object to a height of 100 m (this is a 35-storey house). Air resistance will not give. And on the moon it is possible. Gravity is six times weaker and there is no air. So Bean did something simple for the Moon and unusual for earthly conditions. But these, we emphasize again, are stories. And, as the authors rightly note **[14, 15]**, none of the lunar expeditions visually captures such a simple and at the same time spectacular experience as a high toss of objects. At **[16]** you can find six short clips in which astronauts A-16, supposedly on the moon, from time to time tossing objects. Throws, even remotely resembling the named 100 m, there is no. All throws are several meters high. Can you throw a soft cloth or light cardboard 3-4m high on Earth? I am sure that yes. So on what basis do they want to convince us that the throwing of objects captured in these six clips takes place on the moon? True, the pace of the throws is slowed down, but it is quite within the power of cinema to slow down or speed up the action. Figure 13 shows still images from two clips. The rest of the reader can watch for himself, if he wants to make sure that the author has shown two of the most typical clips. And let the reader not be surprised that the same illustration on the left says "Five clips", and at the top "Six clips". So - in the original. NASA is wrong, too. And quite often.

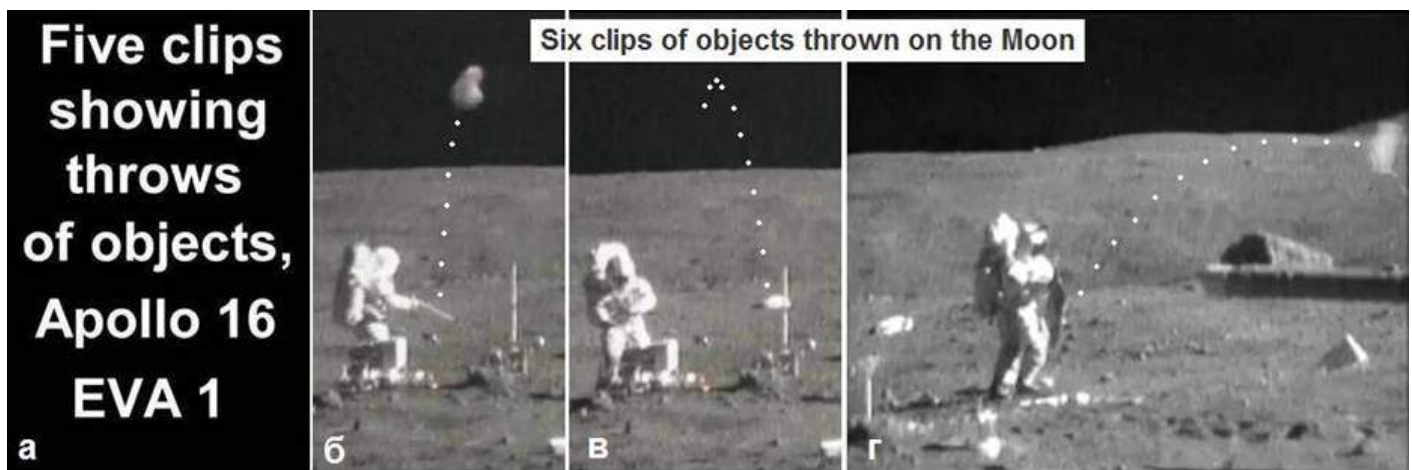


Fig. 13. Apollo 16 astronauts demonstrate throwing light objects upward. The height of the throws is quite earthy. <http://www.youtube.com/watch?v=isVO9AAAhxM&NR=1>

Let's summarize the chapter.

Why in the episode "Galileo's experience" there are additional frames that "slow down" the falling of objects? Why, after excluding these frames, is a completely terrestrial acceleration of free fall of objects obtained? Why is the broadcast quality of the episode so terrible? Indeed, in order to show a clear and easily verifiable experience of Galileo, the astronauts had to shoot the corresponding film and bring it to Earth.

Why do astronauts only talk about high jumps on the moon, but show quite earthly, low jumps?

Why are the stories of astronauts about the safety / danger of jumping on the moon so contradictory in their most fundamental provisions?

Why do astronauts frolic so carelessly on the moon, despite their frequent falls?

How did they manage to demonstrate a completely terrestrial coordination of movements in conditions of unusually low lunar gravity?

Why during the six Apollo expeditions did the astronauts not make a single convincing demonstration of throwing objects several tens of meters high?

There are many questions. And there are even more doubts about where the astronauts really threw a hammer and a feather, jumped and frolicked, threw up packages. All this very much resembles the actions performed on our native Earth.

1. See. [P2] and [iv18] Section 2 8

2. [http : // www . hq . nasa . gov / alsj / a 15 / a 15. clsout 3. html # 1672206](http://www.hq.nasa.gov/alsj/a15/a15.clsout3.html#1672206) (MPEG Clip), see also [iv18] section 28

3 . V. Yatskin and Yu. Krasilnikov. Did the Americans fly to the moon?
<http://www.skeptik.net/conspir/moonhoax.htm> pp. 42-43

4. NASA The Apollo Spacecraft - A Chronology _ Vol _ III _, communication dated January 22, 1965 about a NASA contract for the construction of a giant vacuum chamber. see also <http://www.hq.nasa.gov/office/pao/History/SP-4009/v3d.htm> and [http : // grin . hq . nasa . gov / ABSTRACTS / GPN -2000-001462. html](http://grin.hq.nasa.gov/ABSTRACTS/GPN-2000-001462.html)

5. <http://www.geocities.com/sergximage/>

6. Neil Armstrong. The report read at the XIII Session of COSPAR (Leningrad, June 1970) is published with the kind consent of the author. Abridged translation by G. N. Deev. "Earth and the Universe" 1970 №5
<http://epizodsspace.airbase.ru/bibl/ziv/1970/arm.html> . For an interesting discussion on this topic, see <http://www.vif2ne.ru/nvz/forum/0/co/305766.htm>

7. <http://mo---on.narod.ru> "Americans have never been to the moon." Materials of the forum "Membranes"

8. NASA [http : // www . hq . nasa . gov / office / pao / History / alsj / ktclips / ap 16_ salute . mpg](http://www.hq.nasa.gov/office/pao/History/alsj/ktclips/ap16_salute.mpg) "Astronaut jumps and salutes flag" (2.4 Mb). Astronaut John Young's demonstration high jump at the flag, see also [**iv19**] section 28

9. Yu. Krasilnikov. "The Whole Truth About Americans on the Moon." The magazine " Paradox ", No. 4, 2004, p. 10-25 (LLC "Publishing House of Rodionov"), p. 10, see . See also [un5] section 28

10. "Traces in history". "Around the World", No. 8, 2003, p.62

11. <http://www.hq.nasa.gov/office/pao/History/alsj/a16/images16.html#M113>
see photo description AS 16-113-18339

12. <http://next.nasa.gov/alsj/UL16panic.html>

13. Film "For all mankind". See [f2] and [iv 20] section 28

14. <http://www.sciteclibrary.ru/rus/catalog/pages/325.html> , Мохоб

15. Yu.I. Mukhin. Antiapollo. Lunar scam of the USA. - М .: Yauza, Eksmo, 2005, p. 41

16. <http://www.youtube.com/watch?v=isVO9AAAhxM&NR=1>

The last revision of the chapter - 11.3.2011

Supplement to the section "Galileo's Experience"

The day of 03/15/11 has not yet ended, when this chapter was posted on the site, as one of the active defenders of NASA, Luchezar I. Georgiev [1p] , spoke :

“The incorrect statements of A.I. Popov remained. But he already knows that they are unfaithful! On [2p] I wrote: "By the way, in great detail the acceleration of gravity on the Moon from this video is calculated on the NASA website [3p] as 1.57 or 1.67 m / s² (36 frames, which are referred to there as the duration of the fall, refer to a large 80-megabyte (640 x 480 tons) video on an FTP server, the link to which is given at [4p] : - there is 29.97 fps and no duplicate frames, contrary to what Popov writes! "Those. the video on which I gave the link has a much better resolution (the term "quality", in which you did not have time to give any definition, despite repeated requests, is too vague). And in this much better resolution video, there are no duplicate frames. Why then A.I. Popov continues to look at the previous video, unconditionally knowing about the existence of this? " ...

Here's what the author thinks about this.

1) First, the statement " *But he already knows that they are incorrect!*" - a very primitive propaganda trick, superfluous in a serious discussion. Popov is familiar with the opinion of L.I. Georgiev. But it does not at all follow from this that L. Georgiev brought the truth to us. So there is no need to attribute to Popov what Georgiev thinks.

2) The site referred to by the respected defender is marked as last edited - December 6, 2008. The episode "Hammer and Feather" was filmed allegedly on the Moon in 1971. Recall that above we reviewed a clip that NASA provided director Al Rayner for inclusion in the film "For All Humanity" (1989). This film was awarded in the USA as the best documentary of 1989. And then suddenly it turns out that NASA, it turns out, has a clip of much better quality, without "dead" frames and does not give any reason for doubt. **What was NASA guided by in giving Rayner a bad clip for the best documentary if she had the best quality at that time (Figure 1p)?**



Fig. 1p. Two stills showing how NASA's lunar evidence has “improved” over the years

The answer is obvious - there is no point in it. Everything looks like NASA did not have this very "improved" clip at that time. And there was a fake - rather crude (ill. 1p / a), but which got away with for quite a long time. But when skeptics (the same author [5]) exposed it, then there was a need to “improve” the video. And they did it (ill. 1p / b). According to D. Kropotov [5p], “*when they (new materials) are published is difficult to say, most likely not earlier than 1996, more likely between 2000 and 2008*”.

D. Kropotov's explanation that the timing of the discovery of the truth was "late" was essentially confirmed by L.I. Georgiev [6p]:

*“The 80-megabyte file itself under the link [5p] has a date of May 31, 2007. I feel that it is too late for you. But an episode with Galileo's experience is contained in the video film "Apollo 15: In the mountains of the Moon" (1995) from 20:58 to 21:47 (see [7p], the video series "Apollo Missions" at the end of the page). There, too, the resolution is quite high (640x496 tons) and again **there are no duplicate frames**. Well, is 1995 already early enough for you, or should you look further? ”*

The respected defender felt right about “too late”. Indeed, at the very beginning of the book it is written:

The year of release of the film "For All Mankind" (1989), the author of the book considers a logical time line, after which the "reception" of "new" evidence from NASA should be sharply limited for the following reasons:

- By 1989, 20 years have passed since the A-11 flight - a period quite sufficient for such a powerful organization as NASA to systematize and generalize information about the Apollo flights;

- by the time the film was released, NASA was quite confident in the power of its influence on public opinion, and therefore it did not have serious incentives to use computer graphics to manipulate images, which has actively entered our life since the second half of the 80s;

- the film significantly contributed to the growth of doubts about the authenticity of the landing on the moon; After its release, and under the influence of criticism from skeptics, highly criticized materials began to disappear from NASA's sites , and new materials began to be put into circulation, designed to correct the mistakes made .

6 years that have passed from 1989 to 1995 is quite enough time to replace the old "scandalous" clip **[2]** (6.3 Mb) to release a new one **[4p]** with better quality (80 Mb), and without dead frames.

As for whether or not to seek further, that's as you please, esteemed defender, In light of what is written a few lines above, this will be a useless job for that part of the readers who are tired of all the nascent "new evidence" of NASA. They (and the author of the book among them) do not value this new "evidence" for a penny. But there is a wide enough audience that delights in NASA's continuous production of improved lunar evidence. She needs your job, dear advocate. So good luck in this business! Yours faithfully! A.I.

1n. <http://www.vif2ne.ru/nvz/forum/0/co/306201.htm>

2n. <http://www.vif2ne.ru/nvz/forum/archive/283/283462.htm>

3n. <http://next.nasa.gov/alsj/a15/a15.clsout3.html#1672243>

4n. http://nssdc.gsfc.nasa.gov/planetary/lunar/apollo_15_feather_drop.html

5n. <http://www.vif2ne.ru/nvz/forum/0/co/306230.htm>

6n. <http://www.vif2ne.ru/nvz/forum/0/co/306355.htm>

7n. <http://kolibka.com/movies.php?page=2&cat=space>

Updated 03.22.

14

14-18 minutes

On the moon. Chapter 12

Where were these flags?

Rare publications about the flights of "Apollo" do without the types of the flag, allegedly removed on the Moon **[1]** . Let's get acquainted with some of these types.

Apollo 11: who moved the flag after the astronauts left?

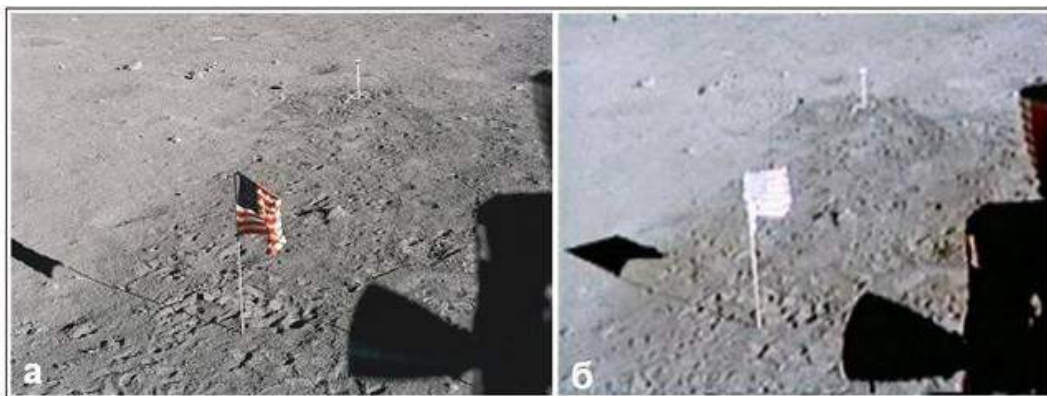


Fig . 1 . Who moved the flag after the astronauts left?

(Two snapshots of the remaining flag, allegedly taken "goodbye" from the lunar module)

Figure 1a shows a NASA image taken by astronauts A-11 through the lunar module window *after* completing their only exit to the lunar surface **[2]** .

In ill.1b we see the same plot, but already as a frame from the film **[3]** . And here's the strange thing: all the details in both pictures coincide, except for one - the shadow of the flag in Fig. 1a goes to the left, and in Fig. 1b to the right. Why? Indeed, both during the shooting of the "a" image, and during the shooting of the "b" image, there was no one outside the module. Then who unfurled the flag in case b? There is no wind on the moon. There is no one, and nothing to unfold it.

It is a different matter if both images were taken on Earth. Perhaps the wind has blown. It is possible that the scene was filmed twice and on different days, but

the organizers of the imitation did not pay attention to such a "trifle" as the orientation of the panel.

Apollo 12: Flag in Spotlight?

The photo ill. 2 shows the astronaut A. Shepard, who is standing near the flag.

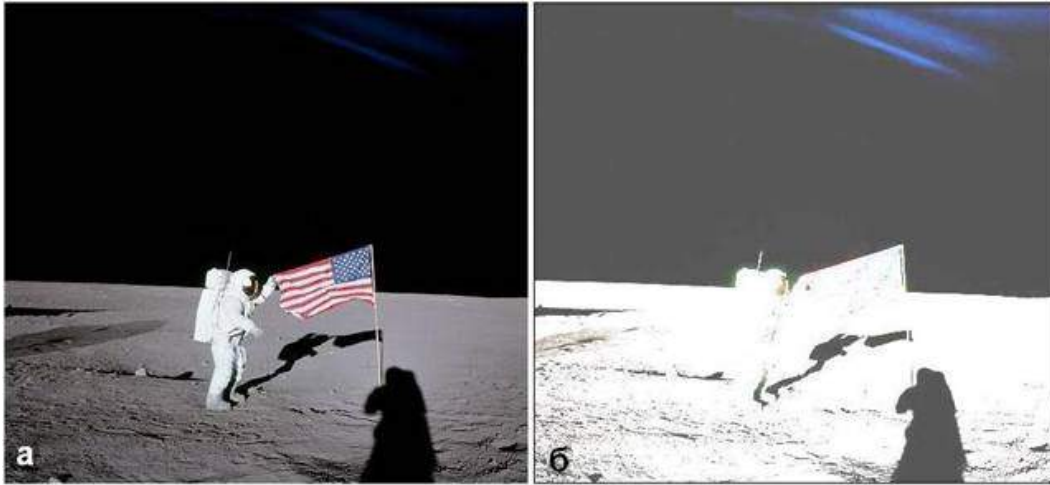


Fig. 2. Searchlight beams?

a) Astronaut P. Conrad (A-12) at the flag

b) the same picture with increased contrast

If you use a computer to increase the contrast and brightness of this image, then bluish rays will appear at the top of it, going in approximately the same direction as the shadows in the photo. That is, these are the rays of light that illuminated the scene in question. But the fact is that, as noted in Section 10, in the void of the lunar vacuum, no rays from the side can be seen. But in the earthly air there is always dust, which makes the rays passing through it visible.

Apollo 14: a flag in the wind?

The episodes with the waving "moon" flag in the wind were discussed so often that they probably already managed to "set the teeth on edge" for both skeptics and defenders. But we cannot but touch upon these episodes at all. A fact is a fact, and it cannot be ignored in a complex consideration. In front of you are two frames from the NASA clip [4], which shows how astronauts A-14 are planting the flag (Fig. 3). The same episode is shown a little more fully in the film [5].

Even static freeze frames (Fig. 3) convey the "live" behavior of the panel. And for a more complete impression, we give with abbreviations a fairly accurate description of this episode given by the author [6]:

"The flagpole looked like the letter" G ". The flag had one free corner, and this corner showed that it was really free. He fluttered so merrily in the wind of the

"airless" space of the "Moon" that the astronaut was forced to pull him back. Angle sagged. But as soon as the astronaut departed, the flag fluttered merrily again. " But, of course, the reader will get the most complete impression of this episode if he himself watches this episode by following the links [4, 5] .

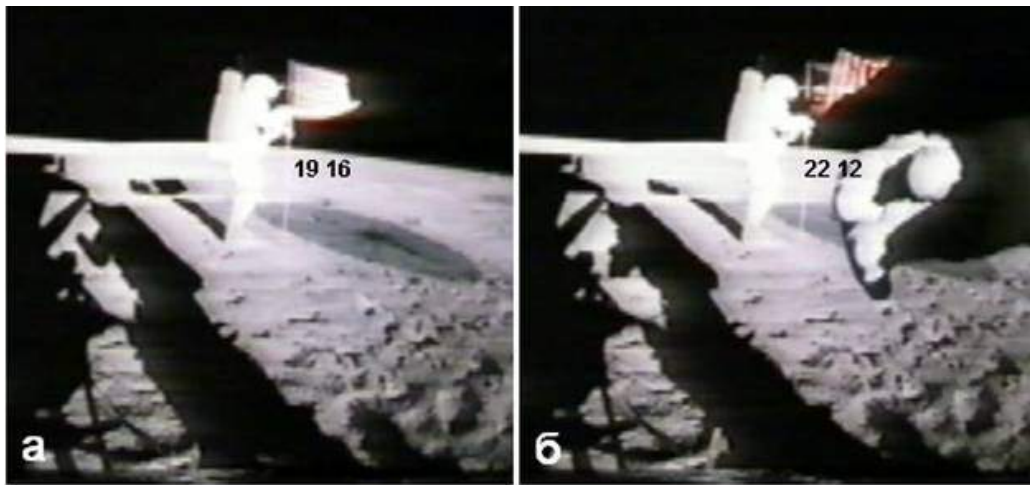


Fig. 3. The flag flutters like a curtain on a window

The opinion of skeptics about this behavior of the flag sounds extremely simple: the flag's cloth is swaying the most, that neither is, the earth's wind. What do the defenders say? Here are several versions of them with comments from the author of the book.

1. *"The astronaut's heart is beating, the pulse is beating in his hands and shaking them. The arms also vibrate and transmit the vibrations to the flag staff. The shaft shakes the cloth, but that has nothing to do but start to oscillate "* [7] .

Let us recall only one circumstance. Even if a person is absolutely calm, then his pulse is several tens of beats per minute. The movement of the cloth in time is ten times slower.

2. *"This is the deformation of the panel due to the large temperature drop"* [8]

Try to bring a nylon rag into the house in the winter from the cold. The temperature drop will be several tens of degrees. If you see that the rag began to quickly fold in half, (Fig. 3b), and then unfold just as quickly, and so on several times (as the flag does), then you can agree with this explanation. And this protector

Number 3. *"On expedition A-11, the flag was simply dented due to a malfunction of the flagpole, NASA liked the look of the crumpled flag, and they began to practice it on other expeditions"* [9] .

The question is not whether the American flag is crumpled or ironed, but why does it move without the help of an astronaut?

No. 4. *"It was made of thick foil. The flag will always be unfolded and not hanging like a rag. It seemed to the authors that the flag was flying in the wind "***[10]** . We will have to repeat that the point is not how the flag looks ("unfolded", "hanging like a rag"), but the fact that it moves. In addition, Mr. Nazarov did not find the time to get acquainted with the description of the flag given by NASA **[1]** . And there it says: "a 3 x 5 ft . nylon flag "- nylon flag. And again, we are not talking about how the flag looks (whether it is unfurled or hanging like a rag), but about the fact that it moves and moves quite realistically.

In general, according to versions No. 1-4 of the defenders, we can conclude that their authors hardly found the time to personally get acquainted with the phenomenon they are defending.

No. 5. Let us now turn for advice to the defenders - veterans V. Yatskin and Yu. Krasilnikov. They already saw the discussed phenomenon, which follows from their numerous publications. How do they protect NASA? Here is what they write **[11]** : *"... The cloth was made of nylon... The cloth hanging on the horizontal bar is a kind of pendulum. On Earth, the air surrounding the fabric absorbs the energy of the vibrations, and they quickly fade away (of course, if there is no wind blowing the fabric). There is no air on the Moon, and therefore such a "fabric pendulum" will oscillate much longer than you might expect.*

Alas, the version of the pendulum does not work - neither fabric nor any other. Remember how the chandelier sways rhythmically under the ceiling. Likewise, the thrown swing swing, slowly dying away. These are, indeed, pendulums. Periodicity is one of the first signs of oscillatory motion. And compare this with how randomly twitching under the random gusts of wind, laundry, hung in the yard to dry. This is how the flag in question is: rinsed randomly, like linen. And it deviates not equally about the middle position, but more and more to one side - as in the wind (ill. 3). (Watch clip [4] and see for yourself).

There was, however, one respected defender who did not come up with complex physical explanations. Doctor of Physical and Mathematical Sciences, cosmonaut G. Grechko put it this way **[13]** : *"... perhaps then the cosmonaut did not manage to take sufficiently impressive pictures of the American flag on the Moon. But the American flag can't be badly shot. Therefore, some shots were filmed in Hollywood ... "*

The doctor spoke diplomatically, but forgot to add that, according to NASA, the Americans had visited the moon six times. Is it possible that all six times in four years of flights "to the moon" "failed to take sufficiently impressive pictures of the American flag on the moon"?

Apollo 15: a light swaying of the banner in response to a light breath?



Fig. 4. Passed astronaut did not touch the flag, but the flag starts to move

Interesting clips with the American flag, allegedly installed on the moon by astronauts A-15 **[12a, b]**. Photography is powerless to reflect what is seen in this clip in motion. Therefore, the two freeze frames presented below (Fig. 4) from the clip **[12a]** are only intended to suggest at what moment of watching the clip you need to be especially careful.

Astronauts take pictures near the flag, salute it, etc. At the same time, the flag is stationary, as it should be on the moon. But at the moment 2:38, one of the astronauts passes between the camera and the flag at a small (by eye, about a meter) distance from the flag. The dark silhouette of his passing knapsack is visible in Fig. 4a. And, importantly, the astronaut passes without touching the flag. And now, when the astronaut has already passed, the banner begins to gently swing in a horizontal direction. What set him in motion, if not a slight ripple of air disturbed by the past astronaut?

Apollo 17: Shadows in the Sky?



III.5. Shadows in the sky?

a) NASA snapshot with the following original caption: *"Geologist-astronaut Garisson Schmidt, pilot of the Apollo 17 lunar module, photographed near the American flag during the exit to the lunar surface ... The upper end of the flag points to our planet Earth."*

b) the same picture with increased contrast

Many NASA websites have a touching image of an American astronaut at a flag that appears to be hoisted on a distant moon (Figure 5a).

In Fig. 5b, the contrast of the image was significantly increased with the help of a computer, and a shadow of a complex shape was drawn on the "moonlit sky" **[6]**. And since there are no shadows in any sky, then, apparently, in the background of the entire scene there is a black screen with the image of the Earth. Shadows fell on him. Recall that the blackest screen reflects albeit a small, but noticeable part of the light incident on it (about 4%). The astronaut is brightly illuminated by rays coming from the side and away from us. Some of these rays hit the screen and made it slightly less black outside the astronaut's shadow area. This difference is hardly noticeable to the eye, but the computer, by increasing the contrast of the image, made the shadow obvious.

The author recommends that the reader, using the link to the picture, make sure of what he read about here. By the way, if you carefully examine the original image on the screen, then a faint outline of the shadow in the "moonlit sky" is visible without changing the contrast.

It should be noted that on the NASA websites there is also a variant of the "Schmidt with a Flag" image **[14]**, where there are no shadows in the "lunar sky". A reasonable explanation of this fact follows from the already quoted statement of the defender Yu. Krasilnikov **[15]**:

"... the photographs on different sites are quite independent of each other in that they are usually scanned and processed differently by different people." Of course, anything can happen when different people work. For example, in Section 8 we saw an example of how different people retouched the same image of the Eagle in different ways. This could have happened with a snapshot of the flag: the responsible employee of the site **[14]** noticed a shadow in the "moonlit sky" and, as it should, blurred it over, and his colleague on another site (see **[6]**) missed this moment.

There were defenders **[16]** who argue that in Fig. 5b it is not a shadow that is visible, but some kind of retouch of a special form. An interesting explanation. Returning to the comparison of the hoax with a counterfeit bill used in the introduction, the author would like to note that he had to receive a counterfeit bill

disguised as a real one. But I don't remember a case when someone spoiled a real bill with an unobtrusive trick, so that when checked, it seemed fake. Therefore, to seriously consider such arguments, it is necessary that their authors explain why such a strange touch-up was required. Otherwise, the thickest books will not suffice to consider such arguments.

Summarize. In the six moon landings reported by NASA, very strange facts were revealed for five cases (A-11, A-12, A-14, A-15 and A-17). How, then, is not to doubt, that the American flag was even on the moon?

1. NASA <http://www.hq.nasa.gov/office/pao/History/alsj/alsj-usflag.html> flag description

2. The NASA signature for the image in Fig. 1a is located at <http://www.hq.nasa.gov/alsj/a11/images11.html#Mag37> **further AS 11-37-5480. Translation of the beginning of the caption: "This photo was taken from the Base window after the completion of the exit from the ship"**

3. See . [f7] section 28

4. NASA http://www.hq.nasa.gov/office/pao/History/alsj/ktclips/ap14_flag.mpg **(4.2 MB). Astronauts A-14 plant a flag**

5. See [q2] and [iv21] section 28

6. Yu.I. Mukhin. Antiapollo. Lunar scam of the USA. - M.: Yauza, Eksmo, 2005, pp. 40, 82, 287, see also NASA <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001137.jpg>

7. "Stolichnaya Vechernaya Gazeta" No. 202-002 dated 3.12.2003. Quoted at <http://mo---on.narod.ru> **"Americans have never been to the moon." Materials of the forum "Membranes"**

8. Cm . [ϕ5] section 28

9. http://mars-x.ru/san/7/28_1.shtml Prokhor NASA: The flag was not waving on the moon. Author: Prokhor. Date of publication: 06/08/2003 Category: Space

10. D . Nazarov. "Miracles and Adventures", 2002, no. 12, p. 24-27. There is a reprint of this article - [4, p. 81]

11. Yu. Krasilnikov and V. Yatskin. "Did the Americans fly to the moon?"
<http://www.skeptik.net/conspir/moonhoax.htm> p.18

12. Clips about the A-15 flag : **a)** <http://www.youtube.com/watch?v=n1UEv2PIzl4&NR=1> , the same scene, but with the highlighting of an interesting moment, see **b)** http://www.youtube.com/watch?v=DWajUJ_NnHs&feature=related

13. <http://www.x-libri.ru/elib/smi/01221/00000002.htm> Excerpts from G. Grechko's book "I was born an astronaut";

14. NASA <http://spaceflight.nasa.gov/gallery/images/apollo/apollo17/html/as17-134-20384.html> - flag without shadows in the "sky"

15. "Were the Americans on the Moon?" Yu. Krasilnikov http://menonthemoon.narod.ru/photos_2_14.html , http://menonthemoon.narod.ru/photos_2_12.html , pages are not numbered

16. <http://forums.airbase.ru/viewtopic.php?pid=1348411#p1348411>

Ill.1. a) " A Look " [ip1] section 28 and NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-37-5480.jpg> **b)** [3]

Ill. 2. NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a12/AS12-47-6896EN.jpg>

Ill.3. [4,5].

Fig. 4. [12], arrows supplied by the author

Илл.5. a) HACA <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001137.jpg>

A copy of the photograph on the book's website <http://moon.thelook.ru/addon/12/gpn-2000-001137g.jpg> MD checksum 5

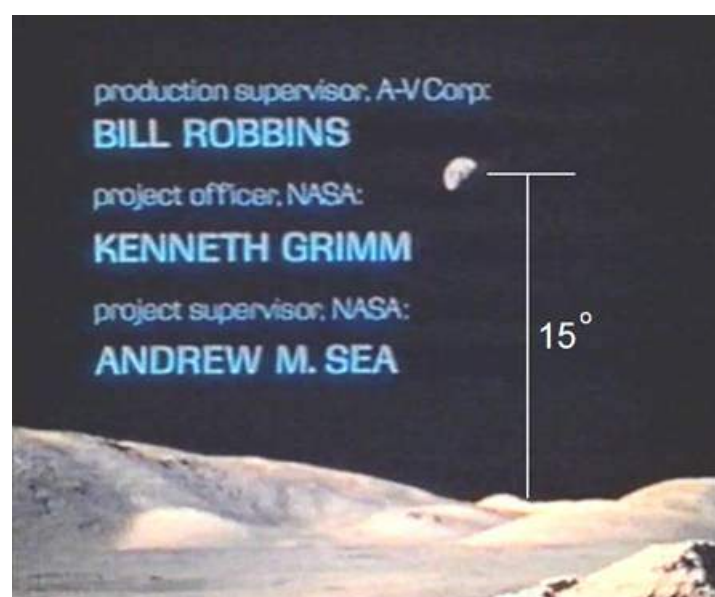
93 BB 0 EC 415 F 2 F 53 DA 4305 AC 55872 AA 4 E

Facts from the archives

19-24 minutes

On the moon. Chapter 13

Leaving the moon



It's time to think about going home.

Here are the occasion: the astronauts of the last "lunar" "Apollo" (A-17) are just going back. Finally, we will admire the hills and plains with a blue Earth on a black sky, captured by NASA's film "On the Shoulders of Giants" **[1]**. One of the final frames of this film, signed by NASA, is shown in Figure 1. Yes, but was this picture taken on the Moon? Judge for yourself.

"Drawn" Earth

Fig. 1. Landscape with "painted" Earth,

allegedly filmed on the moon by astronauts A-17

It is known from the school astronomy course that the Moon in its movement around the Earth is always facing it with one side. And this leads to the fact that the Earth in the lunar sky stands almost motionless near a certain middle position. Ya.I. described this phenomenon very colorfully. Perelman **[2]**:

"In our sky, a month rises and sets, describing its path along with the stellar dome. In the lunar sky, the Earth does not make such a movement. It hangs almost motionlessly in the sky, occupying a well-defined position for each point on the Moon, while the stars glide slowly behind it. If the Earth is at the zenith of

some lunar crater, then it never leaves its zenith position. If from any point it is visible on the horizon, it always remains on the horizon of this place ... "

In the area that NASA has named the home of astronauts A-17, the Earth constantly hovers at an altitude of about 54° above the lunar horizon. The angular size of the Earth in the sky of the Moon is known - 2° . Having counted the "diameters of the Earth" to the lunar horizon, it is easy to determine that in Fig. 1 the Earth is at an altitude of 15° , that is, almost 4 times lower than it should be. A skeptic [3] drew attention to this fact, who concluded that **this NASA lunar landscape was an earthly fake.**

To somehow brighten up the unpleasant sensation of the Earth painted on a black sky, defender V. Pustynsky tried to protect NASA in this way [5]: *"This montage is not malicious and does not distort reality. The film is visual, demonstration, the picture is placed in the title, the frames from which it is made are well known. The earth was painted "to make it more beautiful." In principle, no "unscrupulous" goals can be achieved with this picture. "*

Interesting idea. For example, if some esthete draws on a photograph of the terrestrial evening sky instead of the Moon Mars of an equally impressive diameter, he will not distort reality either? And, if Americans, in the interests of beauty, so freely "draw" the Earth, then what can prevent a completely earthly landscape from faking a lunar one?

Taking off from the moon?

Where is the takeoff engine torch?

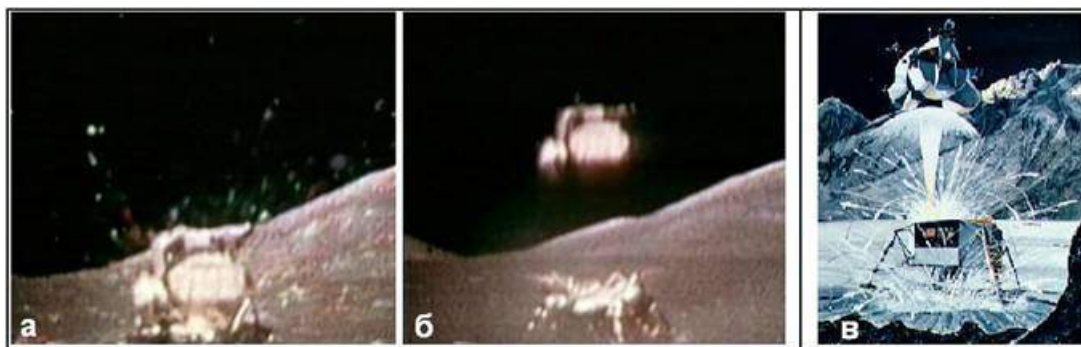


Fig. 2. Takeoff of the "lunar" module:

NASA footage:

a) the moment of the "ignition" command, **b)** takeoff without a torch from the engine,

c) this is how the NASA artist presented the takeoff from the moon

According to the description of the lunar module, its upper part of the module, the so-called take-off stage, starts from the lunar surface. The lower part (landing stage) remains on the moon and serves as a launch platform for the take-off part. According to NASA, astronauts A-15, A-16 and A-17 installed radio-controlled automatic television cameras away from the module before starting from the moon. Let us study the episode of the takeoff of the lunar module A-17, as if transmitted from the Moon by such a television camera **[5,6,7]** .

Fig. 2a shows the instant of start immediately after the “ignition” command. Some rags are flying in all directions. Defenders V. Yatskin and Yu. Krasilnikov **[8]** explain that these are scraps from the thermal insulation layer that covered the landing stage. They are scattered by a jet of gases escaping from the nozzle of the take-off engine. But here's what is interesting: just the jet emanating from the nozzle of the taking-off module is not visible (Fig. 2b). A fact that was unexpected for many. Probably, it was not foreseen by NASA specialists, who advised their artist on how to depict a launch from the Moon (Fig. 2c).



“No wonder,” the defenders say **[8]** , and they cite a photograph of the Proton rocket taking off during the day (Fig. 3a). The flame of her torch is barely visible. On the Apollo lunar modules, the defenders write, similar fuel was used, which is why the torch under the take-off module is not visible.

But, apparently, the defenders did not notice that in Fig. 3b the sky is not bright blue, but densely black. Therefore, a more appropriate analogy would be a photograph of the launch of the Proton at night. And at night there is no need to look for a torch near the Proton (ill. 3b). Of course, the engine of the takeoff stage of the lunar module is much weaker than the engine of the Proton. But in the dark, we will not only see the torch from the rocket engine, but also the light of a pocket flashlight from a kilometer away.

Fig. 3. You can't hide a torch in the dark.

Start of "Proton" during the day (a) and at night (b)

As noted in Section 8, the attitude control engines of the Soyuz and Apollo spacecraft operate on the same fuel as the engine of the lunar module [8]. Moreover, they are about 30 times weaker than the take-off stage engine. And, nevertheless, the flame from these engines is clearly visible against the background of the blackness of outer space (Fig. 10, Section 8), while nothing is visible under the "lunar" module taking off (Fig. 2b).

Recently, the Internet, new advocates bring counterarguments in defense of the invisible plume [9]. The author prefers not to dive into technical details in which he does not consider himself a specialist, neither himself nor the authors of speeches like [8,9]. Let the rocket experts have their say. But it is useful to pay attention to the fact that somehow entered the system, that we can not in any way be able to see the traces of the operation of its engines of the American lunar rocket technology:

- then the command and service modules show themselves in a variety of poses, but without visible traces of the operation of the attitude control engines (Fig. 10, Section 8);
- then the dust is not blown off under the nozzles of the landed ships (Section 9),
- then, as now, the torch is not visible under the taking off lunar module (ill. 2);
- below we will see another example, when a lunar module that has already taken off makes maneuvers in a circumlunar orbit (Fig. 7), also without visible traces of the operation of the orientation engines.

You can give many explanations for each individual fact, but all together it looks very strange. So that begs a simple explanation, that the **ski lunar module, which is shown in ill.2, the engine is not there.** But, if this is so, then what force is it that scatters the flaps of the so-called thermal insulation, and what force actually lifts it? The author [10] believes that in the episode under consideration, only a certain model of the take-off stage "starts", and it is lifted up on a rope. What will confirm the version of the charge and cable?

Explosion under the take-off module

The reader himself can see the explosion under the take-off stage. To do this, when watching an episode, you need to look not at the take-off stage, but at the remaining landing stage. Then he will see how a mysterious glow "swells" on the platform and then instantly "falls" back onto the platform. The freeze-frame technique makes it possible to analyze this phenomenon.

Figure 4 shows 4 freeze frames from the takeoff episode of A-17, showing what happens on the platform in the first second after the “ignition” command . The time elapsed from the moment when the “ignition” command is issued is indicated under each frame.

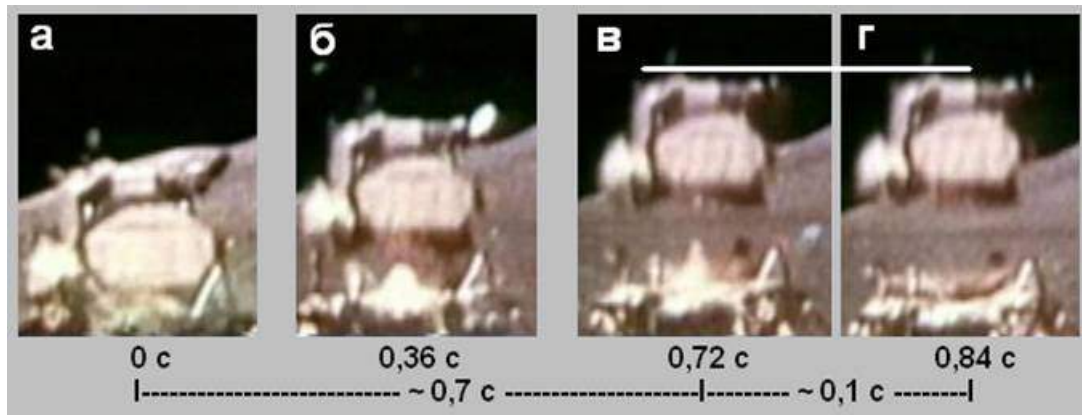


Fig. 4. A charge exploded on the lower platform

For about 0.7 seconds, something shines brightly on the platform, and then, in just 0.1 seconds, this glow stops abruptly. How can one explain both the glow itself and its rapid disappearance?

It can be assumed that the glowing parts of the landing platform are glowing , along which an invisible (according to the defenders) and incandescent jet of gases strikes at close range from the nozzle of the ascending stage. But then it is impossible to explain why, in the interval between the frames "0.72s" and "0.84s", in just 0.12s, this heating suddenly stopped? Indeed, during this time, the nozzle did not even have time to noticeably leave.

Therefore, we see not the glow of heated objects, but the flame from the rapid (in 0.72 s) combustion of some substance located on the platform. As soon as the substance burns out, the glow stops. That is, by all indications, at the moment of "launch" on the landing platform, a charge exploded.

Can the winch provide the lifting speed that we see in the video? Yes, it is quite. You can set this speed from the still frames of the clip. In this case, the scale for determining the climbed height is the vertical size of the take-off module - 2.8 m [11].

It is easy to establish that in 3 seconds the model rises to a height of about 13 m , which corresponds to an average ascent speed of $\sim 4 \text{ m / s}$. The passenger elevator rises even at a higher speed [12]. So the winch can cope with such a "start from the moon".

Thus, the revealed circumstances (the absence of a torch, an explosion of a charge under the model found under the "module" and a completely "lift" speed of climb) indicate that the **shooting of the A-17 takeoff episode was most likely performed on Earth** , as it is believed author [10]. At the command “ignition”, a

charge explodes on the platform, providing scattering of the thermal insulation flaps and thus simulating the start of the take-off engine. There is actually no take-off engine, so there is no torch. The model rises on a cable. So that the thin cable is not visible, the image in the movie episode is deliberately blurred. A simpler option is not excluded, which consists in the fact that we are shown just a cartoon.

Lunar orbit meeting

After we have watched the mock takeoff of the lunar module, it will probably be somewhat strange to consider the meeting of such a module with the command and service module (KSM) awaiting it in circumlunar orbit. And, nevertheless, we will be patient and watch such an episode, since we have decided to mentally follow the astronauts throughout their journey.

MEPhI graduate A. Kudryavets drew the author's attention to a movie episode from the NASA film "Apollo 16: All the most secret" [13]. It shows the maneuvers of the takeoff stage of the Orion lunar module, allegedly filmed in circumlunar orbit from the KSM window. Figure 5 shows stills from this episode. They show that the lunar module unfolds as if by itself: not a single flash from the exhaust of the orientation engines is visible. Not a single start of the engine would have escaped the "watchful" gaze of the movie camera. But they are not visible, these inclusions.

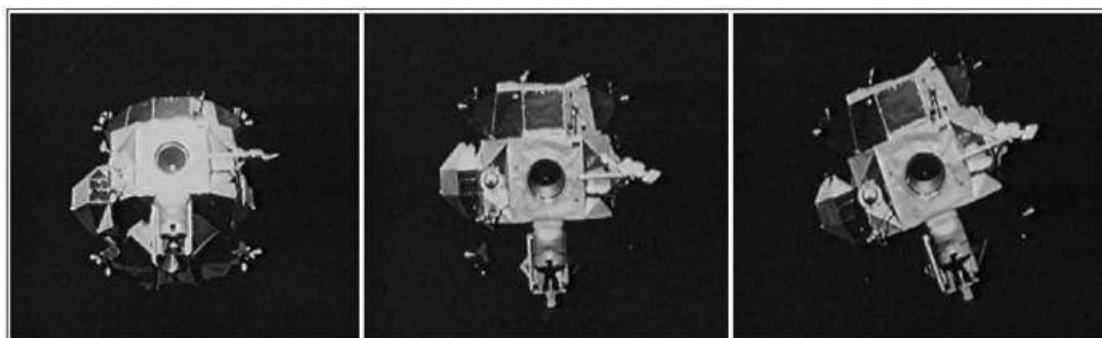


Fig. 5. Maneuvers without an engine?

The maneuvers of the Orion lunar module, allegedly filmed in a circumlunar orbit, occur in such a way that not a single flash from the orientation engines is visible.

Commenting on this and other episodes he watched, A. Kudryavets writes to the author of the book:

“In all frames of module re-docking in the lunar space during their movements, flashing torches from attitude control engines are not visible - they seem to be absent at all, and the modules tumble under the influence of an unknown force.

In addition, the modules, when turning and moving, make sharp movements, leaving the impression of animation or their very low weight. But real ships are multi-ton colossus, and such massive structures of the lunar module cannot make such sudden movements even when the attitude thrusters are turned on, the

thrust of which, as you know, does not exceed several tens of kilograms. Yes, such jerks during real maneuvers of ships are simply unacceptable, because smoothness of movements during mutual maneuvers is the main requirement for the success and safety of docking and undocking. "

And here is an interesting letter from a colleague V.P. Kobzeva:

"I found that episode in the Apollo 16 movie. All the most secret ", about which A. Kudryavets writes. It looks really very strange - the module first rotates in one direction (albeit by inertia), but then instantly stops (no motor impulses are visible) and begins to rotate in the other direction. With a take-off cabin weighing several tons, the mobility is incredible. Several tons is the weight of a small truck. "

So, most likely, A. Kudryavets is right - **we are not seeing a real lunar module maneuvering in a circumlunar orbit, but its model, shot in the studio.**

On the way home



Fig. 6. Footage of astronaut Ken Mattingly exiting the ship, allegedly filmed on the way from the moon to the earth.

According to NASA, during the return from the Moon to Earth, astronauts Al Warden (A-15), Ken Mattingly (A-16) and Ron Evans (A-17) went into outer space 320 thousand km from Earth. Short episodes on this topic are shown in NASA films [14]. They are of the same type, and therefore you can limit yourself to acquaintance with the highest quality of them. For this, the episode with the release of Ken Mattingly from A-16 (NASA film " Nothing so hidden ") was chosen , since it has a more decent quality. Figure 6 shows typical footage from this episode.

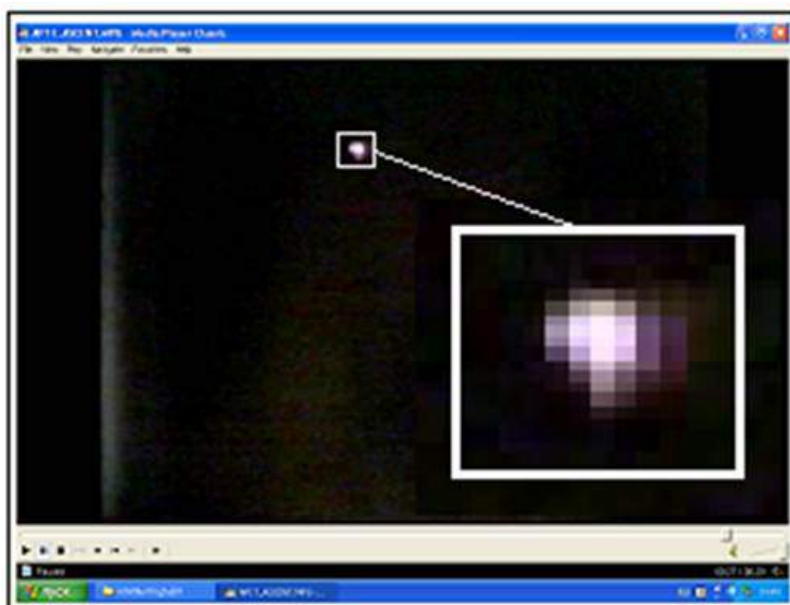
Here we are shown an astronaut outside the ship (Fig. 6a), around which there is only blackness. This blackness can belong to space, but it can also belong to a black screen, if the shooting of the episode is filmed in the studio. To avoid such doubts, in the following frames the image of the Earth appears on the screen. At first it is weak (Fig. 6b), but then it becomes brighter and brighter, and, finally, completely supplants the image of the astronaut (Fig. 6c). The episode is over. The viewer, inexperienced in the techniques of cinema, has the impression that he has just seen an astronaut's exit into open space far from the Earth.

In fact, we saw a simple film trick. The images of the astronaut in front of the spacecraft (Fig. 6a) and the image of the Earth (Fig. 6c) were taken separately. The first is easy to do in the studio, and the second is done with an Earth satellite in high orbit (Chapter 4). Then, by superimposing these two completely independent views, the view of the astronaut was obtained against the background of a distant Earth (Fig. 6b). That is why the image of the Earth in the frame of Fig. 6b, as it were, appears through the image of the astronaut and mixes with its details. And this kind of editing is used in all three mentioned clips. So these **movie episodes about the spacewalk on the way to Earth are a simple movie trick.**

Let's summarize what we saw in this section:

- 1) We admired the Earth, "painted" in the black sky (ill.1a).
- 2) We looked at the lunar module, starting with an invisible torch (ill.2b).
- 3) We saw a charge that exploded under this "module" at the time of launch (Fig. 4).
- 4) We watched the maneuvers of this "module", supposedly filmed in a circumlunar orbit, which occur as if by themselves, without a single flash from the orientation engines (Fig. 5).
- 5) We watched an episode with an astronaut supposedly walking into open space, made using two simple film tricks (ill. 6).

Thus, before us once again passed a series of films - and photo tricks. This concludes our mental journey to the moon and back.



Application. New Arrivals "Pink Elephants"

Application. New Arrivals "Pink

Fig. 7. Muddy cross, as evidence of take-off from the moon

(a frame from the "improved" NASA clip about the launch of the A-17 module)

The public first became acquainted with the episode "start from the moon" after the release of the film "For all mankind" [7], that is, in 1989. In this movie, the entire episode is only 6 seconds long. Then the first questions were raised about the lack of a torch. In response to this, after 9 years (1998) NASA published an "improved" clip [5], "long" as much as 36 s. One frame from it is shown in Fig. 7.

In connection with the development of computer technologies for image processing, the documentary value of such "improvements" is very doubtful, as already mentioned in the introduction. The same defenders V. Yatskin and Yu. Krasilnikov on page 20 of their article [8] noted that "with modern means of image processing, anyone can put at least a pink elephant on a picture from the Moon." Unfortunately, after 17 pages of the same article they have forgotten their buzzwords and on page 37 enthusiastically appeal to the "improved" NASA clip:

"The flame of the engine of the taking off lunar stage is really not visible - their quality is very unimportant. However, at the end of this video, the cabin rises to a great height (the Nazis had a long rope, right?) And turns the engine towards the camera. looks "directly into the engine, and a very high temperature flame inside the combustion chamber becomes visible."

An interesting logic involving a directly controlled "poor quality of frames": this quality does not allow to see the flame of a torch when a stage takes off near the TV camera, but allows you to see the hot belly of the combustion chamber from a long distance.

So, in the "refined" clip, NASA lengthened the airing time sixfold to refute the rope theory. She depicted a certain glow in the form of a dull cross (Fig. 7) to refute the accusations about an invisible torch. True, NASA specialists did not have time to work out the criticism about the explosion under the model and the wrong law of its rise. But it does not matter: there is no limit to the improvement of "lunar" materials - they will work it out. NASA's archive of "new" evidence is bottomless.

1. F8, iv22 "Reference 2"

2 . Ya.I. Perelman. Entertaining astronomy. M. , " Science ", FML , 1966, p. 85

3. D. Wozney. Various Other Apollo Image Anomalies. [http : // internet . ocii . com / ~ dpwozney / by apollo 4. htm](http://internet.ocii.com/~dpwozney/byapollo4.htm) . In this work, a snapshot from <http://www.hq.nasa.gov/office/pao/History/alsj/a17/AS17-137-20960HR.jpg> , similar to Fig. 1, was studied.

4. <http://www.vif2ne.ru/nvz/forum/archive/212/212981.htm>

5. <http://www.hq.nasa.gov/office/pao/History/alsj/ktclips/a>

(4 M b). See also iv23 "Reference 2"

6. <http://www.hq.nasa.gov/alsj/a15/a15.launch.html#1713725> (1.9 MB).

7. f2, f7, iv23 "Links-2"

8. Yu. Krasilnikov and V. Yatskin. "Did the Americans fly to the moon?" <http://www.skeptik.net/conspir/moonhoax.htm> c. from. 25, 35-37, 85, 20

9. <http://forums.airbase.ru/viewtopic.php?pid=1352974#p1352974>

10. Yu.I. Mukhin. "Were the Americans on the Moon?", "Duel" No. 1/144, (2000); He is Antiapollo. Lunar US scam. - M.: Yauza, Eksmo, 2005, p. 47

11. <http://nssdc.gsfc.nasa.gov/database/MasterCatalog?sc=1972-096C>

<http://nssdc.gsfc.nasa.gov/database/MasterCatalog?sc=1969-059C>

12. Sov. enz. words., M. SE, 1988, article "lift"

13. f8-10, iv40 "Reference 2"

14. NASA f8, "Links-2": f8-11, f8-10, f8-4, iv41, iv42, iv43 "Links-2"

Fig. 1. [1], author's inscription

Fig. 2. a, b) [5], f7 "Links-2", **c)**

<http://science.ksc.nasa.gov/mirrors/images/images/pao/AS11/10075186.jpg>

Fig. 3. Rocket launches "Proton" - Khoruzhy V., Gareikhanov R., Dobrovolsky N., Zharikov Yu. Et al., CD "In memory of those who were first", Baikonur, 2001; See also <http://images.yandex.ru/yandsearch?p=2&stype=image&text=%D1%80%D0%B0%D0%BA%D0%B5%D1%82%D0%B0%BF%D1%80%D0%BE%D1%82%D0%BE%D0%BD&ed=1>

Ill.4. [5]

Fig. 5. f8-10 and iv40 "Links-2"

Fig. 6. f8-10 and iv42 "Links-2"

Ill.7. [5]

Past the moon

25-31 minutes

The special case of Apollo 13

A continuous chain of successes can raise doubts

After NASA decreed on April 23, 1968 that after the failure of unmanned rocket tests, the next flight would be manned, the Americans in their lunar epic began to be accompanied by almost continuous luck.

October 1968. NASA carries out the first manned flight of the Apollo spacecraft (A-7) in low-earth orbit. Prior to this, astronauts had not tried their spacecraft in real space conditions. And this single test was enough to make Apollo 8 head straight for the moon in two months.

Two months later, in December 1968, Apollo 8 was allegedly already circling the moon. Not a single automatic American ship (unlike Soviet ones) has ever flown to the Moon or returned to Earth at a second cosmic speed. But Apollo 8 “suffers” complete success and flies to the Moon without preliminary unmanned flights (Section 6). The Americans allegedly flew around the moon, but the lunar module with a man on board has never been tested in outer space. No problems.

Three more months pass, and in March 1969, in the A9 flight in near-earth orbit, the lunar module allegedly passes the first manned test. This is considered sufficient to make it back to the moon.

Two more months, and in May 1969, A-10 launches to the Moon for testing the lunar module in a circumlunar orbit. Again, according to NASA, complete success on all missions, so there is nothing to delay with landing on the moon.

And two months later, in July 1969, the A-11 starts. Astronauts supposedly land on the moon brilliantly and take off brilliantly from it, although the lunar module for landing and takeoff itself has never been tested before.

November 1969. According to NASA, A-12 is landing on the moon, and supposedly so precisely that Surveyor-3, which had arrived earlier, is only 150 meters away from it.

And throughout this chain of events, the successful operation of the launch vehicle, which passed such failed tests before the very beginning of this cascade

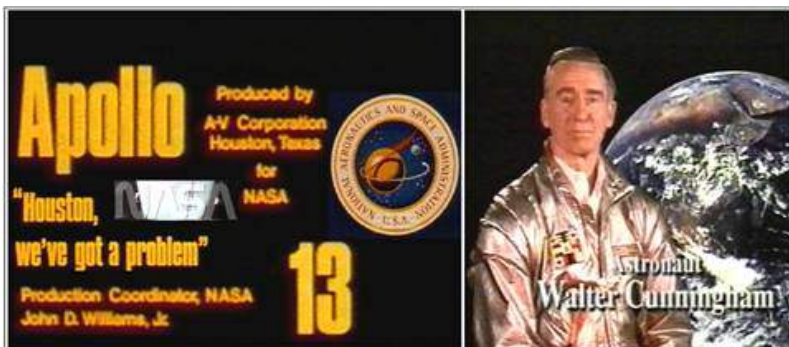
of successes, runs like a red thread.

The first explanation for such a continuous series of successes is that after the decision of April 23, NASA specialists simply stopped making mistakes and worked only according to the miraculous method of "working out complex technical systems" (Section 1). To the author, such an explanation seems dubious, since on the path of technical progress, regardless of any orders, success is achieved through many mistakes.

The second explanation is that after April 23, 1968, the US lunar program was unambiguously directed down the path of a hoax. And then the tough schedule of moving forward to the Moon, marked only by milestones of success, becomes understandable. It's easier to tell than to do, but it's important not to overdo it. Without a report of a "decent" accident capable of stirring up the world community, a continuous chain of successes could lead to unnecessary doubts. And the accident happened, and, moreover, exactly what is needed: with a dramatic plot and with a happy ending .

1970: Flight Drama or Flight Drama?

It all began, as Y. Golovanov writes, with bad omens. *"The A-13 ship launched to the Moon from the cosmodrome on April 11, 1970. The unlucky ship number promised big trouble. And they happened on April 13, already at the approach of the ship to the moon. It was Monday - a day, as you know, difficult, and then weighed down with the next number 13 "[1].*



Let's follow the events using a selection of frames from the 30-minute NASA film "Apollo 13: Houston, we have problems" (Fig. 1) and several images [2,3].

Fig. 1. Composition from the screensavers and credits of the NASA film "Apollo 13"

Apollo 7 astronaut comments on the film

W. Cunningham.

As expected, the film begins with the launch of the rocket (Fig. 2a), and now the space view of the Earth should indicate that A-13 has entered an intermediate

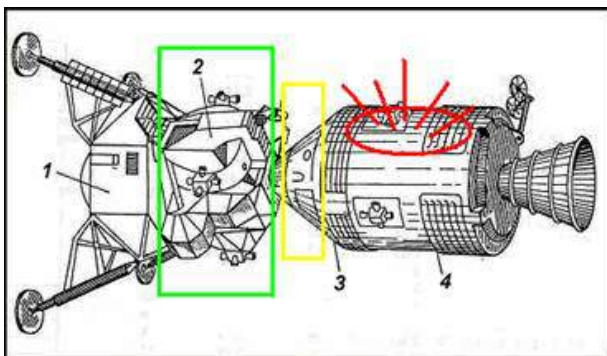
near-earth orbit (Fig. 2b). Soon A-13 will leave it to the Moon, and one could hope that the astronauts would show us the receding Earth. But, alas, the episode of the removal of the Earth is absent in the film, which is pointed out by the empty frame of Fig. 2c. True, after a while we see the last stage of the rocket against the background of the distant Earth (Fig. 2d). But this plot was made by means of film montage (section 5).



Fig. 2. Stills from the film "Apollo 13"

We look further. The commentator reports that A-13 headed towards the Moon and, in confirmation, we are shown a view of the Moon (ill.2e).

But as the film progresses, the voice of astronaut Jack Swigart is heard: "Houston, we have a problem." From that moment on, for three days the Control Center (Fig. 2f), the whole of America, and with it the whole of humanity, will be in anxiety.



Recall that, according to NASA, a structure (Fig. 3) was sent to the Moon, consisting of three main parts: lunar module 1,2, command module 3 and service module 4. According to NASA on April 13, when the spacecraft was already closer to the Moon than to the Earth, an explosion occurred in service module 4, as a result of which some of the power generators were out of order, and the ship's power supply dropped sharply. After that, the command module 3 (the main location of the crew) became almost uninhabitable (therefore, it is circled in a yellow warning frame on the diagram).

Fig. 3 Diagram of the accident that allegedly occurred on board Apollo 13

Now there was no time to land on the moon. The astronauts moved to the cockpit of the lunar module 2. Only there it was still possible to maintain living conditions. But will it be possible in such an emergency situation to turn the ship to Earth and make a successful landing? The drama unfolds. Concerned NASA representatives speak at press conferences (Fig. 4a), TV announcements are full of alarm (Fig. 4b), passers-by are buying up special editions of newspapers (Fig.

4c), "The moon is closed! The drama of life and death "- shout billboards and running lines of light boards (ill. 4d, d).



Fig. 4. Stills from the film "Apollo 13" (continued)



Fig. 5. Stills from the film "Apollo 13" (continued)

Crowds of people gather in front of large outdoor television screens (Figure 5a). Prayers are offered in churches (ill. 5b). The faces of ordinary people are full of anxiety (Fig. 5c), but the astronauts are courageously calm (Fig. 5d), because the best specialists are concerned about their salvation. They are already going around the moon (ill. 5e), in order to then rush to the Earth. And finally, the home planet is close (Fig. 6a). The last hours of the flight, according to NASA, went like this.

An hour before landing and 27,000 km before Earth, the astronauts moved from the lunar module to the command module. It was in it that they had to splash down in the Pacific Ocean. They then separated the lunar module from the command module and photographed their escape shelter as a souvenir (Fig. 6b). Prior to this, the astronauts separated the damaged service module and also photographed it. There are relevant footage in the film, but the author provides here a more interesting color image from the NASA website (Figure 6c). And, finally, after splashdown, the cabin of the ship was lifted aboard the aircraft carrier "Hornet" (Fig. 6d).

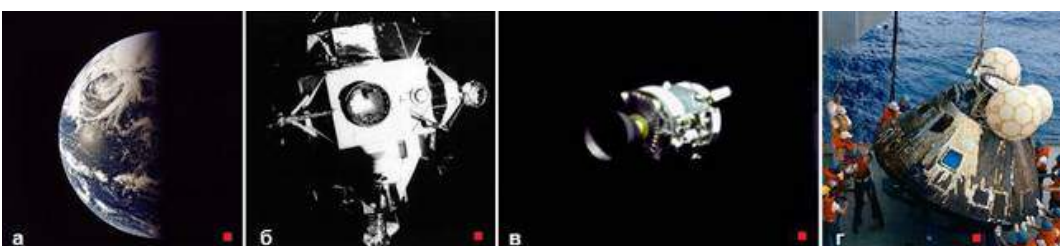


Fig. 6. Stills from the film "Apollo 13" (continued)

The faces of the people are shining with smiles, President R. Nixon makes an appropriate speech (Fig. 7). Happy end !



Fig . 7 . Joy and celebration on the occasion of a happy return

And now let's try to disconnect from emotions and see what exactly in the presented frames testifies to the authenticity of the story told to us. We will consider only frames with cosmic content. They are marked with red marks.

Fig. 2a - looking at the launch of a rocket, it is impossible to establish where it is flying

Ill.2b - the view of the Earth from a low orbit indicates that this view has not changed since the time when the first satellites and the first cosmonauts took the first pictures of the Earth. But this frame does not say anything about the flight to the Moon.

Ill.2d - this picture , as we know from Section 5, was made by superimposing a separate type of step and a separate view of the Earth. He says that the directors of the film did not have real shots of the last stage of the A-13 against the background of the distant Earth. In conjunction with the empty space of Fig. 2c, this trick gives the first indication that something is wrong with the flight of the A-13.

Figure 2e is a non-speaking photograph, since the Moon was captured by the Orbiters from all sides long before the A-13 flight.

Ill. 5d - the scene in the ship should not be filmed in low-earth orbit, and simply in the studio.

Ill.5d - flight over the Moon - episode, more difficult to analyze. Figure 8e shows the beginning and end of this episode. One gets the full impression that he was filmed from a ship approaching the moon. Was it really taken by the A-13 astronauts?

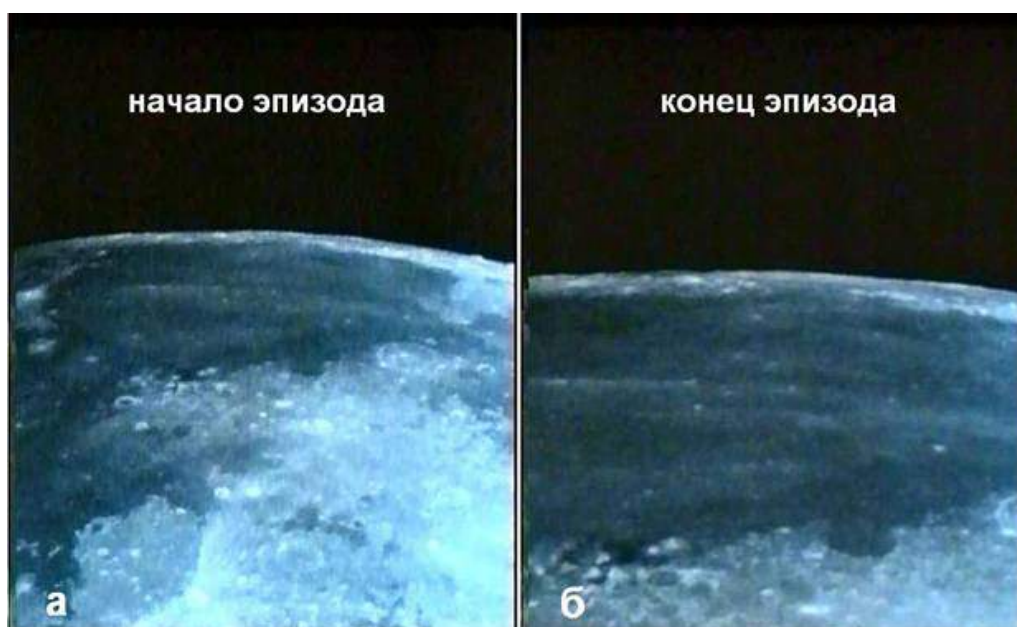


Fig. 8. The beginning and end of the episode with the "approaching" Moon.

No, in fact, in front of you is again a "movie from one shot." Recall from Chapter 5 how the episode "The Earth Is Removed" was "taken" with one image of the Earth. There, the same image of the Earth was shown at a smaller scale. Now NASA's film masters are demonstrating the same trick with the Moon and, as it were, vice versa: the same image of the Moon is shown more and more on a large scale. And it seems that the moon is approaching. To make sure of this, let us carefully compare the frames of Fig. 8a (beginning) and Fig. 8b (end). For clarity, this comparison is made in a separate illustration Fig. 9.



Fig. 9. Stills for "The Moon Is Coming" from the same image

In Fig. 9a (beginning), the author has drawn a white frame and marked two characteristic details. In the middle frame of Fig. 9b, the contents of this frame are shown with magnification. Figure 9c shows the "end of sequence" frame again. Comparing Fig. 9b and Fig. 9c, it is easy to understand that the final frame is just an enlarged fragment of the initial frame - all the details are the same. And when shooting the Moon from a manned spacecraft, this cannot be. After all, this ship is not going to crash into the moon. Therefore, it approaches the Moon along a

trajectory that bends around its surface. With such a flight, as it approaches, the lunar horizon line continuously moves away, and the moon would reveal more and more details of its surface to astronauts. And since this is not the case, since all the details of the visible surface (especially at the horizon) coincide, then we have an imitation of approaching the Moon.

This suggests that NASA does not have a real film about the flight over the Moon, allegedly filmed by the A-13 astronauts.

Fig.6a - this image of the Earth is useless as an argument in favor of this whole story, because by the time of the A-13 flight, NASA had already been receiving color images of the distant Earth from its satellites for three years (section 4).

Fig. 6b - a snapshot of the lunar module would be conclusive if the module was taken against the background of the Earth. Indeed, at the time of the separation of the lunar module from the spacecraft, if there was such an event, the Earth should have been “only” 27 thousand km away and be a wonderful and rather wide sight. But it is made against a faceless, black background and does not prove anything about the reality of the history of A-13.

Ill.6v- the type of emergency module, the root causes of all the unrest deserves special study. In Figure 6a, only blackness is visible around the damaged module. But if you use a computer to adjust the brightness and significantly increase the contrast of the image, then in the upper right corner of the image, a previously hidden elongated detail, marked with the number 1, appears (Fig. 10). It resembles some kind of casing. This casing is surrounded by a radiance around the perimeter 2. On Earth, such a halo appears around bright light sources and is caused by the scattering of light on dust particles flying in the air. It is easy to determine the direction from which the module is illuminated by the border of the shadow on the nozzle 3 of the service module. And this direction (blue lines) comes from this particular casing. Finally, the oblong shape of the casing itself is very reminiscent of the back wall of an illuminator, a bright light source used in studios.

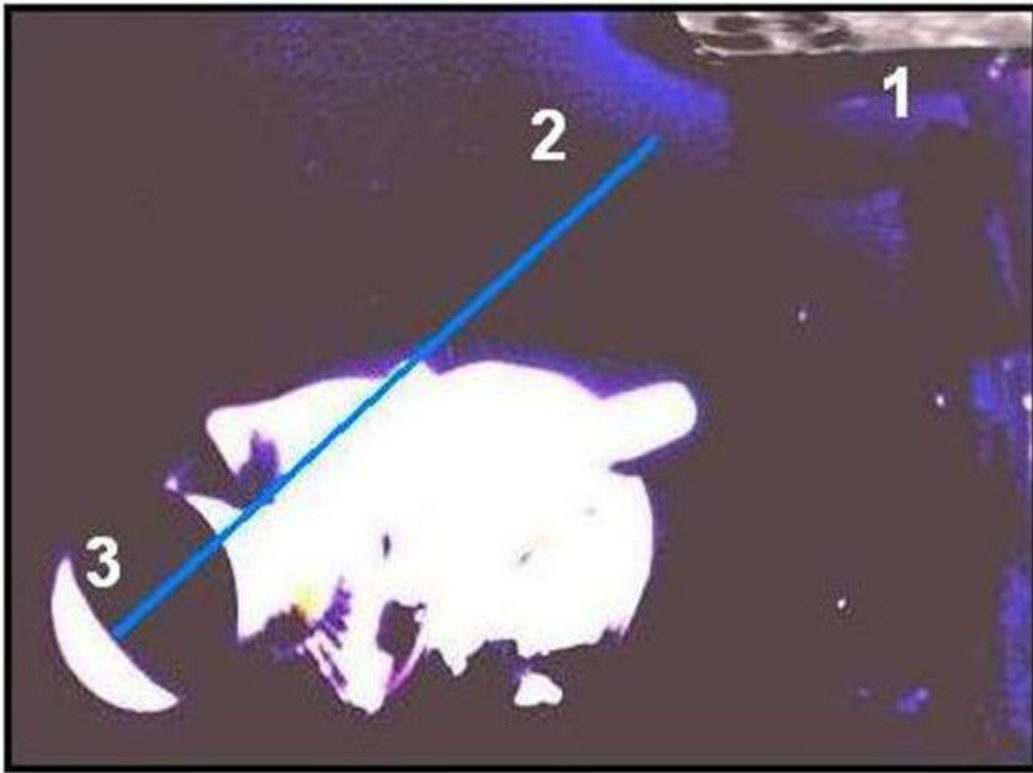


Fig. 10. The main "proof" was filmed in the studio.

Fragment of Fig. 6a with increasing brightness and contrast

So it looks a lot like the object in the upper right corner is the back wall of the light. By the standards of the 60s of the past century, it is shaded just fine. But modern computer methods helped to establish that the main evidence in the entire history of the A-13 - the damaged service module, most likely, was filmed in the studio.

Figure 6d is a burnt command module, but what is "from the moon" in it ?

So what, then, remains of NASA's evidence of Apollo 13's dramatic journey to the Moon? Nothing. Have we missed something important in this consideration, such as something that is on the NASA website but is missing from the file? Apparently not, nothing significant is missing. The site [3] contains 192 images. They talk in detail about the astronauts and their preparation for the flight, about their families, about their training, about the launch of a rocket from the cosmodrome, about what happened at the Mission Control Center in Houston during this whole story, and much more. But there is practically no information on the merits of the alleged accident on the site. Very few pictures are dedicated to her. We have seen and discussed almost all of them.

We must give NASA its due. And there is a happy end in this whole story, and all the appropriate signs that so impress the layman have been observed. The accident occurred at the "Apollo" is unhappy with the number **13**. Start from the Baikonur took place in **13** hours, and even in **13** minutes on American average time. **On April 13** , on a **hard day Monday** , a message about the accident came.

Four numbers 13, reinforced by one difficult day - won't the concentration be too high to consider these coincidences as a game of chance?

In general, nothing prevents us from assuming that **both the accident of the A-13 and the entire flight of the A-13 are a staging**, so to speak, a drama about the flight. And there are indications that the top Soviet political leadership was aware of the true content of American flights to the moon in general. This is evidenced by the amazing event that took place in Murmansk five months after the launch of Apollo 13.

1970: which Apollo was captured by the USSR?

“On September 8, 1970, in Sovetskaya harbor in Murmansk, the crew of the US icebreaker Southwind was solemnly handed over to the Apollo command module,” caught by a Soviet fishing trawler in the Bay of Biscay ”! At the same time, Hungarian journalists with cameras appeared in the secret port of Murmansk. The capsule was loaded and Southwind left ” [4-7] .

Information about this event with the corresponding photographs (Fig. 11) was published by the Hungarians in the book [6] in 1981. However, this book was not widely known, and the amazing event *remained practically unknown for almost 40 years.*

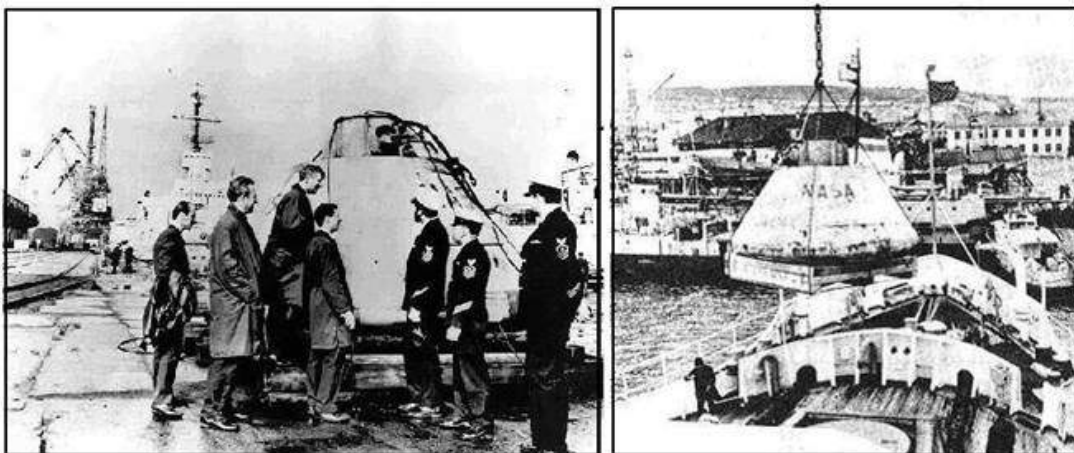


Fig. 11. Transfer of the capsule to American sailors in the Soviet harbor of Murmansk on September 8, 1970. Photo: Hungarian News Agency ,.



Fig. 12. American icebreaker Southwind, which took on board the Apollo capsule found by Soviet sailors .

L ish lately thanks to the persistence of the same Hungarians, the story began to get publicity, particularly in the American space encyclopedia [5] . Until then, “ ***none of the Western sources ever mentioned this fact* ” [5] . To this we must add that , and none of Soviet sources never mentioned this fact. That is, there is the fact of an agreed mutual silence about the Murmansk episode by both parties involved.**

At present, the memoirs of many prominent participants in the lunar race have been published. Among them are academicians V.P. Mishin. and Chertok B.E., director of the head research institute-88 Yu.A. Mozzhorin, Head of the Cosmonaut Training Center, General N. Kamanin, Chief Designer of the Soyuz spacecraft, K.P. Feoktistov and others. And, although their memories are very detailed (including personal experiences and well-being), none of them mentions the event in Murmansk. Consequently, the secrecy rating of the Murmansk history was so high that even such leaders were not aware.

According to NASA, after the flight to the Moon, the Apollo capsules (cabins) with the astronauts on board returned to the Pacific Ocean. Returned vehicles, so that they do not burn out when entering the Earth's atmosphere, are covered with a layer of thermal protection. The found capsule, according to the testimony of our specialists admitted to its inspection, was empty and did not have thermal protection:

“It was metal, very well made of thick galvanized iron, without any traces of corrosion. Everything was extremely simple. (Preserved) a set of light search beacon ... even the thermal protection was not imitated in any way ” [7]

There was a unique case in the history of astronautics: one country lost a space object, while another found it. Try to find something similar. You can understand the Hungarians (the only outside witnesses) who put so much effort into making history public. Its unusualness is emphasized by the fact that both parties involved were rivals in the tense Cold War, which by that time had lasted for a quarter of a century and of which the lunar race was part.

Of course, the Americans could not enjoy this story, and they were not interested in disclosing it. The USSR, returning the capsule, could simultaneously in the media both beat the manifestation of its good political will, and click on the nose of a goofed rival. And, nevertheless, clearly for the sake of the USA, the USSR takes a vow of silence. The United States, with the consent of the USSR, is sending its ship to Murmansk, where not a single American ship has entered since the Second World War.

In general, it turns out that something much more important is hidden behind this story than a flasher of the original design and a ton or two of galvanized iron. What could it be?

Pay attention to one subtle, but very important fact: the date of the discovery is not indicated in the message about the transfer of the capsule. The Soviets did not say, but the Americans are also silent even now, when some information about the episode has been published [5]. Could tell the date of the loss. They lost. But - not a word on this score. Consequently, the exact dates of the discovery and loss are the main secret in this story. And it is the publication of these dates that is especially unpleasant for Americans. Recall that this is the year of Apollo 13's flight. This was the only launch "to the moon" in 1970.

If the mock capsule was found by Soviet sailors at least an hour before the launch of the A-13, then the Americans would have a simple and logical explanation for this: they were preparing to meet the spacecraft and once again trained on the mockup in search of it. In this case, there is no reason for special secrecy.

If - significantly later than this start, then again there are no consequences: preparations are underway for the next flights. Again, there is no reason to keep the dates secret.

If the capsule is found soon after the launch, then any explanations can be built, but doubts will remain: the A-13 rocket seemingly launched towards the Moon and with a crew on board, and after a short time an empty model of the Apollo spacecraft is found in the waters of the Atlantic? **And what prevents us from considering that it was this empty model that stood on top of the rocket for several hours**

back supposedly launched to the moon?

Here it is necessary to pay attention to another interesting event, which could help not only make the find, but also deliver it to the Soviet port under reliable security. And the fact that the Americans would not hesitate to use force to take it away from the "weakling", says a story that took place just six months earlier [8]. Then the USSR tried with its reconnaissance radio observation ships to trace where the American Apollo 11 lunar rocket was heading after the launch. The Americans surrounded our ships with a whole squadron of surface ships with uncovered guns, submarines, "covered" them from above with aircraft and completely drowned our ships with electronic jamming.

So in April 1970 this "trick" would not have passed for the Americans. Accidentally or not (let the reader decide), but just a couple of days after the launch of Apollo 13, the global exercises of the Soviet Navy "Ocean" began, in which dozens of Soviet warships were present in the Atlantic. And since the ships

occupy their positions in the ocean not on the day of the announcement of the exercises, but in advance, this means that by the time of Apollo 13's launch on April 11, large areas of the Atlantic were already under the control of Soviet warships. So it was and to whom to find the find, and to whom to deliver and who to guard, so that the find arrived safely in Murmansk.

Apollo 13 was launched on April 11, and after 5 months in the port of Murmansk, the Americans returned an empty capsule from Apollo, found by Soviet sailors in the very Atlantic on the shore of which the corresponding American cosmodrome is located. They found her obviously not on the eve of the transfer procedure. While they were brought to the Union, while they were getting to know the find, while they were pondering what was what - time went on. And the time for diplomatic negotiations must also be taken into account. And the proper witnesses had to be selected for the fact of the transfer. After all the Americans, having received the lost capsule without witnesses, could well deny the fact of the transfer later. And they took care of the witnesses: Hungarian photojournalists - representatives of the union socialist country - are invited to the handover ceremony. This is also an issue that requires diplomatic coordination not only with the Americans, but also with the Hungarians. It will take quite a few months.

Such an unusual and highly secret incident took place in the city of Murmansk a few months after the launch of Apollo 13. And if we recall that the Americans in the most decisive way prevented the "Soviets" from following the flight of their "lunar" rockets, and this happened twice before the Murmansk history (launches A-10 and A-11) [8], then a very painful question for the prestige of the United States: "where did the Apollo actually start?" And did the Soviet ships find this capsule by chance? Or, after two attempts to track the flights of lunar rockets, thwarted by the Americans, these ships were specially located in some foreseen area on the eve of the A-13 launch? And then one can understand why the Americans were vitally interested in classifying this story, of course, having agreed on this with the USSR.

What the Soviets received for their silence is a question that goes into the realm of speculation. The interested reader can find some possible answers in article [9]. One thing is clear: by hiding the information about the discovery of the capsule, the Soviet leaders saved the Apollo 13 mission and the entire Apollo program from very dangerous doubts.

Links

1. Ya. Golovanov, "The truth about the APOLLO program ", M.: Yauza - EKSMO-Press, 2000, chapter 7, p. 210.

This book is on the Internet: chapter 7
<http://www.epizodsspace.narod.ru/bibl/golovanov/apollo/08.html>

2. NASA film "Apollo 13: Houston, we have problems", see [f 8] section 28
 3. NASA http://www.apolloarchive.com/apollo_gallery.html («The Project Apollo Image Gallery») section A -13
 4. http://www.nekata.ru/index.php?show_section=111
 5. М. Вейд - *"Soviets Recovered an Apollo Capsule!"*
<http://www.astronautix.com/articles/sovpsule.htm>
 6. **"Urhajozasi Lexikon" (Encyclopedia of Space Research), 1981, ISBN 963 05 2348 5, Zrinyi, p . 33.**
 7. I. Afanasyev. "News of Cosmonautics" March 2003 www.novosti-kosmonavtiki.ru/content/numbers/244/39.shtml
 8. "Chasing a Ghost": Operation "Crossroads" Alexander Zheleznyakov, "The X-Files", No. 13, June 2005 ,
http://www.cosmoworld.ru/spaceencyclopedia/publications/index.shtml?zhelez_32.html
- Information about the author: <http://www.forum.mista.ru/topic.php?id=403995&page=9> : A. Zheleznyakov - currently Deputy General Director of OJSC NPP "Raduga" - one of the largest Russian enterprises specializing in development of systems and means of communication for special purposes.
<http://www.pereplet.ru/avtor/zheleznyakov.html>
9. <http://www.manonmoon.ru/articles/st10.htm>

Fig. 1. Composition of the author from the intros and credits of the film [2]

Ill.2. [2]

Fig. 3. V.I.Feodosiev. "Fundamentals of rocket flight techniques", M.: "Science" FML, 1981, p. 79, with additional sketches by the author of the book; see also <http://www.skeptik.net/conspir/feodosev.htm>

Ill.4,5. [2]

Ill.6. a) <http://www.hq.nasa.gov/office/pao/History/alsj/a13/AS13-60-8591.jpg>

b) <http://www.hq.nasa.gov/office/pao/History/alsj/a13/AS13-59-8562.jpg>

в) <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001119.jpg> This view of the damaged Apollo 13 Service Module (SM) was photographed from the Lunar

Module/Command Module following SM jettisoning.

d) <http://www.hq.nasa.gov/office/pao/History/alsj/a13/ap13-S70-35632.jpg>

Ill.7. a) [2] b) <http://www.hq.nasa.gov/office/pao/History/alsj/a13/ap13-S70-15526.jpg>

Ill.8,9. [2]

Fig . 10 . Picture ill. 6c with increasing brightness and contrast (D.P. Kobzev). A copy of the photograph on the book's website <http://moon.thelook.ru/addon/14/GPN-2000-001119.jpg> . Checksum MD 5
E767BD12EA4F579CC4053782B2F1172F

Ill.11. [4-6]

Ill.12. [5];

Back on Earth

20-25 minutes

Back on Earth. Chapter 15

We close the "moon" album

We are nearing the end of our exploration of illustrative NASA lunar materials. Let's get to know some of the common features of how NASA illustrates the American "space odyssey."

Astronauts flew perfectly prepared

*"NASA was well aware that photographs were essential documentary material, and went to great lengths to teach astronauts to photograph ... they spent hundreds of meters of film on these exercises. **The astronauts flew perfectly prepared for photographing.** The cameras were purchased from the Swedish company Hasselblad - the world's best medium format cameras. " "The provision of cameras on the A-11 was quite exhaustive. In addition to conventional TV and narrow-film cameras, there was also a special camera for shooting stereoscopic images ... "- this is how well-known defenders write [1-3].*



Fig. 1. With the masters and the demand is appropriate.

a) astronauts with cameras in training;

b) 16-mm film camera, fixed in the window of the lunar module

Well, from the trained and equipped with all the necessary "specialists" and the demand is appropriate.

Why did the trained astronauts turn out great photos on the moon, and film shots - good marks?

Let's compare the movie episodes, allegedly filmed by astronauts on the Moon, with the same type of photographs taken by them on the same Moon.

Here is a photograph taken at the flag (Fig. 2a). Excellent quality, rich colors, the smallest details are clearly worked out. And next to it is a film frame on the same topic and from the same expedition (ill. 2b). According to NASA, it was filmed through the porthole of the lunar module with an automatic 16-mm film camera - the same one shown in Fig. 2b [4,5]. Astronauts leave the module "to the moon", and the movie camera remains to work in the gentle conditions of the lunar module cabin. But why is the film frame not so sharp and blurred, if, at distances of more than 2-3 m, focusing is usually not required for a movie camera lens (just set it to "infinity")?

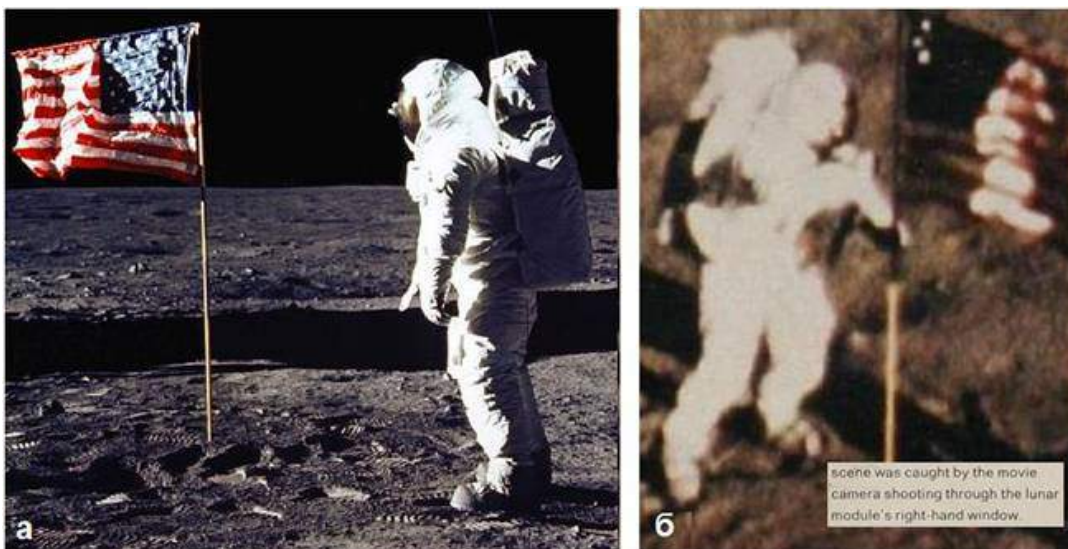


Fig. 2. Why did the photos on the moon turn out perfectly (a) , and the film frames - for a two (b) ?

(plot with flag)

Here's another photo of the famous astronaut jumping at the flag (Figure 3a). Great shot. And next to it is a frame from an episode of the film "For All Mankind" [6], where astronauts demonstrate their walks on the moon. The quality of the footage is again useless.

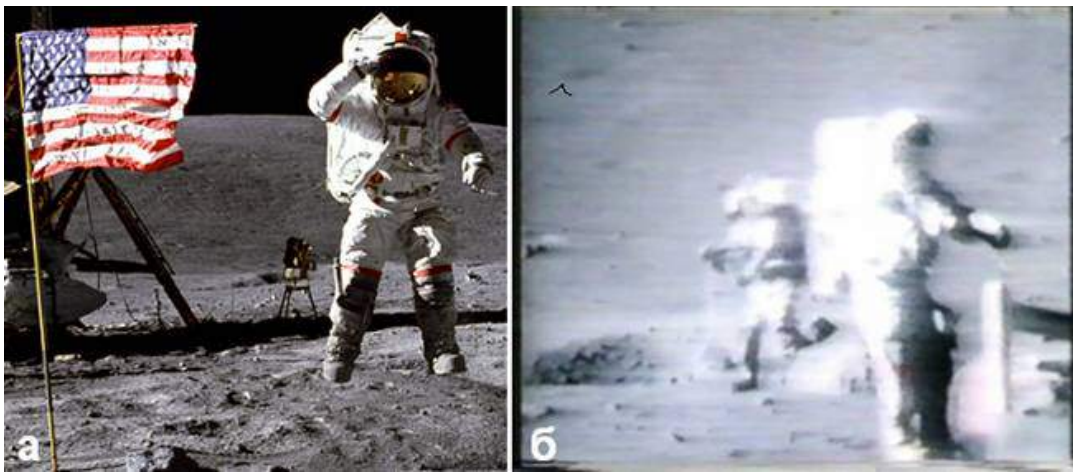


Fig. 3. Why did the photos on the moon turn out perfectly (a) , and the film frames - for a two (b) ?

(plot - jumping and moving on the ground)

True, on the part of the defenders in these cases, it is customary to remind that the films used footage from live television broadcasts from the Moon, and from television broadcasts what demand. But this cannot be said about the frame of ill. 2b. The Americans themselves write about it: "filmed with a movie camera through the right window of the lunar module" (see the inscription on Fig. 2c). And why is NASA so generously showing us bad clips of supposedly live TV programs, and has not instructed any astronaut to shoot at least one decent-quality movie episode about jumping, running and walking astronauts on the Moon?

Such examples can be demonstrated for a long time. Let's try to understand what caused this.

Why is photography convenient? The fact that much on it looks the same on Earth and on the Moon.

Let the terrestrial photographer take off the "flag on the moon" at the moment when it fluttered in the terrestrial wind (ill. 2a). It's okay - it will be possible to say that the banner is simply crumpled. But, if you remove the waving flag on film, then you will have to come up with explanations about the fabric pendulum or about the powerful pulse of an astronaut shaking the flag staff (Chapter 12).

Here is a photographer filmed on Earth the jump of a man in a spacesuit against the background of a black screen (Fig. 3a). It will be almost indistinguishable from the jump of an astronaut who has jumped on the moon. Even the low jump height can be explained. Say, he jumped high, but the photographer did not catch the moment. And in the movies, you can't hide the height of the jump. Yes, there will be problems with the pace of jumps and other movements: very different gravity on the Earth and on the Moon. But, if you shoot a "moon" clip on Earth with poor sharpness, blurry and indistinct, then such differences may not be noticed.

It seems that NASA has chosen a line to propagate "flights to the moon" that can be termed as "the union of good photos and bad movies." NASA's lunar sites are filled with hundreds of high-quality photographs. And the video clips - although much less (several dozen), are still enough so that no one can reproach NASA for their absence. At the same time, real episodes, such as the launch of a rocket, are shown with high quality. Clips with a lunar theme, especially those from which you can get at least some useful information, all, as one, are of low quality.

And whims are useful, and breakdowns by the way

And yet, the more forgeries, the greater the likelihood of exposure. Is it not for this reason that the joint efforts of NASA and astronauts have found many excuses to show less "lunar adventures" in dynamics?

"NASA has strived to expand space television programs from time to time, realizing that television is the best advertisement, but many astronauts have resisted the introduction of television cameras into the transcendental world. Cunningham was forced to take the camera almost by force, but in space he nevertheless arbitrarily canceled one session ... Armstrong was also a fierce opponent of television. Bormann - opposite ... Stafford was also "For" ... "[7].

It seems that in America the most undisciplined people at work are the military (and astronauts are mostly military). They act as if they were asked to make a movie about their married life. And you cannot order them, you can only "strive to expand", while counting the votes "for" and "against". It is difficult to take such "fairy tales" seriously.

Yes, and with the television equipment at NASA, you see, there were always some unexpected disappointments. During the descent of the A-12 to the moon, viewers *"saw only animation of the maneuvers being made and heard the voices of the astronauts"* (Chapter 8) . And on the Moon itself, during its stay, *"the Earth did not see ... neither astronauts, nor lunar landscapes, because the television camera failed "*[7] . Why wasn't there a spare camera? Even a tourist company goes on a hike with more than one camera, so that in the event of a breakdown, you will not be left without pictures and films at all. And then they flew to the moon without a spare camera?

The television equipment of the A-16 astronauts also refused, not allowing them to film the most interesting episode of the "redocking" of the modules after the launch from the near-earth orbit [8]. And on the Moon, *"the breakdown of the highly directional antenna on the lunar cabin did not allow television coverage of the first work on the Moon"* [7].

The lunar theme also had a bad effect on terrestrial studio television equipment: *"On July 25, 1969, the opening of the first container with rock samples delivered to Earth by the Apollo 11 crew was broadcast on national*

television. When the very moment of opening the container came, the television program was suddenly interrupted ” (Chapter 16).

You can believe in one or two accidental breakdowns. But when the number of oddities reaches a dozen, then doubts arise: are not all these "breakdowns" invented simply in order not to once again be hampered by another imitation, but to replace the show with a story with cheerful voices or a cartoon. It is hard to believe that the country, which allegedly created a unique space technology, did not provide its pioneers with reliable teletechnics. Moreover, no one has ever doubted the quality and perfection of American television technology, unlike the "American flights to the moon".

NASA jokes

For some time now, NASA itself began to promote its photographic counterfeits on the lunar theme with funny humor. For this, the site [10] even has a special section " Fun Images " ("Funny pictures"). What for? Judge for yourself.

For example, there is a "real" "lunar" image on the NASA website (Fig. 4a). The photo shows that Bean has a camera attached to the suit at chest level. In the same way, he was strengthened by his comrade (ill. 1a). And it seemed strange to some skeptics, how is Bean's comrade, taking off "from his chest," manages to photograph the top of Bean's helmet? Was there someone else with an unattached camera. But then it does not happen on the Moon, because the crew of the lunar module is 2 people.

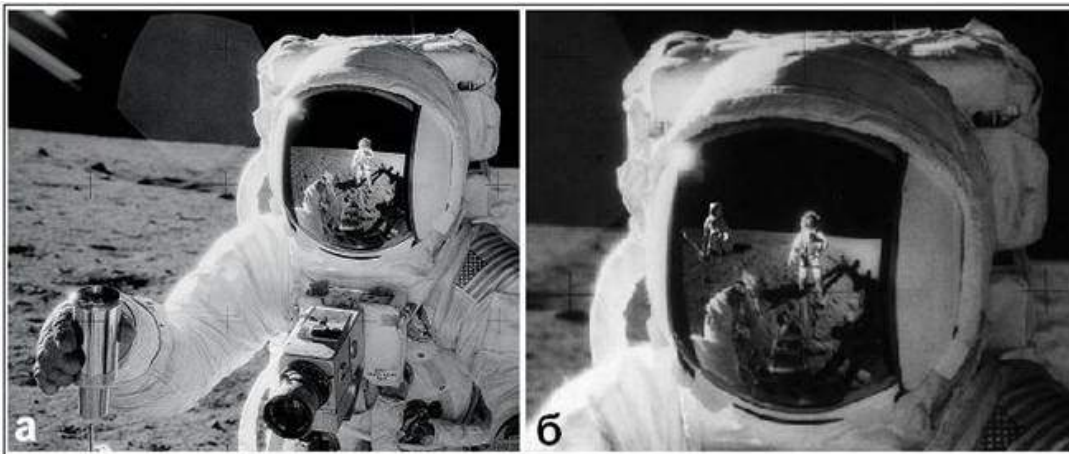


Fig . 4 . Why is the top of the astronaut's helmet visible?

a) a photo that raised questions from skeptics, **b) the** answer is a NASA joke

NASA answered the skeptics' question with a healthy laugh. NASA photographer David Harland refined the image in Figure 4a so that two astronauts were visible in the reflection on the glass of Bean's helmet instead of one (Figure 4b). And this means that there are three people on the moon instead of the required two. Isn't that funny? Ha ha! But there was essentially no answer.

And David also depicted about a dozen astronauts wandering on the moon. There are in the " Fun Images " section and absolutely funny pictures, for example, pets on the moon next to astronauts, etc. In general, NASA is "humorous". Moreover, judging by the dating of the pictures on the " Fun Images " website , this fun work captivates Americans in our time, that is, 30 years after the end of the lunar epic.

But why would Harland and his colleagues waste time (and NASA money) on such nonsense? Is it really just because of the cheerful nature and the excessive amount of dollars? In this regard, the author [11] writes: *"It is not connected with humor. This is an attempt to discredit those blatantly fake photos that NASA has leaked to print . Say, those photos are also from the category of "Nazi people are joking."*

In addition, with their "jokes" the Americans scoff at the very possibility of doubting the truth of the landing on the moon. It should be clear to everyone that any attempt to look for flaws in NASA illustrations will cause not just laughter, but ridicule. Not everyone can resist the pressure of laughter.

.

Serious pressure

Very often, the following arguments are used to suppress criticism of NASA:

G. Nazarov: *"American specialists are not stupid"* [11];

Yu. Krasilnikov: *"Mukhin, obviously, holds the Nazis for complete idiots who have not even learned to cut spotlights out of the frame in their native Hollywood"* [12];

Yu. Krasilnikov and V. Yatskin: *" What prevented them from removing the most odious shadows before they got into the media?"* [1].

V. Shevchenko: *"But think for yourself that if some wise people in Hollywood or somewhere else decided to fabricate a stay on the Moon, could they really not have thought that it was necessary to remove any wind in the studio"* [13].

Of course, NASA has always had smart people. But let us recall the popular wisdom: "he who does nothing does not make mistakes." More decisive arguments are prepared for especially stubborn skeptics :

D. Shiir, NASA official [14]:

"Any person who claims that we have not been on the moon, I am ready to call a complete paranoid."

B. Welch, NASA official [14]: *"Yes, the range of arguments is very wide - from the most difficult to ridiculous. Some are absurd from the point of view of optics. Absurd from the point of view of physics, from the point of view of science and from the point of view of history. These arguments smack of a desire to surprise the world with a cheap sensation. American astronauts landed on the moon in the 60s and 70s. The conversation is over! "*

The same Yu. Krasilnikov and V. Yatskin [1]: *"People are stupid. Envy. People have a violent fantasy ";*

A.A. Leonov, cosmonaut, now Air Force general:

"In science, in a serious environment, there are no doubters. And all sorts of ordinary people ... But how can you count on them, enter into some kind of dialogue with them? It is useless ... "[15] .

It's a pity that the general didn't say which particular field of science he himself represented. In addition, by "ordinary people" they usually mean the majority of the population, and this majority is sure that the Americans were on the moon and entirely on the side of Alexei Arkhipovich.

K.P. Feoktistov , a prominent authority on Russian cosmonautics: *"Stupid and funny!"* [sixteen].

B. Strugatsky, popular science fiction writer: *"An absolutely stupid idea"* [16].



Fig. 5. "Any person who claims that we have not been to the moon, I am ready to call a complete paranoid "

Under such pressure, not everyone would dare to publicly doubt that the Americans were on the moon. Let's not succumb to this pressure and calmly summarize our acquaintance with the "lunar" NASA album.

Almost the entire lunar epic was filmed at the "dream factories"

The "lunar" album of NASA is huge: tens of thousands of photos on websites, hundreds of video clips, dozens of films. In this sea of very well done information, like small grains, those dubious facts and materials with which we have met above float. And while they are perceived separately, then, like a magic wand, the following opinions are expressed:

"It is clear to me - they were on the Moon! They were! Black on white - they were! But the films, photographs, photographic materials disappeared. The expedition photographic material did not come out, the photographic material of the expedition was lit. They removed the fake at the "dream factory" [17a].

Where, then, did the clarity come from if the expedition photographic material was lit up ? And how could he light up six times in a row? After all, only landings, not counting the lunar flyby, according to NASA, there were six (A11, A12, A14, A15, A16 and A17). What kind of rock has plagued the photographic material during the four years these landings have taken place?

The following statements sound more diplomatic:

"After the showing of the famous American documentary film on TV, in general, there is no doubt that the photography and filming on the Moon have been tweaked and embellished in the pavilion" [17b].

*"I've always said that the Americans were on the moon. Another thing is that, perhaps, the astronaut then failed to take sufficiently impressive pictures of the American flag on the moon. But the American flag can't be badly shot. Therefore, **some shots were filmed in Hollywood , but to shoot the entire flight in Hollywood is just stupidity, nonsense** " (G. Grechko, [18]).*

Well, let's try to make sure that G. Grechko is right. Let us list briefly the most basic doubtful facts that have become known to us:

To the Moon , Chapter 5:

- * An astronaut's exit into outer space is a substitution of Gemini-Apollo, (ill. 4.7);
- * Start to the Moon - the second substitution of "Gemini-Apollo" with the use of masking techniques, (ill. 9);
- * Moving away from the Earth - "a movie from one shot, (ill. 15);
- * A snapshot of the third stage against the background of the distant Earth - photomontage, (ill. 19);
- * Views of the distant Earth - photomontage, (ill. 21)

Around the Moon, Chapter 6:

- * Earth rises above the lunar horizon - with many signs indicating that they were filmed by the "Orbiters" (ill. 6,7,12);
- * One and the same view - both as sunrise and as sunset (ill. 14,15);

- * The same type of sunrise is used when illuminating two different flights (Fig. 16);
- * questionable films and video clips made on the basis of one or several photographs, as well as the lunar globe (ill. 18,19,21);
- * Episode "Moon through the Apollo Window", filmed at the NASA Space Museum;

On landing , Chapter 8:

- * Photographs of lunar modules, allegedly taken in space, but in reality - in the studio (ill. 1, 2, 5);
- * "Lunar" ships, maneuvering in a supposedly circumlunar orbit without a single flash from the orientation engines (Fig. 9);
- * Conflicting information given by astronauts about the descent to the moon (ill. 18).
- * Large-scale NASA work to create a terrain with many craters in the Arizona desert (Fig. 14,15)

On the moon

Chapter 9:

- * "Lunar modules" supplied by the "crane" (Fig. 4.5);
- * "Lunar" rovers, leaving behind trails of earth-shaped dust (Fig. 11);

Chapter 10:

- * Lunar modules, supposedly standing on the Moon, but clearly filmed on Earth (ill. 1-3);
- * Walking astronauts on the moon, but in fact on an unevenly lit cinema area (ill. 5);
- * Surrounding "lunar" mountains with traces of marine water sediments (ill. 7.8);

Chapter 11:

- * Fakes of Galileo's experience in order to imitate the presence on the moon (ill. 1, 4, 5);
- * Jumping and moving astronauts in terrain with many signs of earthly performance (Fig. 7-11)

Chapter 12:

* Numerous facts showing that American "lunar" flags are actually on the Earth;

Return from the moon

Chapter 13:

* Earth painted on the "lunar" sky (ill. 1);

* A clip filmed on Earth about the launch from the Moon (ill. 2.4);

* Lunar module, supposedly maneuvering in space (Fig. 5);

* Edited episode of a spacewalk far from Earth (Fig. 6)

So, “filmed in Hollywood” (in the words of G. Grechko) or replaced with space shots from ordinary near-earth space flights staying in an intermediate near-earth orbit and starting from it to the Moon , flights around the Moon, landing on it, staying on it and taking off from it ... What was not filmed in the studio? Launches from the cosmodrome and splashdown in the ocean. But they do not say anything about where the missiles were launched and where the ships that splashed came from. If someone left the house and returned after a week's absence, this does not mean at all that he flew somewhere far away during this time. He could have a great week, for example, at his dacha. All the rest of the **facts indicate that the Americans practically filmed the entire flight in Hollywood** . But this book contains no more than one third of the doubtful facts discovered by skeptics.



Fig. 6. Filmmaker Paul Lazarus: **“All the technologies for this already existed then. We did it ”**

For those who have doubts about the possibilities of cinema at that time, let us report the opinion of the famous American filmmaker Paul Lazarus (Fig. 8) - one of the creators of the popular science fiction film about space travel "Capricorn-1". He said in this regard, “All the technologies for this already existed then. We did it in our film ” [14] .

1. Yu. Krasilnikov and V. Yatskin. "Did the Americans fly to the moon?"
<http://www.skeptik.net/conspir/moonhoax.htm> pp. 3 , 5, 85-86
2. "Were the Americans on the Moon?" Yu. Krasilnikov [http : // menonthemoon . narod . ru / photos _2_14. html](http://menonthemoon.narod.ru/photos_2_14.html) , [http : // menonthemoon . narod . ru / photos _2_12. html](http://menonthemoon.narod.ru/photos_2_12.html) , pages are not numbered
3. HACA APOLLO-11 HASSELBLAD CAMERAS
<http://www.hq.nasa.gov/office/pao/History/alsj/a11/a11-hass.html>
4. " Life, " August 1969 , see also [un2] sec. 28
5. " A Look ", August 1969 , see also [un1] section 28
- 6 . See [f2] section 28
7. Y. Golovanov, "The truth about the APOLLO program ", M .: Yauza - EKSMO-Press, 2000 , pp. 167, 175-176, 206, 243 ,,
<http://www.epizodsspace.narod.ru/bibl/golovanov/apollo/obl.html>
8. NASA [http : // www . hq . nasa . gov / office / pao / History / alsj / a 16 / A 16_ MissionReport . pdf](http://www.hq.nasa.gov/office/pao/History/alsj/a16/A16_MissionReport.pdf) , p.108 television equipment during the recording time division maneuver A-16 is not operated
9. <http://forum.ixbt.com/topic.cgi?id=64:1130-44#768>
10. HACA <http://www.hq.nasa.gov/office/pao/History/alsj/frame.html> - Apollo Lunar Surface Journal.
<http://www.hq.nasa.gov/office/pao/History/alsj/alsj.funpix.html> - Fun Images
- 11 . Yu.I. Mukhin. Antiapollo. Lunar scam of the USA. - M .: Yauza, Eksmo, 2005, pp. 87, 277
- 12 . "Were the Americans on the Moon?" Yu. Krasilnikov [http : // menonthemoon . narod . ru / photos _2_14. html](http://menonthemoon.narod.ru/photos_2_14.html) , [http : // menonthemoon . narod . ru / photos _2_12. html](http://menonthemoon.narod.ru/photos_2_12.html)
13. See [f5] section 28
14. See [f3] section 28
15. See [f6] section 28
16. Yu. Krasilnikov. "The Whole Truth About Americans on the Moon." The magazine " Paradox ", No. 4, 2004, p. 10-25, [un5] section 28
- 17 . Sergey Burivy **(a)** and A. Ganzeev **(b)** , "Duel No. 9/152

18. [http : // www . x - libri . ru / elib / smi 01221/00000002. htm](http://www.x-libri.ru/elib/smi/01221/00000002.htm) Excerpts from G. Grechko's book “I was born an astronaut”;

Ill.1. a) NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a13/ap13-KSC-70PC-67.jpg>

b) NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-36-5389.jpg>

Ill.2. a) NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5874EN.jpg>

b) NASA [http://spaceflight.nasa.gov/gallery/video/apollo/apollo11/ mpg / apollo 11_onbclip09.mpg](http://spaceflight.nasa.gov/gallery/video/apollo/apollo11/mpg/apollo11_onbclip09.mpg)

Ill.3. a) NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a16/AS16-113-18339EN.jpg> b) [7]

Ill.4 . NASA a) [http : // www . hq . nasa . gov / office / pao / History / alsj / a 12 / AS 12-49-7278. jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a12/AS12-49-7278.jpg)

b) <http://www.hq.nasa.gov/office/pao/History/alsj/alsj.trio>

Fig. 5.6. see links in the text.

The declared height of the Saturn-5 rocket is 85.7 m, its maximum diameter is 13 m, the launch weight is 2728.5 tons, the payload in orbit is 500 km, 120 tons

20-25 minutes

Back on Earth. Chapter 16

American lunar soil - rich soil for doubt

According to NASA, astronauts brought from the Moon about 380 kg of lunar soil and stones [1,2]. Photos of these stones are presented in NASA images, in scientific monographs of scientists (Fig. 1a), these stones illustrate the "moon" films of NASA. In such films, in the role of an expert, one can see [3] Dr. Garisson Schmidt (ill. 1b), who, as an astronaut A-17, allegedly personally collected these stones on the Moon. However, believing in his stories is hindered by the fact that the "lunar" geologist posed for an apparently dubious "lunar" photograph of terrestrial origin (ill. 1c).

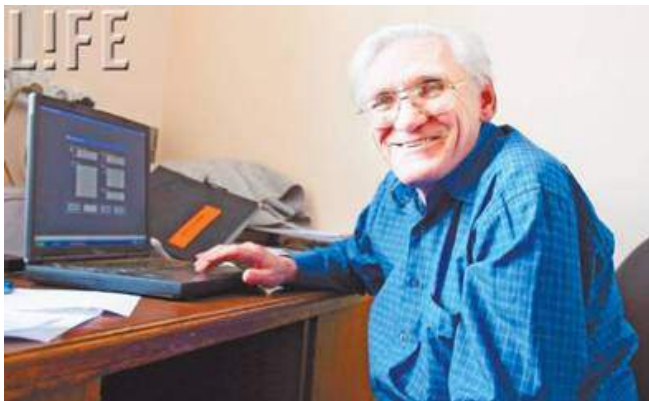


Fig. 1. Moon (?) Stones :

a) NASA snapshot <http://images.jsc.nasa.gov/lores/S72-37210.jpg> ; **b)** astronaut-geologist Dr. Garisson Schmidt talks about moon rocks [3] ; **c)** someone under the name "geologist-astronaut Garisson Schmidt" poses in a dubious scene "on the moon" (chapter 12 <http://www.manonmoon.ru/book/12.htm>)

At that time, three Soviet automatic stations delivered from the Moon only regolith (small particles from the near-surface layer) with a total weight of 300g, while astronauts could bring large samples with a total weight of those very centners. Defenders report that NASA gave Western scientists about 45kg of lunar soil and moonstones [4,5]. However, the authors [6-10] analyzed the relevant publications [11-17] and could not be convinced that these 45 kg reached the laboratories. According to the author [6], currently in the world no more than 100 g of American lunar soil wanders from laboratory to laboratory, so *“usually the researcher received 0.5 g of rock ... in the form of a separate fragment ...”* [17]. True, the monograph [18] shows several photographs of large lunar stones such as Fig. 1a at once, but under all the photographs there is an eloquent caption “NASA image”. We recommend that the interested reader familiarize himself with the cited works. We are interested in how much and what kind of lunar soil NASA transferred to Soviet scientists. Because Western, and even more so, American scientists are representatives of an overly interested party.

29 g of regolith to Soviet scientists is not an argument in favor of landings



In the USSR, the Institute of Geochemistry of the Academy of Sciences of the USSR was appointed the head scientific organization for all studies of the lunar soil. This role is assigned to him today (now - GEOKHI RAS). The head of the meteoritics department of this institute, Doctor of Sciences M.A. Nazarov (Fig. 2) reports that ***“the Americans transferred to the USSR 29.4 g of lunar regolith from all Apollo expeditions, and from our collection of Luna-16, 20 and 24 samples, 30.2 g were issued abroad.”*** [19].

Fig. 2. Doctor M.A. Nazarov (information portal "LifeNews")

This is a very important message. If only because we simply do not have any other generalizing information on this matter. Let's pay attention to the fact that such important information coming from the bowels of the parent organization has been published so far only on the Internet. And a message on the Internet is not, strictly speaking, a document. Today it exists, but tomorrow it can disappear without a trace. The well-known skeptic Yu.I. Mukhin tried to get a written answer on this topic from GEOKHI. He turned to GEOKHI with a request to inform [7] :

“A) when and how much lunar soil was sent from the USA to your institute;

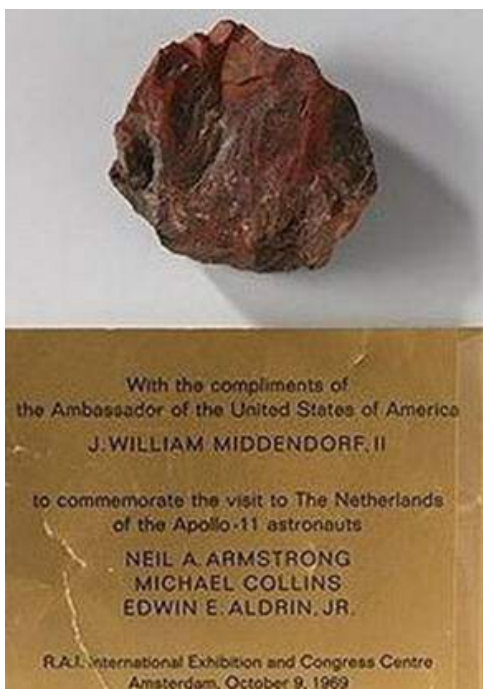
b) in what editions the results of these studies were published and what is the availability of your institute's reports on this topic for review;

c) who else in the USSR received samples of lunar soil from the USA for research.

GEOCHI declined to give a written answer to the questions asked.

It turns out that everything is closed on the respected doctor M.A. Nazarov. So, the distinguished doctor said that the USSR received from the USA 29.4 g of lunar regolith. Even so, but how does such an exchange prove that the Americans have the 380 kg they are talking about?

How did it happen that, **according to NASA, Western European scientists who had nothing to offer in return were allegedly given whole moonstones, and Soviet scientists, who had their own real lunar soil, were given grams and only regolith?** According to the author, this suggests that something is wrong with the American moon rocks. **The alleged moonstones were not handed over to the one who is most interested in verifying their authenticity.** And 29 g of lunar regolith is not an argument. After all, three Soviet automatic stations in 1970-1976. together they delivered from the Moon to the Earth only about 300 g of regolith [20] and no one says that Soviet cosmonauts landed on the Moon.



This conclusion has recently received an interesting confirmation. Here is what is written in a message with an intriguing title: "The moonstone delivered by Apollo 11 turned out to be a cheap fake" [21]: "Dutch experts have analyzed the" moonstone ", officially, through the Department of State, donated to the Prime Minister of the Netherlands Willem Drize by the US Ambassador William Middendorf during the visit of the Apollo 11 astronauts to the country - October 9, 1969. After

the death of Mr. Driz, the relic, insured for \$ 500 thousand, became an exhibit at the Rijksmuseum in Amsterdam. And only now studies of the "moonstone" have shown that the gift of the United States turned out to be a simple fake - a piece of petrified wood . "

Fig. 3. The American Moonstone — a gift from Apollo 11 to the Dutch Prime Minister — turned out to be a petrified piece of wood;

<http://cnews.ru/news/top/index.shtml?2009/08/28/359642#>

Only a month has passed since the presentation of the piece of wood to the Dutch Prime Minister, and the United States decided to organize a massive donation of "lunar soil" to all countries - 135 UN members. In this action, they have already foreseen that it would be possible to get to the "lunar samples" only by breaking the gift (and who would decide on such a scandal?). *"In November 1969, four months after the landing of Apollo 11, then US President Richard Nixon ordered NASA to allocate about 250 fragments of "lunar rock" and on their basis made boards (nameplates) on which **acrylic balls with four samples of lunar rock tightly sealed inside** . "* Now "moon" stones were given in tightly sealed plexiglass balls (Fig. 4), as well as in similar cylinders [22]... The donation procedure was repeated in 1972, when according to NASA, the last "landing on the moon" was carried out (A-17).

But somehow it turned out that *"today the location of only about **13% of the gift**" moon stones "of the A-11 and A-17 series is known . (This is) an unprecedented situation in the world museum practice " [22] . As if a powerful vacuum cleaner was turned on somewhere, carrying away exactly the American "moonstones" to nowhere.*



Fig. 4. In such tightly sealed solid plexiglass containers, NASA representatives solemnly handed over to all 135 UN member states some stones allegedly delivered by astronauts from the moon

<http://bolshoyforum.org/forum/index.php?page=142#tp-comment>

http://www.collectspace.com/images/aoe/aoe_chaffee.jpg

<http://www.vtmagazine.vt.edu/winter07/images/moonrock.jpg>

Even the astronauts who allegedly brought these very stones for NASA from the Moon, NASA does not trust their storage. (What if they give it to some curious researcher ?). Here is an interesting post on this topic **[23]**: *"Tuesday marks 35 years since the first manned landing on the moon. The anniversary will be marked with a ceremony at the Washington Aerospace Museum, at which participants in three US space exploration programs - Mercury, Gemini and Apollo - and legendary television journalist Walter Cronkite, who covered them, will be presented with shards of rock brought back from the moon by astronauts. From 1961 to 1973, 34 Americans flew into space under these programs. 25 of them are still alive. Lunar shards, encased in plexiglass discs and mounted on memorial plaques, will be awarded only symbolically. US law prohibits individuals from owning material brought from the Moon, but astronauts will have the right to choose a museum or other institution where the shard will be displayed on their behalf. "*

And in order to discourage too persistent and too naive scientists from asking NASA for moonstones not for peering through plexiglass, but for scientific research, the following interesting legend was invented.

40 years of caring for "future generations of scientists"

"In the United States, it was decided to keep the bulk of the delivered samples completely intact until new, more advanced methods of studying them are developed" **[16]**. *"It is necessary to spend a minimum amount of material, leaving untouched and uncontaminated most of each individual sample for study by future generations of scientists"* - explains the position of NASA American specialist J. A. Wood **[17]**.

Poor modern scientists and their recent predecessors and teachers. With their instruments, they could examine every single atom in the substance, but they were denied confidence.

Poor future scientists. They have in the twentieth I th, and, perhaps, in the XXII th century, of course, will not have such beautiful ships and rockets, what were the "Apollo" and "Saturn 5" of the twentieth century. And they will not be able to get fresh moonstones on the moon. But NASA took care of them: they did not give moon stones to their contemporaries, but left them for them. Note that over the past decades, many geologists have passed away - contemporaries of the "lunar" flights. The next generations of scientists left their student benches, worked for decades and managed to grow old, and NASA is waiting and waiting for these future generations. A perfect legend to hide the fact that there are no moonstones in her pantries. Because tomorrow never comes.

And if this legend of care does not work for someone, then there is another intelligible explanation at the ready: moonstones are not issued from the storage, because there is no money for their research. Here is what the author of the book writes as of 1974 [18]:

"A significant portion of the samples will be stored in reserve at the Houston space flight center, a cut in funding that will reduce the number of researchers and slow down the pace of research." Do you feel it? 25 billion dollars was spent on delivering lunar samples, and they forgot to set aside money for their research of these very samples. But a thousandth part of the named billions would be enough. True, the well-known skeptic A. Kudryavets spoke more decisively about the sudden lack of money: *"Why do we need any special funding for the study of the lunar soil? Would there be no specialists in the world who would be ready to conduct a thorough analysis of alien cobblestones at their own expense? For that matter, some of the soil could be put up for auction, and the money raised could be used for research. Doesn't sound like the adventurous genius of the Americans trying to save themselves from a trivial task. In addition, NASA does not tire of repeating - it acted for all mankind . So what's the problem? Let not in words, but in deeds finally share the fruits of his activities with all of humanity ... There is no such soil in the declared quantities, and this is not a doubt, but a fact. "*

In general, the American lunar soil is a very rich ground for doubts and even more decisive conclusions. This is the main conclusion of this chapter.

P . The S . A small amount of lunar soil the Americans could deliver to Earth using automatic stations

And where did the Americans get the lunar soil at all, even in grams, if they were not on the moon? This question is asked quite often. Let's not bypass it.

As we know, during the two years before the Apollo lunar flights, five American Surveyor-type automatic vehicles made a soft landing on the Moon. Here is what is written about these vehicles on the NASA website [24] (translated by the author of the book) : *"Program summary. A total of 5 units performed 6 separate chemical analyzes of surface and near-surface samples ... "*

These data were used as the basis for imitation of lunar soil samples - the author believes [7-9] . In connection with this opinion, it is interesting to get acquainted with how the prominent American specialist in the field of lunar mineralogy J. Frondel begins his book [18]:

"On July 25, 1969, the opening of the first container with rock samples delivered to Earth by the Apollo 11 crew was broadcast on national television ... When the very moment of opening the container came, the television program was

suddenly interrupted. As if a veil was hastily thrown over the disappointing sight ... ".How similar it is that at the last moment someone noticed a "blunder" and urgently interrupted the transmission. "Bloopers" are always possible, especially when earthly stones are passed off as lunar stones. And yet, at first, the risk of exposure was not very high, since at the time of the first "landing" there was not a single scientist, including a Soviet one, who would have seen the real lunar soil. But when such a soil appeared (Luna-16, 1970), and comparative studies began, signs of a fake of the American lunar soil began to accumulate **[7-9]** . And the Americans desperately needed real lunar soil.

G.L. Gayse (ill. 5a), author of *The Dark Side of Apollo*, believes that the Americans quietly brought some lunar soil to Earth using automatic stations to represent it as the soil brought by astronauts **[25]**. According to the author of the book, this happened after the first "landing" of the Americans on the moon, proclaimed in July 1969. If this were not the case, if the Americans already had real lunar soil that July, would they give the Prime Minister of the Netherlands a petrified piece of wood (Fig. 3)?

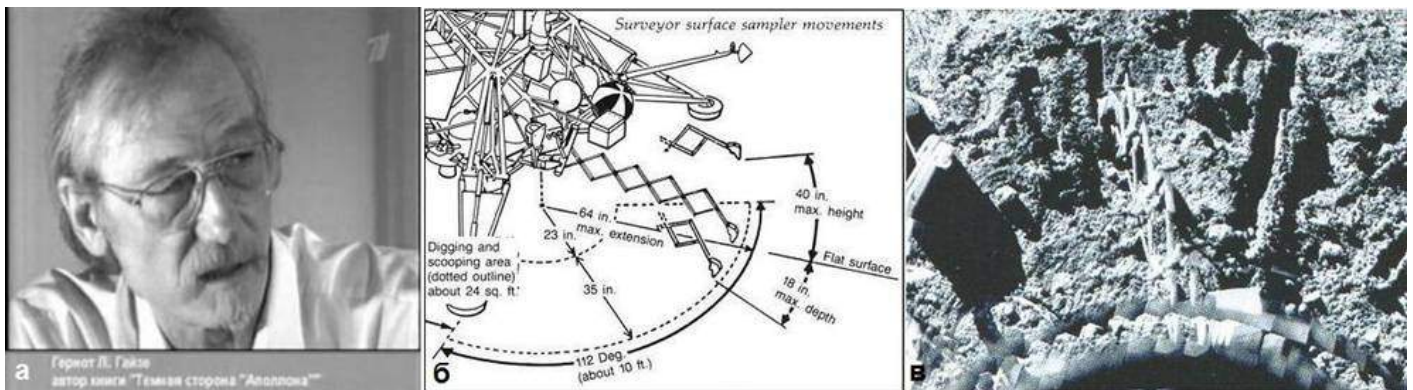


Fig . 5 . a) the Americans delivered a certain amount of lunar soil to Earth using automatic stations, says Geriot Gayse, author of the book "The Dark Side of Apollo"; **b)** from the scheme of functioning of the scoop installed on the apparatus "Surveyor-3"; **c)** furrows in the lunar surface layer dug with a Surveyor-3 bucket, the image was transmitted by an automatic TV camera

<http://history.nasa.gov/SP-480/ch9.htm> , <http://history.nasa.gov/SP-480/p138.htm> , **[27]**

In the early 60s, the Americans were already planning an automatic delivery of lunar soil to Earth **[26]**. And some facts indicate that this plan was carried out. Here are relevant excerpts from NASA's chronology of successful Surveyors **[24]**:

1966 May 30 - Surveyor 1 - Mass: 269 kg; 1967 Apr 17 - Surveyor 3 - Mass: 283 kg; 1967 Sept 8 - Surveyor 5 - Mass: 279 kg;

1967 Nov 7 - Surveyor 6 - Mass: 280 kg; 1968 Jan 7 - Surveyor 7 - Mass: 1 036 kg.

Surveyor-3 in April 1967 was digging with a special bucket in the lunar soil (ill. 5b, c) **[27,28]**. NASA claims that the mechanical properties of the lunar soil were studied in this way. But these properties can be studied with an object of any shape, even with a simple rod, while a scoop is naturally associated with scooping up soil. That is, **on "Surveyor-3", apparently, the first check of the device for taking a sample of lunar soil for future automatic delivery took place.** The operation of the bucket was monitored and controlled by an automatic television camera, which transmitted the corresponding images to the Earth.

"Surveyor-5" after landing on a command from the Earth re-started the engine, and *"Surveyor-6"* not only re-enabled the engine, but also took off by 4m **[20, 24]**. According to NASA **[24]**, this was done to study the impact on the lunar soil of the gas jet from the landing engines. But this operation could have another purpose: **"Surveyors - 5 and 6" learned to take off from the moon.**

Surveyor 7, which is very curious, was more than three times heavier than its predecessors and had about the same mass (1,036 tons) as our Luna 16, 20 and 24. And, by the way, it was also *"equipped with a grab bucket for scooping up the soil"* **[29]**.

After the landing of the Surveyor-7, the Surveyor program was officially terminated, although it was already planned to send the Surveyor-8,9,10 vehicles **[30]**. And the Americans seem to have forgotten about the task of automatically returning lunar soil samples to Earth . But what prevented the Americans from sending new Surveyors to the moon without publicity, in order to back up with even a handful of real lunar soil reports about the astronauts allegedly collected centners of lunar samples?

After all, they have already done so much in this direction. They tested a ladle controlled from the Earth on the Moon. We tried the jumps of the apparatus. There is also a lot left - the return of the soil to the Earth. But weren't NASA specialists able to do this? Yes, they lagged behind the USSR in terms of the time of implementation of some stages of the study of the Moon by automatic machines. But not much. For example, Surveyor-1, making a soft landing on the Moon, lagged behind Luna-9 by only 4 months. And the first American lunar satellite, Orbiter-1, also appeared just 4 months after the first Soviet one, Luna-10. In 1970, the USSR for the first time carried out an automatic delivery of lunar soil (Luna-16). And why, after some time, the United States could not repeat this success of the USSR?

As we now know, the surface of the Moon is mostly covered with fine dust. But it cannot be ruled out that digging in this dust, the Surveyor's scoop could stumble across and pick up a few small moon stones. From this point of view, the reports in the press **[31]** about the transfer to Western scientists of small lunar stones of several tens or even a couple of hundred grams should not be surprising. The main rocks of the Moon according to information from the geologist N.V. Lebedev. **[32]**

have a density slightly higher than 3 g / cm^3 . So a pebble weighing 200 g has a volume of only 65 cm^3 and transverse size $\sim 4 \text{ cm}$. Such a pebble will fit into a ladle. And, apparently, in order not to initiate such reasoning, the Americans preferred to their strictest critics (Soviet scientists) to transfer 29.4 g of fine lunar powder - regolith. (Say, we also have large stones, but they are not about your honor).

Links:

1. <http://science.ksc.nasa.gov/history/apollo/flight-summary.txt>
2. <http://curator.jsc.nasa.gov/lunar/index.cfm>
3. f1 "Links-2" <http://www.manonmoon.ru/book/28.htm>
- 4 . Yu. Krasilnikov and V. Yatskin. "Did the Americans fly to the moon?" <http://www.skeptik.net/conspir/moonhoax.htm> pp. 3 , 5, 85-86
- 5 . K. Gatland. "Space technology", M., Mir, 1986 (London 1982), p. 156
- 6 . <http://gosh100.boom.ru/skeptikmustdie.htm> and <http://gosh100.boom.ru/moon1.htm>
7. Yu.I. Mukhin. Antiapollo. Lunar US scam. - M.: Yauza, Eksmo, 2005, 432 p.
8. Yu.I. Mukhin. "Were the Americans on the Moon?" No. 48/345 "Duel".
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10. D. Kropotov. "Were the Americans on the Moon?" "Duel", №8 / 357
11. "Lunar Soil from the Sea of Abundance", M., Science, 1974
12. I.I. Cherkasov, VV Shvarev. Soil of the Moon), Moscow, Nauka, 1975, 144 p.
13. Soil from the mainland region of the Moon. M., Nauka, 1979, 708s
14. Lunar soil from the Sea of Crises, M., Science, 1980, 360p.
15. Cosmochemistry of the Moon and planets. M., Nauka, 1975, 764 p.
- 16 . I.I. Cherkasov, V.V. Shvarev. "Soil Science of the Moon", M., Science, 1979, p. 149
17. J. A. Wood, "Cosmochemistry of the Moon and Planets", M., Nauka, 1975, pp. 31,
18. J. Frondel. Mineralogy of the Moon. M. "Mir", 1978. p.11

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<http://www.meteorites.ru/menu/press/moonusa.html>

<http://www.epizodsspace.narod.ru/bibl/getlend/obl.html> and
<http://www.epizodsspace.narod.ru/bibl/getlend/11c.html>

20. <http://www.skeptik.net/conspir/append3.htm> - exploration of the Moon by automatic machines in 1958-76 GG

21. <http://cnews.ru/news/top/index.shtml?2009/08/28/359642#>

22. <http://bolshoyforum.org/forum/index.php?page=142#tp-comment>

23 V. Kozlovsky. [http : // news . bbc . co . uk / hi / russian / a sci / tech / newsid _3908000 / 3908693. stm](http://news.bbc.co.uk/hi/russian/asci/tech/newsid_3908000/3908693.stm)

“The USA Celebrates the Anniversary of Landing on the Moon”, 20.07.2004.

24. <http://www.astronautix.com/craft/surveyor.htm>

25 . f7 "Links-2" <http://www.manonmoon.ru/book/28.htm>

26. G.S. Khozin. "The Great Confrontation in Space" (USSR-USA) .- M .: Veche, 2001, p. 156-159

27. Yu. Krasilnikov. "The Whole Truth About Americans on the Moon." The magazine " Paradox ", No. 4, 2004, p. 10-25 (LLC "Publishing House of Rodionov"), ip5 "Links-2"

28 . [http : // history . nasa . gov / the SP -480 / ch 9. htm](http://history.nasa.gov/theSP-480/ch9.htm) and [http : // history . nasa . gov / SP -480 / p 138. htm](http://history.nasa.gov/SP-480/p138.htm)

29. <http://ru.wikipedia.org/wiki/%D1%E5%F0%E2%E5%E9%E5%F0>

30. Ya. Golovanov, "The truth about the APOLLO program ", M .: Yauza - EKSMO-Press, 2000 - 352 p. 197

This book is on the Internet:

<http://www.epizodsspace.narod.ru/bibl/biblioteka.htm> , then p. 103

31. I. I. Cherkasov, V. V. Shvarev. Soil of the Moon, Moscow, Nauka, 1975, 144 p. 100

32.[http: //supernovum.ru/public/index.php?doc=169](http://supernovum.ru/public/index.php?doc=169) at the end of the article a brief information about N.V. Lebedev

Last Modified 4/3/2011

Back on Earth

20-25 minutes

Back on Earth. Chapter 17.

Let's summarize

A conclusion has already been drawn with regard to NASA illustrations and American lunar soil. Indirect circumstances play an important role in the final conclusions. In this regard, it is interesting to get acquainted with how the Americans skillfully measured and controlled the information received in the media regarding the Apollo flights.

Total control of NASA

"NASA exercised total control in Houston. For the first time in history, the media, and, above all, television, were used to visually show the enemy his defeat in sound and color " [1].

Astronomer Richard West (ill. 1a) on the days of the Apollo 11 flight commented on the landing of astronauts on Danish television: *"We had instructions - a thick script, somewhere around 1000 pages or more. And there it was precisely scheduled what and at what point in time the astronauts were to do. We could keep track of everything in this way " [1] .*



Fig. 1. NASA's total control over television

a) **"We had an instruction of 1000 pages."**

b) registration of the German TV studio ARD on the day of the first "landing" on the moon

But can you expect everything to go according to the 1,000-page instructions when every little thing is done for the first time? This is, if we are talking about a real landing on the moon. A performance is a different matter. Then an instruction (or script) is absolutely necessary. If the actors do not strictly follow the instructions of the director, then the performance will inevitably fail. Apparently, all Western European television carefully prepared for the broadcast about the day of the first landing. Take a look, for example, at the design of one of the German TV studios that day (photo 1b): a model of the lunar module, a large lunar globe, people in "space" overalls, etc. NASA's control over Western European and (naturally) over American television practically meant control on a worldwide scale, because all other countries could only reproduce the broadcasts of American and Western European TV. Recall, for example, the statement of Academician B.E. Chertoka (Section 6): *"To watch the broadcast from the United States available to the whole world, we had to go to NII-88, where the image was transmitted via cable from the television center. The TV center itself received it **on the Eurovision channel ...**"*.

Steep turns of propaganda

Everything that we know about Apollo flights today has been achieved by quietly studying NASA's "lunar" information. And there is no better way to deprive a person of the ability to reasonably, how to bring him into an agitated state. Let's take a look at how the American media provided the hype for the first landing.

"America rejoiced, sang, danced, thundered with orchestras"



*"Cape Kennedy in July 1969 became a real Babylon. NASA has invited many congressmen, diplomats, industrialists, bankers, judges, priests to the expected holiday. About a million tourists came by themselves. There was no hotel or motel room for 75 miles around. They even drained the water in the pool and put it on the bottom of the bed. 3,500 journalists gathered at the cape. On launch day, the New York Times covered over 100 columns with Apollo 11 stories. **For the first time, color photographs were published in the newspaper...** Former President L. Johnson acted as a television*

commentator. Nobel laureate Harold Urey read televised lectures, jazz king Duke Ellington was supposed to take pauses when Apollo 11 went beyond the moon. Plus, the most popular commentators ... I didn't even have to talk about the excitement - it was in the air. America rejoiced, sang, danced, thundered with orchestras ”[2].

Fig. 2. Jubilant crowds greet the A-11 astronauts on the streets of New York.

And how they met the conquerors of the moon (ill. 2)! And with what dignity the top officials of NASA, led by the head of the lunar program B. Gilruth (right), demonstrated a container with lunar (?) Stones (Fig. 3). In short, it was an All-American holiday.

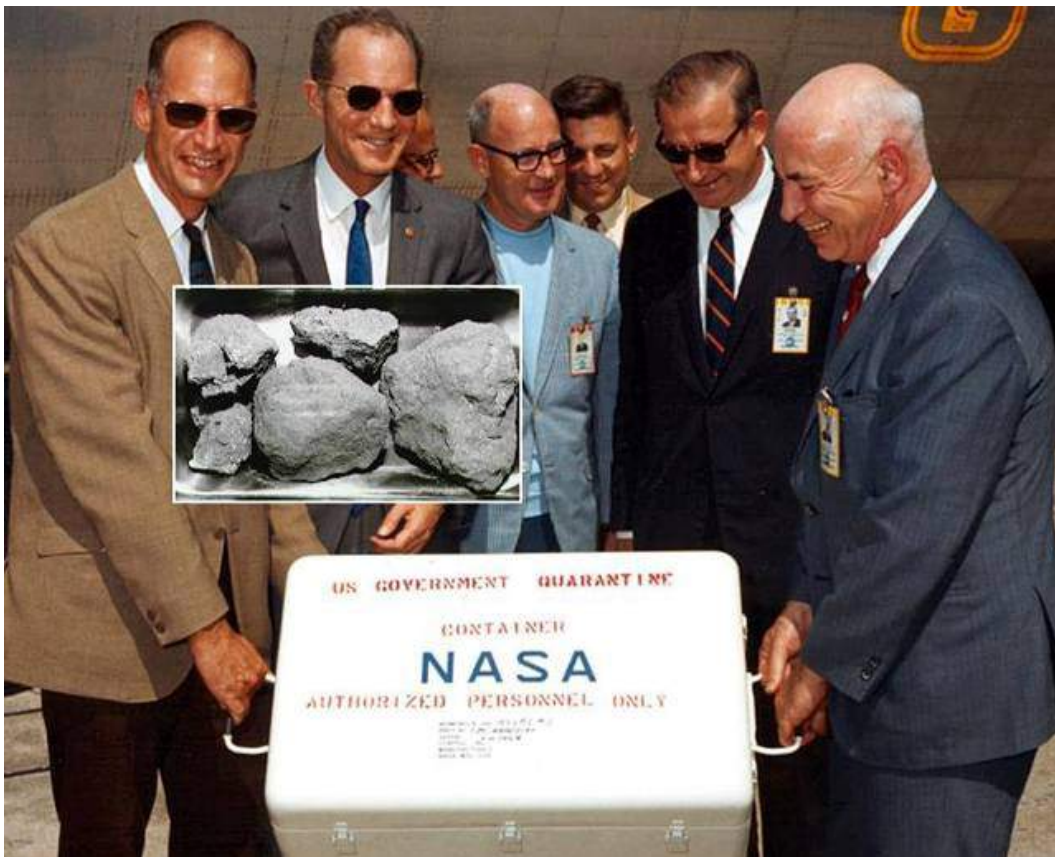


Fig. 3. Top NASA officials, led by the head of the lunar program B. Gilruth (right), demonstrate a container with lunar (?) Stones; on the insert - moon (?) stones

"Why do we need these lunar boulders?"

But suddenly, as if on cue, the American media suddenly abruptly “changed the disc”: *“How to balance the burden of national problems with a chest full of lunar cobblestones? The answer to this question was sought by the entire American press after the return of “Apollo 11. Polls showed that half of Americans do not see the point in continuing lunar expeditions.”* [2] But, if it is so important for the highest authorities to interview the population, then why did they not do this before How to spend \$ 25 billion on Apollo? President F. Kennedy in his message simply announced the decision. And no polls! And, then, what did the

Americans expect to bring from the Moon, except for cobblestones? The Americans are masters of public opinion management, and they began to prepare this propaganda spread in advance.

In early 1969, six months before the A-11 flight, the head of the manned space flight program, Dr. Müller, *“announced that budget cuts would force NASA to abandon manned space flights in three years. Similar to the earlier planned rise, now the decline was planned ”* [2]. And how can you plan so accurately if the first flight to the Moon has not yet taken place and how many more unforeseen circumstances could delay the real reaching of the Moon, and not by one month, but by years?

If, instead of a flight to the moon, it was planned, then planning a recession is simply necessary. There is a well-known expression: “the main thing in the profession of a thief is to get out in time”. And Dr. Mueller, six months before the first landing, calls the exact date for the completion of the Apollo program - in four years. And so it happened: the message about the last landing on the moon took place in December 1972.

Any important decision requires an appropriate study of public opinion. And the American media, which provided the public excitement about the A-11 flight, immediately after its completion led the company to reduce public interest in "lunar" travel. And the result was not long in coming: *“Starting with Apollo 11, there has been a sharp decline in public interest in the lunar space program ... If 3497 journalists covered the launch of the A-11, and 2226 for the A-12, only 1518 arrived at the launch of the A-13. reporters. Instead of a million tourists in July 1969 at the start of the A-11 in April 1970, at the start of the A-13, it was hardly possible to count 100 thousand ”* [2]. The sharp turn was made by public opinion under skillful management in just 9 months.

For Americans only

The Americans never tired of reminding them that they flew to the moon on behalf of all mankind. *“We choose to fly to the moon ... **for the benefit of all mankind**, ”* said US President John F. Kennedy, announcing the Apollo program on May 25, 1961 [3]. *“A huge leap **for humanity** ...”* - said Neil Armstrong. On the commemorative pennant, fixed on the lunar module A-11, it is inscribed : *“We came in peace **from all mankind** ”* (ill . 4) . *“ **For all mankind** ”* - this is the name of the famous film about the flights of "Apollo" [3].



Fig . 4 . "We came in peace **from all mankind "**

The inscription on the capsule, allegedly left on the moon on the ladder of the lunar module A-11

And why, after four years of Apollo flights, did it not occur to anyone at NASA to invite someone from the non-American part of humanity to the moon? After all, this is 90% of all humanity. How can we not remember the American Peary, who preferred to "conquer" the North Pole without unnecessary witnesses [4].

27 people, according to NASA, have visited the moon, of which 12 - on the moon itself, but these were only US citizens. Thus, only American citizens can attest to an American achievement (Figure 5).

It can be understood that at the first landing, the Americans had no time for diplomatic subtleties, but, according to NASA, there were six of these landings. And after these six flights, the Americans still had three more Saturn-5 missiles and three Apollo command modules in stock [5]. The most expensive flight to the Moon (A-15) cost \$ 445 million [2]. If we subtract from this the cost of one Saturn-5 rocket from the available stock (\$ 431 million [6]), then the organization of an international expedition under the auspices of the United States would have required a mere trifle - \$ 14 million. This is all of humanity, somehow, would have mastered.



Fig. 5. "Aliens" were not taken to the moon.

The defenders often remind that both the launch of the first satellite and the flight of Gagarin also took place without outside witnesses. Yes, this is so, but such witnesses are not required to prove their reality, since the first satellite was followed by thousands of others, the first man in space was followed by hundreds of "second" ones. They are the best proof of the authenticity of both the first satellite and the first man in space. That is why the Americans had no doubts when they "unfastened" \$ 25 billion for the Apollo program.

And here we come to an obvious question that is asked by many. And why have Americans not been flying to the moon for all these decades?

Continuation did not follow and will not be soon

Let's get acquainted with what the defenders V. Yatskin and Yu. Krasilnikov write about this [7]:

Political factors. *" The purpose of the flight to the moon was, first of all, political: to wipe the nose of the Russians. For this specific purpose, NASA has issued a specific amount. "*

Technical difficulties. *" Repeating the lunar expeditions today is more difficult than it might seem. The design documentation for the equipment has been preserved. But this does not make it any easier: all this equipment was manufactured on the basis of technologies, materials and components almost half a century ago. The production areas where the rocket stages were made (gigantic, 10 meters in diameter) have long been redesigned for other tasks. Electronic parts from which missile control systems and on-board computers were assembled have not been produced for a long time. Finally, the Saturn launch complexes have long been reequipped for shuttles. Therefore, everything would have to be done almost from scratch. "*

Financial difficulties. *"And naturally, to spend the same money on all this. There will be no new flights to the Moon until humanity (or a rich country) has a tidy sum of several tens of billions of dollars. "*

Of course, the goals pursued by both participants in the lunar race were undoubtedly political. But this does not at all exclude the continuation of this or that space program after the achievement of primary success in it. So, by launching the first satellite, the USSR "wiped its nose" on the Americans, but did it stop launching satellites after that? After 4 years, the USSR again "wiped its nose" with the United States, sending the first man into space. Why didn't this happen in the US with respect to the Moon?

Statements about the technical difficulties of repeating the achievement of 40 years ago are generally designed for a purely emotional perception and simply for an uninformed reader.

It's not clear why advocates are so sorry for 40-year-old technology? What is the need to use them? For centuries, new and new generations of people decide to build new dwellings and repair those in which they live. And who now would think of, say, to make repairs in an apartment with materials and methods even ten years ago?

The fact that the size of 10 m is called gigantic by the defenders in terms of the selection of a suitable factory premises is simply surprising. The factory premises and used with such a lshimi dimensions of yore are not uncommon, and in a wide variety of industries and in many different countries.

The sadness about computers almost half a century ago is also striking, since nowadays a simple individual computer has many times greater capabilities.

And unless in the case of a decision to make a flight to the moon, everything will have to start almost from scratch. After all, the achievements of scientific and technological progress in 40 years should be added to the previous knowledge of the United States on the technique of flights to the moon, if any? It would not have started from scratch, but from a much more advantageous position.

And the reference to the need for the same financial costs looks completely unconvincing. Even if we mean a simple repetition (that is, copying) the technique of the 60s, then even then this will require about 20 times less funds. As noted in Chapter 1, according to NASA, when developing the same lunar rocket, 95% of the funds went to research work to create the first prototype, and subsequent rockets cost almost 20 times less. If you combine old knowledge with the latest achievements, then the cost will be even less.

And, nevertheless, despite these obvious circumstances, the fact is that the winner of the lunar race has no desire to develop his "lunar" success. " Already only these absurdities clearly indicate that the US flights to the Moon in the 60s were a hoax, and then the power that intends to send its astronauts to the Moon today will indeed have to start almost from scratch.

What is the legacy of the moon race?

Concrete advances in any area of technological progress always have significant concrete consequences both for this area and for many others. Let's see what remains of humanity from the "lunar" victories of the United States and from the "lunar" efforts of the USSR.

From USA - Teflon-coated pile clasps and pans

"Pile fasteners - Velcro, Teflon non-stick coating - these are just its most famous everyday results ..." - this is how the authors of the article write about the technical legacy of the Apollo program [9] . This is the # 1 argument for all

defenders when it comes to the "lunar heritage" of the United States. No need to say - comfortable things in everyday life, but did you have to spend \$ 25 billion on this?

But about the release of US "lunar" technologies in space technology, the picture is disappointing.

Forgotten rocket "Saturn-5" together with "wonderful" engines F -1. Even its predecessor, Saturn - 1B, has been forgotten, having "silently" yielded to our more practical and more powerful "Proton".

Forgotten ship "Apollo". After the only joint flight "Soyuz-Apollo" with foreigners (Soviet cosmonauts) in 1975, he disappeared forever.



Fig. 6. Lunar legacy from the USA

(Velcro and Teflon coated pans)

From the USSR - the Proton and Soyuz rockets, the Soyuz and Progress spacecraft

But what was left after the end of the lunar race in the USSR.

The Proton rocket, designed for manned flight around the Moon, is currently the most powerful rocket in use. In particular, it was used to launch the Zvezda module - the fundamental element of the international space station [9] .

The Soyuz spacecraft and the rocket of the same name, the Progress spacecraft, a cargo modification of Soyuz, created 40 years ago, are still in the service of Russian and international programs.

"Soyuz manned spacecraft are now known all over the world. But the initial task of the Soyuz project was to fly around the moon with a man on board, and not near-earth flights. The creation of the Soyuz spacecraft laid the foundation for the development of astronautics for decades to come, and the design principles opened up the possibility of subsequent upgrades and modifications. "Soyuz" and their cargo modification "Progress" in practice have proven their advantages as a transport and rescue vehicle in near-earth orbits "[9] .

Quite recently, "the head of the American Space Agency (NASA), Charles Bolden, in an interview with the Russian Space magazine, recognized the Russian Soyuz launch vehicle and the manned spacecraft of the same name as the most reliable in the world. This was reported on October 30 by the Interfax agency. "This is probably the most reliable space system in the world today." The head of NASA said that "Unions" should be a matter of national pride for Russians. However, Bolden named the American shuttle the best ship. "Since I only flew on the shuttle, I will still support the shuttle," he said. However, the head of NASA reminded reporters that in a year the shuttles will complete their flights, and the support of the international space program, in fact, will remain with the Soyuz.



Ill.7. Lunar heritage of the USSR

So, pile fasteners and pans with Teflon coating from the United States, and the Proton and Soyuz rockets, the Soyuz and Progress spacecraft from the USSR. The following fact is also curious.

From 1967 to the present time, Russia (then - the USSR), thanks to the presence of Proton rockets and Soyuz spacecraft, has been able to carry out a manned flight around the Moon. And the United States does not have such technology. True, one can expect that, thanks to the installation of Soviet (Russian) engines on American missiles, the necessary carrier will soon appear in the United States. But this will again be a legacy from the USSR.

Some very different-scale traces of the history of technical progress remained after the lunar race from the winner and from the loser. This information is compounded by a number of other doubtful facts analyzed above . All this is enough to draw the final conclusion of the first part of the book :

NASA's evidence for American astronauts staying near and on the moon is inconclusive.

1 .ph1 "Links-2"

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6. NASA <http://www.astronautix.com/lvs/saturnv.htm> - the cost of the C-5 rocket

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9. Encyclopedia "Cosmonautics". Under the scientific ed. Academician B.E. Chertok. M.: Avanta +, 2004, p. 126, 287

10. <http://oko-planet.su/science/sciencenews/22364-nasa-priznalo-raketu-i-korabl-soyuz-samymi.html>

Fig. 1. f1 "Links-2"

Илл.2. <http://www.hq.nasa.gov/office/pao/History/alsj/a11/ap11-69-H-1421.jpg>

Илл.3. а) <http://www.hq.nasa.gov/office/pao/History/alsj/a11/ap11-S69-39984.jpg>

б) <http://images.jsc.nasa.gov/lores/S69-45516.jpg>

Илл.4. <http://www.hq.nasa.gov/office/pao/History/alsj/a11/a11.plaque.jpg>

Илл.5. <http://www.hq.nasa.gov/office/pao/History/alsj/a410/ap8-S68-50265.jpg>

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End of the first part

Versions, opinions

49-62 minutes

Versions. Chapter 18.

Automata in the role of astronauts

Section 1:



"Surveyors" - helpers on the moon

Fig. 1. The Surveyor apparatus for soft landing on the Moon and delivery of various instruments and devices.

(<http://nssdc.gsfc.nasa.gov/nmc/masterCatalog.do?sc=1968-001A>)

Sharp turn of NASA propaganda towards Surveyors

1963: "the final selection of potential landing sites will be based on the Surveyor program."

As described in the Introduction and Chapter 4, three years before the "lunar" "Apollo", the Americans launched automatic soft-landing vehicles of the "Surveyor" type on the Moon (Fig. 1) [**1-5**]. In total, from June 2, 1966 to January 10, 1968, five of the seven sent Surveyors successfully landed: Nos. 1,3,5,6,7. They delivered various research instruments to the moon and transmitted their research data by radio. Head of the department of manned missions NASA Verne The the C . Fryklund in 1963, three years before the lunar landing of the first Surveyor, stated the following [**6**] :

«1963 November - Procedure for determining Apollo landing sites - . Nation: [USA](#). Program: [Apollo](#). Spacecraft: [Surveyor](#). Verne C. Fryklund of NASA's Manned Space Sciences Division advised Bellcomm of the procedure for determining Apollo landing sites on the moon. The Manned Space Sciences chief outlined an elimination for the site selection process. For the first step, extant selenographic material would be used to pick targets of interest for Lunar Orbiter spacecraft

photography. After study of the Lunar Orbiter photography, a narrower choice of targets then became the object of Surveyor spacecraft lunar missions, with final choice of potential landing sites to be made after the Surveyor program. The selection criteria at all stages were determined by lunar surface requirements prepared by OMSF. Fryklund emphasized that a landing at the least hazardous spot, rather than in the area with the most scientific interest, was the chief aim of the site selection process».

Here is an abridged translation of this message by the author of the book:

*“November 1963. « Verne The the C . Fryklund commented on the procedure for selecting Apollo landing sites. The first step is to use the extensive selenographic material to select subjects for the Orbiters to photograph. ... The task of narrowing the choice of targets (landing sites) will be entrusted to Surveyors, so that the **final selection of potential landing sites will be made based on the results of the Surveyors program** .*

Hence it followed that the Apollo would land on the sites previously tested by the Surveyors. Briefly, this position can be formulated as follows: "Surveyors" - scouts of the "Apollo". Everything is logical.

1969: 9 out of 10 Apollo will land very far from Surveyors

But when 1969 comes - the year of the decisive storming of the moon, different voices are suddenly heard from NASA headquarters. The first message known to the author arrives on June 3, 1969, just 1.5 months before the launch of Apollo 11 with its announced first landing of astronauts on the moon [**7**] :

«1969.06.03 - Proposed landing sites for Apollo 12...*The MSC recommendation was to land at either the Surveyor III or Surveyor I site if Apollo 11 landed in either Apollo site 2 or site 3.*

Earlier, on January 10, Benjamin Milwitzky, NASA Hq., had said, "There appears to be much merit in landing close to one or more Surveyors." He pointed out that "reexamination of disturbances in the lunar surface created by Surveyor landings, the study of unique lunar features seen by Surveyors, and the return to Earth of objects identified by Surveyors as scientifically important can greatly enhance the scientific and technological value of subsequent Apollo landings. . . .»

The content of the second paragraph is especially interesting in this message. In the translation of the author, it sounds like this:

“Earlier on January 10 (1969), Benjamin Milwitzky of NASA headquarters said,“ It would be great if the landings took place near one or more Surveyors. ” He emphasized the important scientific and technological value that would have for subsequent landings, rechecking the disturbances caused by the Surveyors landings, studying the unique lunar features seen by the Surveyors, and returning the objects identified by the Surveyors to Earth ... ”.

Do you feel the difference? Now, if we sit next to any "Surveyor", it will only be out of curiosity about "indignation". Did the five successful Surveyors reported by NASA manage to scout suitable sites for the six later announced astronaut landings (A11, A12, A14, A15, A16, and A17)? Or did they say that the whole moon is so safe to land that wherever you want, land there? Something is hard to believe. After all, not even every platform on which the light Surveyor landed is suitable for landing a 15-ton lunar module. There should be more reconnaissance Surveyors than actual landing sites. So it seemed at first it was supposed. It is not for nothing that *"in the period from 1963 to 1966, NASA planned to carry out 17 launches of the Surveyor spacecraft"* [5]. This is 7 more launches than the maximum number of planned landings named by NASA (from A-11 to A-20, see below) and 11 more than the number of six alleged landings. So, it would seem, send and send the Americans to the moon new Surveyors. And , for someone, but the "pioneers" of the Moon - astronauts A-11 - the help of "Surveyors" - reconnaissance is especially needed. But from the second statement, indifference to the intelligence received from the Surveyors still emanates. And 5 days after the "return" of the A-11 astronauts "from the moon", this idea was expressed in an even clearer form. NASA has published a timeline for the Apollo program [8] :

Timeline - timeline for the Apollo program (1969 July 29, NASA)

Flight Launch Plans Tentative Landing Area

Apollo 12 November 1969 Oceanus Procellarum lunar lowlands

Apollo 13 March 1970 From the Mauro highlands

Apollo 14 July 1970 Censorinus- crater highlands

Apollo 15 November 1970 Littrow volcanic area

Apollo 16 April 1971 Crater Tycho (Surveyor VII impact area)

Apollo 17 September 1971 Marius Hills volcanic domes

Apollo 18 February 1972 Schroter's Valley, riverlike channel-ways

Apollo 19 July 1972 Hyginus Rille region-Linear Rille, crater area

Apollo 20 December 1972 Crater Copernicus, large crater impact area

The plan itself does not require a detailed translation, even if some of the readers do not know English. The main thing in it is that of the 9 mentioned "Apollo" only one, in bold, should sit next to the old "Surveyor". The rest were to sit hundreds of kilometers from the nearest "old" Surveyor. And it is not so important that in the future the scenario of "landings" will go differently. With this plan, NASA clearly indicated that the Surveyors with their reconnaissance were no longer of interest to the Apollo. Considering that just a week before the publication of this plan, the already "landed" Apollo 11 also ignored the closest old Surveyor 5 (see below), then the total number of Apollo indifferent to Surveyors will reach nine. Thus, in 9 out of 10 completed and planned "landings" NASA decided to ignore the experience of the Surveyors scouts. What could have happened before the launch of A-11 (July 16, 1969) that, judging by reports from June 3 and July 29 of the same year, caused such a sharp turn in NASA's position?

Why Apollo 11 "landed" 30 km away

from "Surveyor-5"?

A curious diagram in the magazine "A Look "

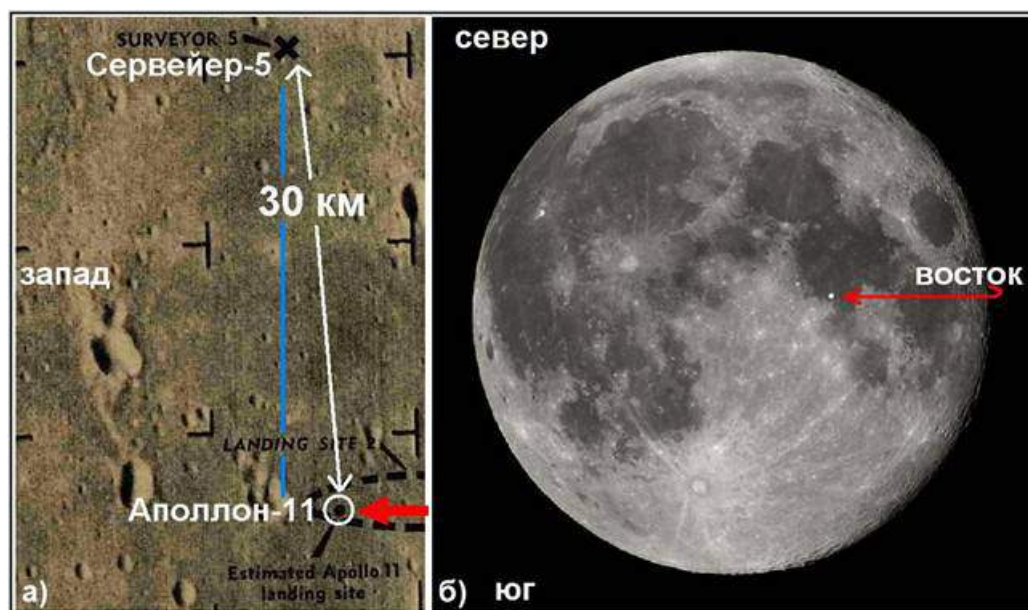


Fig. 2. Apollo 11 according to NASA landed 30 km from Surveyor 5

a) "A Look ": lunar landing place "Surveyor 5" and the title landing place "Apollo 11"; the red arrow indicates the direction of movement of the A-11

b) the author's scheme: on the disk of the Moon, the entire area "a" is placed within the white point

Guess the probable cause of the rotation, along with a comparison of the resulted NASA communications help scheme landing site "Apollo 11", which was

published in August of 1969 "in the special issue of the journal A the Look " **[9]**, which was released on the "hot pursuit" flight of the A-11 (Plate .2a). According to this scheme, A-11 villages 30 km south of Surveyor-5. There are no explanations for this fact in the magazine, although the fact itself is very curious.

Let's think about what happened. At first, the lunar ship makes a fairly accurate approach to the Surveyor 5 location. This can be seen from the diagram in Fig. 2b. Shown here is a small white dot about 1/110 of the Moon's diameter ($\approx 3500\text{km}$). That is, on the ground, its diameter is 30 km and the entire area shown in Fig. 2a fits in it. It is twenty-five thousand times smaller than the hemisphere area of the visible hemisphere of the Moon.

Accidental hitting such a tiny point on the scale of the Moon is practically impossible, so the new guest flew exactly to meet with "Surveyor-5", but eventually landed 30 km to the south. Perhaps the astronauts saw something dangerous around Surveyor 5? However, what can be seen 30 km away?

If we proceed from the previous NASA ideology ("Surveyors" are scouts for "Apollo"), then there was no benefit from the "Surveyor-5" reconnaissance, since the A-11 sat down so far from the explored site. But even according to the new NASA course (*"to study the disturbances produced on the lunar surface by the Surveyor landing..."*), nothing worthwhile comes out either: from a distance of 30 km (for an astronaut on the Moon it is 15 distances to the horizon), disturbances cannot be studied.

It turns out that there was a bobble. But was it not the responsibility of the lunar module pilot to correct the ship's course? It is unlikely that NASA had such a train of thought, and therefore it is not surprising that there is no explanatory diagram like Figure 2b in A Look .

It wasn't Apollo 11 that landed on the moon, but an automatic Surveyor X?

In 1963, the chances of a successful lunar landing were rosy, and NASA did see the Surveyors as scouts for the upcoming Apollo landings. This confidence is reflected in the 1963 statement **[6]** . But in 1969, NASA was apparently already on the path of a hoax. In July 1969, after the launch of Apollo 11, apparently, the landing was to be played for the first time.

And a lot becomes clear if a ship, not a spaceship controlled by astronauts, flew to a meeting with "Surveyor-5" , but a new automatic apparatus. Let's call it conditionally "Surveyor-X". And he sat on the moon not in July 1969, but ahead of time. At least 1.5 months before the planned "launch to the moon" of Apollo 11, after which the first message was published about a change in NASA's view of the Surveyors. And, perhaps, even earlier - in January of the same year, to which B. Milvitski's statement was attributed **[7]** .

If the new apparatus sat down next to the Surveyor 5, then the old line (Surveyors - Apollo scouts) would not have suffered. Indeed, look how all right will

turn out in this case.

After the Surveyor-X landed on the moon, NASA is verifying its accurate landing using a laser ranging reflector. This mission could, in particular, be performed by the Lick Observatory of the University of California [10]. The presence of radio communication with the new messenger and the operability of all his systems and devices are also checked. The rest of humanity will not know about this preparation. After all, it is practically impossible to intercept the "test" radio exchange between "Surveyor-X" and the Earth, without knowing at least approximately its time and precisely - the frequency of transmissions. An alien observer will also not detect a reflector that appears on the moon until NASA wishes it. The fact is that in order to detect the reflector, it must be illuminated from the Earth with a powerful and necessarily narrow laser beam (otherwise no power will be enough). A narrow beam illuminates only about one millionth of the lunar disk, so the probability of hitting the reflector by shooting at random is very small. It's like looking for mushrooms in the forest while blindfolded. And therefore, the delivered reflector can, as long as necessary, "wait" for the hour of its publicity, which is determined by NASA.

In due time, mankind is notified of the first launch on the Moon (with a landing!), And at the cosmodrome in front of tens, if not hundreds of thousands of witnesses, an enchanting launch of the Apollo-11 rocket is made. True, it is accompanied by a complete radio jamming of Soviet intelligence vessels (Chapter 20), trying to trace where this missile actually flew. But mankind does not know about this nuance.

After three days, set for the flight to the Moon, NASA will report that astronauts have landed on the Moon next to the old Surveyor No. 5, which has been sitting on the Moon for a long time. And it will publish the exact coordinates of the landing site, which practically coincide with the long-published coordinates of the Surveyor 5 landing site. That is, everything, as promised by NASA back in 1963, - *"so that the final choice of possible landing sites (Apollo) was made based on the results of the Surveyor program ..."*. NASA announces that astronauts have installed a laser reflector, among other things. Anyone who has the technical capabilities can shoot a laser beam at the indicated place and, using the reflected beam, make sure that this reflector is present. And who, under the thunder of victorious reports of all Western media, would come up with the idea that the reflector was on the moon without any participation of astronauts? (We will discuss where the astronauts actually could be at this time in Chapter 24). In the case of an accurate landing of the new assault rifle, it would be possible to "organize" a walk for the A-11 astronauts to the Surveyor-5. The "meeting" itself would be filmed in the studio, but the proof of its "authenticity" would be the reflections of a reflector lying not far from Surveyor 5.

In order for the entire staging to go exactly like this, the new machine gun flew to the moon long before the start of the A-11. He was supposed to enter

equatorial orbit around the Moon , land near Surveyor 5 and deliver instruments and a laser reflector (Fig. 2b).

But the new envoy sat down exactly in longitude (see the blue line), and deviated in latitude by 30 km . This is forgivable for a machine gun. So, in 1964, "Ranger-7" hit the moon 20 km from the target point, "Ranger-9" in 1965 - 6 km [11]. Apparently, by directing the Surveyor-X to the seat of the Surveyor-5, NASA specialists hoped to improve the accuracy, but there was a miss of 30 km. The previously announced strategy (Surveyors - Apollo scouts) did not work. And then the NASA statement of June 3, 1969 [7] **appeared** , as the first touchstone, and after it, as the final "cross" on the "scouts" - the schedule of July 26 [8].

Was Surveyor 7 the last one?

“Perhaps,” an attentive reader will say, *but according to NASA, the last Surveyor (# 7) landed on the moon in January 1968 , that is, almost 1.5 years before the A-11 flight ”* [1-4] ? That is so, but after all, NASA did not report a lot of things. Including the fact that very much of the evidence of the "landings" could belong to machines similar to those that the Americans sent in dozens to the Moon, around the Moon and to the Moon in the years preceding the "Apollo" (Introduction and Chapter 4).

The then head of the Jet Propulsion Laboratory (Pasadena, California), which developed the Surveyors, Professor W. Pickering, complained that there was not enough money to launch the spacecraft Nos. 8,9,10, which allegedly went to Apollo [12] . But if the Surveyors really were scouts for the Apollo, then they do not save on reconnaissance, otherwise you can lose the entire army. In addition, the total cost of launching all three Surveyors was a very small fraction of the cost of the Apollo program [12] . And why, at the same time, the same laboratory was conducting large-scale studies of other planets using no less expensive apparatus [13] ? Wasn't the Honorable Professor casting a shadow over the fence with his complaints?

Three months after the landing of Surveyor 7 on April 4, 1968, the tests of Saturn 5 ended in complete failure. Hopes for a real "landing" did not come true. In his book How NASA showed America the Moon, Ralph René recalls an excerpt from an American proverb: *“If you can't do it, imitate”* [14.1] . But because of the named blunder, the now legend about "Surveyors" - scouts of the landing sites did not pass. But they could do a lot for the hoax. Of course, in complete secrecy from the public. The presence of several cosmodromes [15] made it possible to carry out secret launches of Surveyors practically and when, and anywhere. According to [16] In the year of Apollo 8 alone, every second launch in the United States was secret and, on average, once every 10 days, a secret space object was launched.

The following coincidence is curious. According to Professor Pickering, there was not enough money to launch **three** new Surveyors. And so, during 1969-1972.

exactly three American laser reflectors appeared on the Moon (Fig. 3), allegedly delivered by astronauts [**17**].

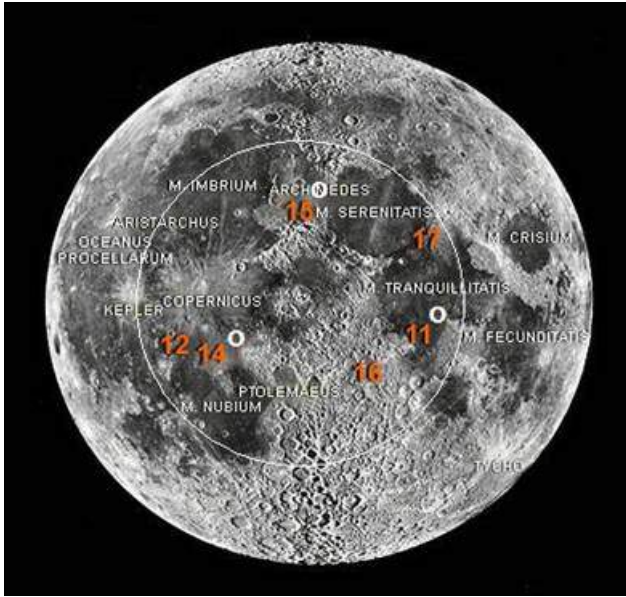


Fig. 3. Places on the Moon where American astronauts allegedly landed as a result of the Apollo program (1969-1972). (
<http://www.lpi.usra.edu/lunar/missions/apollo/>)

The white circle drawn by the author **is the** approximate field of view of the long-range space communications antenna. With such accuracy, she could establish the location of the radio transmitter on the moon.

The letter "o" is marked by the author of the "Apollo", allegedly leaving reflectors on the moon . Sending Surveyors-Xs to these locations was mandatory.

Does this not mean that it was not the astronauts, but the Surveyors Nos. 8, 9 and 10 that delivered these three reflectors to the Moon? And the complaints of the respected professor were required in order to explain to the public why the reports of the Surveyors' landings had stopped. So, according to the author's version, the **reflectors and other devices and devices necessary to simulate the activities of astronauts on the Moon were delivered to the Moon by "Surveyors-X", and they were delivered in advance .**

What the Surveyors could do to simulate the landings

Delivery of laser reflectors

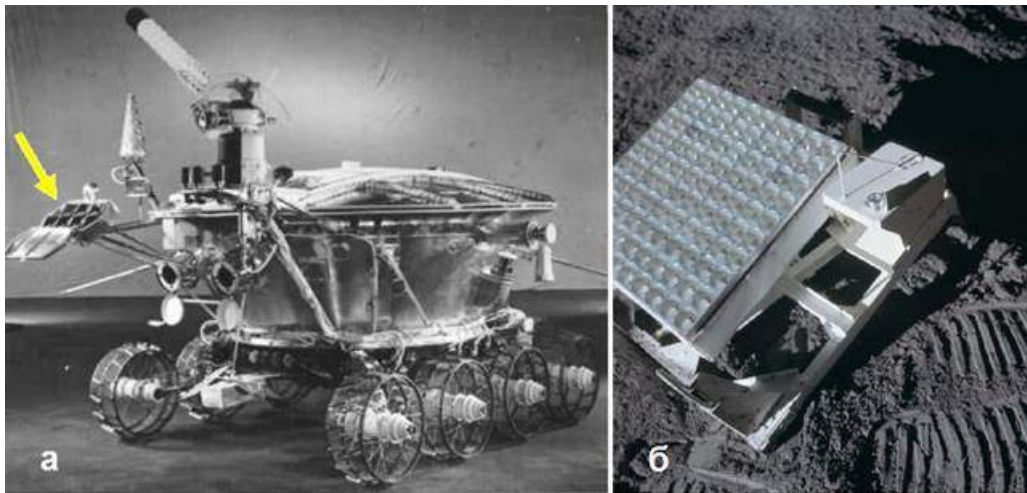
H Ashi Automatic "Lunokhod-1" (ill.4a) and "Lunokhod-2" in the same years were taken to the Moon laser reflectors, showing that such a task is quite capable machines, and does not require people stay on the moon.

The first "Lunokhod" *"was delivered to the lunar surface on November 17, 1970 and worked on its surface until September 29, 1971. (He) traveled 10 540*

m, transmitted 211 lunar panoramas and 25 thousand photographs to the Earth ” [18] .

"On December 5 and 6, 1970, at the Crimean Astrophysical Observatory, using a 2.6-meter telescope, successful experiments were carried out on laser ranging of the lunar surface in the area of the lunar rover parking lot (Pravda No. 345 (19123) dated December 11, 1970)" [10] . And 40 years later, on April 22, 2010, Lunokhod-1 was again “found on the lunar surface by Tom Murphy and a group of scientists who sent laser pulses from the Apache Point Observatory telescope in New Mexico” [18] . So the Soviet reflectors are still lying on the Moon, but the USSR never tried to connect the appearance of its laser reflectors on the Moon with the "landings" of Soviet cosmonauts.

NASA, on the other hand, made the appearance on the Moon of three American laser reflectors (Fig. 4b) one of the main proofs of the alleged landings. Although it is highly likely that NASA has entrusted the delivery of the reflectors to the Surveyors - X.



Ill.4.

a) "Lunokhod-1" with a reflector (http://upload.wikimedia.org/wikipedia/commons/2/2b/Lunokhod_1.jpg)

b) a reflector allegedly delivered to the moon by astronauts A-14 (<http://www.hq.nasa.gov/office/pao/History/alsj/a14/AS14-67-9385.jpg>)

Delivery of electronic devices

NASA also reported that the astronauts left a number of electronic devices on the moon. They worked for a long time after the return of the astronauts "from the moon". But, as we know, the delivery of such devices to the moon was quite feasible for automatic machines. Already "Surveyor-1" had a payload of 60 kg for the delivered devices [1-4]. And in the years of the alleged hoax even on such a "firstborn" it was possible, in addition to the reflector ($\approx 10\text{kg}$), to install more than one additional electronic device. Although the Americans do not report this,

the Surveyors' payload appears to have increased over time. This is evidenced, for example, by the fact that the landing mass of the last vowel of "Surveyor" (No. 7) was 3 times greater than the mass of the "firstborn" [2]... And this already corresponds to a payload of 180 kg. So "Surveyors-X" could well carry many other devices and devices along with reflectors.

Broadcast of radio reports "from the Moon" on behalf of astronauts

Each "Surveyor" was necessarily equipped with radio equipment. Without her, he would be just a piece of metal. She received radio commands from the Control Center, and in response, a varied stream of radio information went to the Center. It included a "report" on the receipt of the command and the results of its execution. The machine regularly sent to the Center information about the state of its devices and devices, the results of their work, and much more. Compared to this complex work, retransmission of a signal, that is, simply re-emitting it in the opposite direction, is a simpler operation in which the complex of other electronic devices does not participate.

Of course, such an operation also requires preliminary approbation. But the presence of people on or near the moon is completely optional. For example, Soviet cosmonauts, without flying anywhere from the Earth, talked to the Earth through the automatic spacecraft Zond-4 (September 1968) and Zond-6 (November 1968), which were at that time in the vicinity of the Moon. For the first time, the voices of P. Popovich and V. Sevastyanov sounded from the moon. ***While in the Evpatoria flight control center, Pavel Popovich and Vitaly Sevastyanov and for six days negotiated with the MCC through the Zonda-4 repeater, simulating a flight to the Moon and back. The simulation turned out to be so plausible that after overhearing them, NASA specialists initially decided that the Soviet cosmonauts were flying to the Moon*** (see introduction) .

Nowadays, cosmonaut A. Leonov often speaks on TV, assuring that the Americans were on the moon. And not forgetting to mention that "we" listened to their voices from the moon. It is a pity that at the same time he does not remember that more than 40 years ago, in November 1968, the clear speech of the young Alexei Arkhipovich was carried to the Earth from the Earth-Moon path through the Zonda-6 repeater from a distance of 250,000 km to the Earth. And at that time he was in the same Evpatoria. Here are the relevant entries from N.P. Kamanina [19] :

"11th of November. Tyura-Tam - Evpatoria. On the IL-18 plane we flew from the cosmodrome to the Crimea. Now all the cosmonauts who are preparing to fly around the moon (Leonov, Bykovsky, Popovich and others) have gathered here.

November 12. At 4 o'clock in the morning, the senior at the command post from the Air Force, Alexei Leonov, reported: "I conducted two communication sessions with the L-1 ship - the audibility is good, although it was at a distance

of 250 thousand kilometers from the Earth. In one second my voice reached the ship and in another second it returned to Earth. "

The Americans have never been among the laggards in the field of radio engineering, and therefore they had all the technical capabilities to organize reports of astronauts "from the moon" without any landing. With the help of the same Surveyors-X.

Automatic repeaters on the path "Earth-Moon and back"

Not needed

Many readers wrote to the author that for the Americans, for their peace of mind, it was not enough to deliver the Surveyors-X to the moon ahead of time. They also had to simultaneously with the launch of the Apollo launch to the Moon along a hypothetical flight path of astronauts other automatic vehicles, whose task would be to broadcast imaginary conversations of astronauts with the MCC from this very route. And the "return" of astronauts "from the moon" also had to be provided with similar automatic broadcasting.

In principle, such a solution is technically feasible. What prevented NASA, which by that time had sent dozens of light vehicles to the Moon, from secretly sending another or two light vehicles with a single relay function to the Moon ? But, most likely, this was not required of the Americans either. The fact is that the USSR did not conduct any tracking (neither optical, nor radio) of the Apollo flight along the Earth-Moon route (Chapter 21). And examples of the fact that the Americans received from the USSR from some well-wishers very private information about what was being done (or not done) in the USSR in the framework of the lunar race were quite enough **[20]** .

Real broadcast of "live" TV programs "from the moon" is not needed

Even before the Apollo flights, American lunar automata transmitted to Earth many good photographs of the lunar surface, taken from a distance (Rangers, Orbiters) and from the surface itself (Surveyors). Surveyor 1 alone submitted more than 11,000 photographs according to NASA **[1]** . For example, Figures 5-7 show three sequential images from Ranger-9, Orbiter-2 and Surveyor-7.

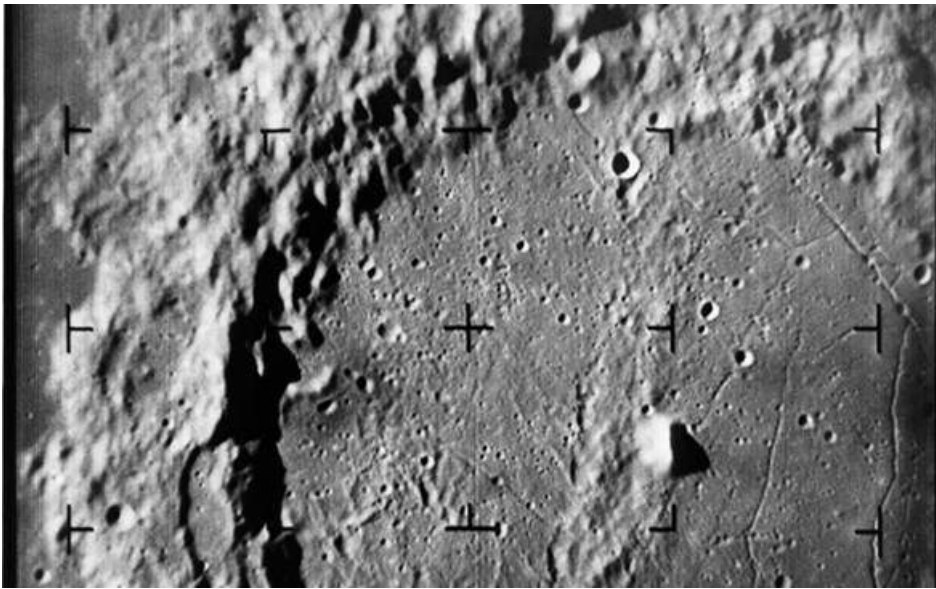


Fig. 5. Image transmitted by Ranger 9, 1965. (<http://ilewg.lpi.usra.edu/resources/ranger/catalog/9/A/>)



Ill.6. Image of the Copernicus crater, transmitted by the satellite "Lunar Orbiter" - 2, 1966.

(http://nssdc.gsfc.nasa.gov/imgcat/hires/lo2_m162.gif)

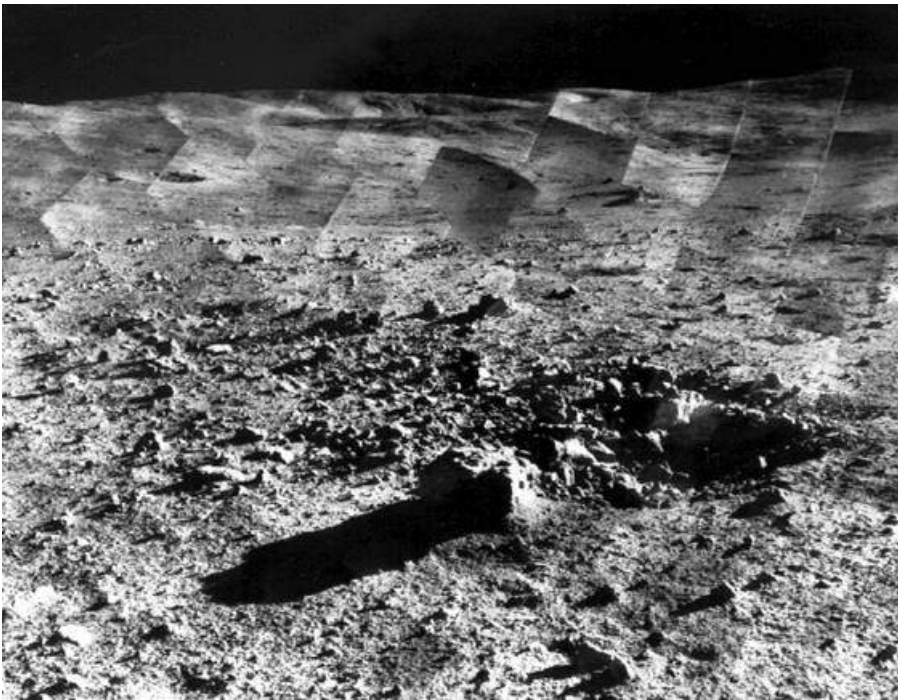


Fig. 7. Image transmitted directly from the lunar surface by Surveyor 7, 1968

(<http://nssdc.gsfc.nasa.gov/planetary/lunar/surveyortycho.gif>)

When we say "snapshot", "photography" in relation to the American lunar automata, one should not forget that all these images are transmitted to Earth by radio waves, that is, these are television images. But these were static images. Therefore, the words "snapshot", "photography" closely reflect their essence.

Could the American lunar machines transmit from the Moon a high-quality "live" TV report, that is, a moving image? But, we emphasize, high quality! Chapter 4 shows that no, they could not. The most that one could count on from them was a fairly high-quality (see Fig. 5 and Chapter 4) slideshow of black-and-white images with a change of frames every 5 seconds. But after all, NASA already at the first "landing" showed supposedly live TV broadcasts from the Moon: "an astronaut makes the first step to the Moon", "astronauts are setting a flag on the Moon", etc.

Yes, NASA claims they were TV broadcasts from the moon. However, look again at the footage from these "TV reports" ("Life"). One of them was shown in chapter 9. Here is another of the first live "TV coverage" "From the Moon" (Fig. 8).

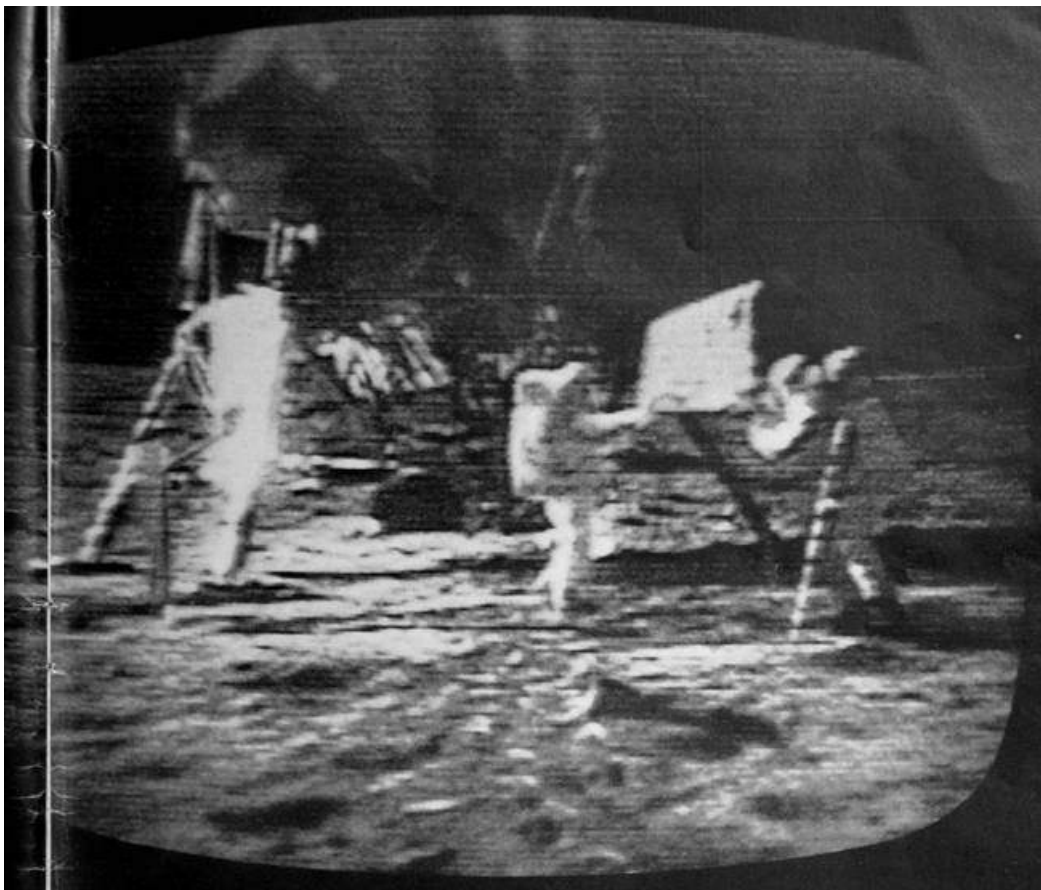


Fig. 8. Life Special , August 1969: Apollo 11 astronauts plant the American flag under the supervision of an automatic television camera installed by them. A live image, allegedly transmitted directly from the moon.

What in these blurry images can convince that the action is taking place on the moon? Such "action" can be filmed in any studio. And this was clearly demonstrated by the English filmmaker A. Stewart (Chapter 9).

Unsurprisingly, NASA did not allow the television companies broadcasting these "lunar" TV broadcasts from the Mission Control Center around the world to connect directly to the cable containing the TV signal itself. Here is what Ralph Renee writes about this **[14.2]** :

"As it turned out, NASA insisted that TV studios allowed to broadcast should shoot from a giant screen in the MCC hall, that is, broadcast an enlarged image ... the image became coarse, inexpressive and blurry ... Why NASA decided to use the "image image" scheme if you could just plug in the cables and broadcast directly, avoiding the distortion of the "original" by optical zoom? Oversight? Incredible stupidity? Or maybe the dog is not buried there at all? "

In general, NASA has done everything possible so that the live TV frames, allegedly received from the Moon, would be seen by humanity as cloudy as possible. And if you really can't figure it out, there's nothing to complain about. But doesn't these efforts to degrade the quality of TV broadcasts "from the moon" indicate that NASA had something to hide in these "live" broadcasts? Is it not the

fact that they were not conducted from the moon? And if so, then there was no need to master "Surveyors-X" "live" TV programs from the Moon.

At a minimum, three Surveyors-8,9,10 would be enough for all six Apollo

And how many of these Surveyors-Xs are needed to support the broadcasting of astronauts supposedly from the Moon? Minimum - three, according to the number of abandoned reflectors. That is, the very three devices Nos. 8, 9 and 10, which, according to Pickering, were allegedly canceled, would have been enough. "How so? - the reader may ask, after all, according to NASA, six "Apollo" landed on the moon "?

Two factors contributed to this "economy":

First, the space machines of that time possessed a large service life in time. The same "Surveyor-1" kept in touch with the Earth for about six months [**1**], and spacecraft, created in the same Jet Propulsion Laboratory for flights to distant planets, kept in touch with the Earth for years [**13**]. This allowed one Surveyor-X, having dissuaded for one Apollo, to patiently wait for the "arrival" of the next.

Secondly, the resolution of the then radio antennas for distant space communications did not exceed a quarter of a degree in angle, which approximately corresponds to half of the visible disk of the Moon (see the light circle in Fig. 3). This allowed one and the same "Surveyor-X" to speak for the "Apollo", "landed" hundreds of kilometers apart. You cannot control this distance from Earth by radio means.

If, for example, Surveyor-8 delivered a reflector for the A-11 landing, then it could broadcast for both Apollo 11 (July 1969) and Apollo 12 (November 1969). From the Earth they will not understand that the radio voices in both cases come from the same place. And the reflector was not provided for in the A-12 landing scenario, so nothing can be checked.

A-14 (February 1971) "arrived" next to A-12 on the Moon. This act again provided for a reflector. Suppose it was delivered by Surveyor 9. Behind the A-14 in late July - early August 1971, the A-15 "landed" on the moon and allegedly also laid out a reflector. In fact, Surveyor-10 might have been good enough for that. And after A-15, A-16 (April 1972) and A-17 (December 1972) "landed" on the moon. For both, no reflectors were provided. This means that there was no urgent need to send two more Surveyors-Xs. Voices "from the moon" could be provided by the same repeater "Surveyor-10".

So it was possible to get by with just three Surveyors-Xs to broadcast reports "from the moon" on behalf of all six "landed" Apollo. Of course, this is a tough minimum. And if necessary, the United States (not a poor country) could well send to the moon one or two additional simple repeaters. Fortunately, their cost is "a penny" against the background of 25 billion spent on the Apollo program.

Apollo 12 astronauts' visit to Surveyor 3 is an unsubstantiated record

Since the complete oblivion of the old Surveyors could raise undesirable questions, according to the schedule NASA decided to simulate the scene of the astronauts "visiting" one of them. This role was ultimately assigned to the A-12 astronauts.

According to NASA, the A-12 "landed" about two hundred meters from the "Surveyor-3", so that the astronauts were able to visit the "veteran" (Fig. 9).



Ill.9.

A figure in a spacesuit near the Surveyor-class spacecraft is designed to convince us that Apollo 12 has landed next to Surveyor 3.

(<http://grin.hq.nasa.gov/IMAGES/SMALL/GPN-2000-001316.jpg>)

Amazing accuracy. And it would not be superfluous to confirm it. It would seem that, gentlemen astronauts, take out the laser reflector from the trunk, put it on the lunar surface: the laser location will confirm that a new spacecraft has indeed landed next to the Surveyor-3. Of course, this would not remove the question of what kind of apparatus it was. But that would be a step towards evidence. However, keeping in mind the famous 30 km miss, NASA could not risk a second time. And NASA reported that the A-12 did not deliver a reflector to the moon. So what reason do we have for believing that anything has landed near Surveyor 3, not to mention the landing of astronauts? In confirmation of the fact of such a "historical" meeting, we are offered only another "lunar" picture of Fig. 9. And we learned enough about the price of these "moon" pictures in the first part of the book.

And here it is pertinent to recall that the "descent" of A-12 to the Moon was depicted by "cartoons" (Chapter 8), that all that mankind was content with at that moment were the "cheerful" radio voices of astronauts. That astronaut A-12 A. Bean caught a cold in circumlunar orbit (Chapter 3). (Apparently from the solar wind). And the painful condition can only be attributed to. That on the "Moon" the astronauts had a television camera failed, and there was "no spare camera", so

that *"the Earth did not see ... neither the astronauts, nor the lunar landscapes"* (Section 17). Ralph Rene wrote about this: *"Go crazy! Just imagine: a person with "correct data", after intense training and long training, made such a dullness - turned the camera towards the sun. Honestly, it's hard to believe! "* **[14.2]** .

Probably, a competent reader could remind the author of other incidents with "Apollo-12". But the above is quite enough for Apollo 12 to deservedly claim the glory of the most unsubstantiated "lunar" Apollo.

Surveyors also helped with the lunar soil issue

In the complex and delicate question of the lunar soil, NASA seems to have been assisted by all Surveyors - both the first ("vowels") and subsequent secret ones. The first Surveyors (Nos. 1,3,5,6,7) provided NASA with the necessary information about its elemental composition, mechanical properties, etc. (section 16). This information could be used to simulate soil, the "delivery" of which was attributed to the first "lunar" "Apollo". The Surveyors-X that followed could have supplemented this information with their radio reports from the Moon, and at least one of them may have been able to automatically deliver some real lunar soil to Earth (Chapter 16).

Of course, "Surveyors-X" could deliver to Earth only tens, in extreme cases, hundreds of grams of real lunar soil in the form of dust and small stones, that is, regolith. To deliver large moonstones to them, as well as to the Soviet "Lunas", was beyond their strength. It is not surprising, therefore, that Soviet scientists received from NASA not moonstones, but 29 g of regolith (Chapter 16).

Section 2:

"Orbiters" - assistants in the lunar orbit



Broadcast of astronauts' talks "from orbit around the Moon"

III.10. Lunar Orbiter (

http://nssdc.gsfc.nasa.gov/planetary/image/lunar_orbiter.jpg)

According to NASA legend, during the "landings" on the moon, two astronauts in the lunar module landed on the moon, and one was in the command module in circumlunar orbit, waiting for the return of the "conquerors of the moon". He also negotiated with the MCC. Strictly speaking, the Surveyors-X, sitting motionless on the moon, could not provide an imitation of these negotiations. The fact is that the radio voices from the Moon were really listened to by "ours" (Chapter 21), and

broadcasting from a stationary source and from a source moving in an orbit can be distinguished, because the movement in orbit slightly distorts the received frequency of the radio signal.

But the Americans could very easily work out this circumstance by assigning the function of broadcasting from orbit to automatic satellites of the Moon (Fig. 10) of the "Lunar Orbiter" type (or "Orbiter" for short), which were described in Chapter 4. Such satellites could also be launched ahead of time, as they functioned for a long time in circumlunar orbit and could be activated when ordered by NASA. Long reasoning on this score is unnecessary, since it would simply mean repeating much of what was said above about the use of Surveyors-X as repeaters and imitators of radio reports "from the Moon".

"Orbiter" to "Apollo 8": the choice is poor, but no more

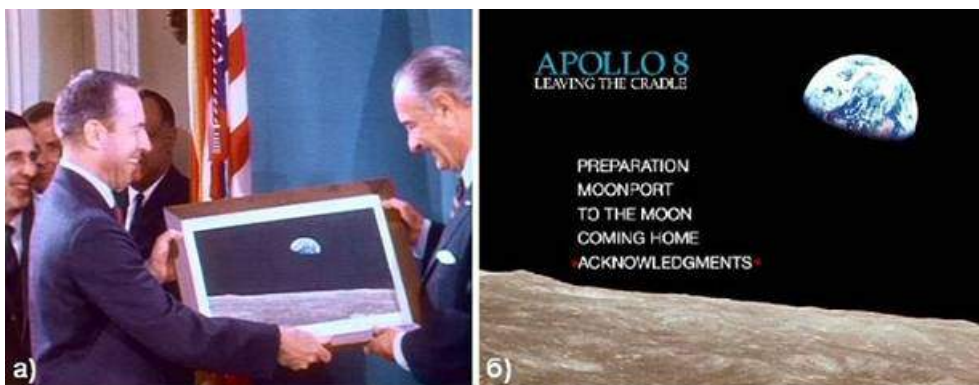


Fig. 11. a) Astronaut F. Borman presents the President of the United States L. Johnson

a snapshot of the Earth rising above the lunar horizon, allegedly taken by the Apollo 8 astronauts. Taken from

film "Apollo 8": leaving the cradle " **(b)** .

But the main benefit of the Orbiters for staging the "landings", according to the author, was that they made those beautiful pictures in circumlunar orbit that astronauts showed to the world on their behalf, as evidence of their own flight around the Moon (Fig. 11) ...

Let us briefly recall what was written in detail in Chapters 4 and 6. In 1968 -1970. Soviet automatic spacecraft "Probe", circling the moon, each time took several pictures of the moon above the lunar horizon (ill. 12). And it never occurred to anyone in the Soviet Union to give one of the Soviet cosmonauts such pictures and play them out by handing them over to the Soviet leadership under the mark of an allegedly completed flight around the Moon. But for such a performance, it was only necessary to arrange a demonstrative launch of the Proton rocket, allegedly with people and supposedly around the Moon. There were no technical obstacles for this. And our cosmonauts also knew how to speak "from the moon" while sitting on the Earth (read above).



Fig. 12 (top row) Earth above the Moon . Pictures taken Soviet automatic ships "Zond-7" and "Zond-8"

Fig. 13 (bottom row). Earth over the moon . Pictures allegedly taken by astronauts A-8

American "Orbiters" filmed the Earth over the lunar horizon back in 1966 (Chapter 4). **"Orbiters" filmed such views from time to time , literally by the piece**, because, at least at that time, high-quality filming of such complex compositions 400,000 km from Earth was a very difficult task for automata. Let us emphasize that we are talking about a small (piece by piece) number of high-quality images of "sunrise-sunset". They were performed by the very slow so-called "Orbiter" photo-television equipment. The same "Orbiters" "baked" large quantities of low-quality images.

And so in 1968, NASA had three new images of one Earth rise above the lunar horizon in its luggage (Fig. 13). And the Americans claim that these images were taken by the Apollo 8 astronauts. Isn't the result poor for three trained people, "to the teeth" armed with photographic equipment and supposedly made 10 revolutions around the Moon in their ship? How, then, are astronauts different from automata?

Obviously, nothing, and it is very likely that the astronauts, along with other participants in the hoax, presented one of the Orbiters for their new pictures. Moreover, further study of the materials already familiar to us allows us to roughly imagine how the shooting of those three "shock" shots of one sunrise took place (Fig. 13).

How the Orbiters conveyed beautiful views of the rising of the Earth

We use the high quality sunrise image from Figure 13a for this study. It is shown in Figure 14 in a larger shot, with the black background of space cropped from above so that the informative part of the image can be seen as best as possible within the portrait format.



Fig. 14. A high-quality view of the Earth's rise, obtained on the Orbiter's photo-television equipment and transmitted to the Earth via a TV channel in a slow mode. The image is cropped from above against the black background of space.

(<http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS8-13-2329HR.jpg>)

According to the author's opinion, substantiated in Chapter 6, this view was obtained with the Orbiter photo-television equipment. This equipment produces and transmits images very slowly. Therefore, pictures from it are obtained in very small quantities, but at the same time of very high quality.

In addition, we will need a selection of four low-quality Earth rise views from Chapter 6. It is repeated in Figure 15. According to the author's opinion, substantiated in Chapter 6, these frames were also transmitted by the "Orbiter", but in live TV transmission mode by an automatic TV camera of type "A" with an interval of 5 seconds between frames (as in the "Ranger", see Chapter 4).

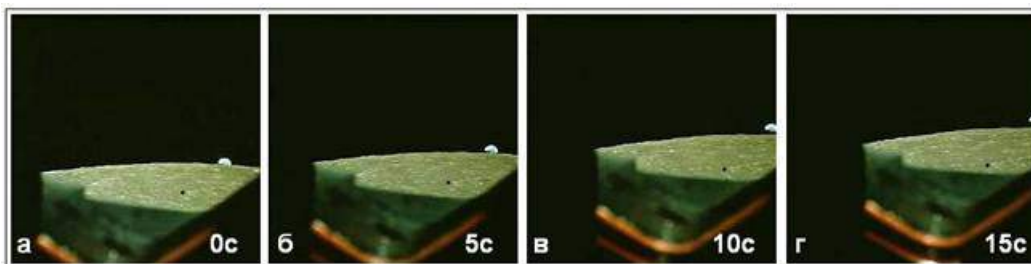


Fig. 15. (Repeated from Section 6). Frames transmitted by "Orbiter" in live TV mode

(<http://www.lpi.usra.edu/resources/apollo/images/browse/AS08/14/2391.jpg>,
<http://www.lpi.usra.edu/resources/apollo/images/browse/AS08/14/2392.jpg>,
<http://www.lpi.usra.edu/resources/apollo/images/browse/AS08/14/2393.jpg>,
<http://www.lpi.usra.edu/resources/apollo/images/browse/AS08/14/2394.jpg>)

The speed of TV transmission and the wide field of view of the frame adversely affect the quality of the transmitted images. Many such images can be transmitted, but all of them will be of much worse quality than from photo-television equipment. In order to better see the low quality of these four frames, Figure 16 shows an enlarged section of the frame of Figure 15b.



Fig. 16. Low quality Earth rise view, transmitted by Orbiter in live TV mode by automatic TV camera of type "A". Fragment of Fig. 15b. The image is cropped from the top on the black background of space and from the bottom on the uninteresting part of the image.

In the author's opinion, both the image in Fig. 14 and all the frames in Fig. 15 were taken by the same Orbiter during the same sunrise. Although the similarity of the lunar landscape is striking even when looking at Figs. 14 and Fig. 16, let us compare even more closely the high-quality frame of Fig. 14 and the low-quality Fig. 15b. This is done in Figure 17.

For ease of comparison, the high-quality view in Fig. 14 is slightly rotated so that the lunar horizon line in the compared images is oriented approximately the same. In both compared images, the numbers indicate the same details of the lunar terrain. Looking at the lunar surface and the position of the Earth above the lunar horizon, you can see that Fig. 17a is a small area from Fig. 17b. Thus, the low-quality view of Fig. 17b, as it were, played the role of a guiding (reconnaissance) image before photographing the high-quality image of Fig. 17a. And how to understand the dark outline that obscures the details of the lunar terrain in the image of Fig. 17b and is absent in Fig. 17a? It's very simple: this contour was superimposed by means of photomontage by NASA masters after it was received from the Moon.

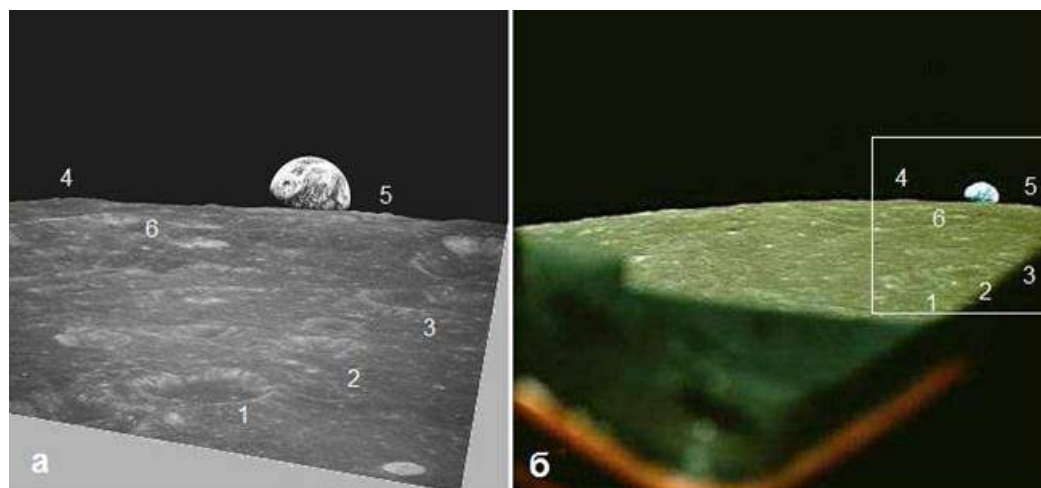


Fig. 17. Comparison of the high-quality view of Fig. 14 and the low-quality view of Fig. 15b on the details of the captured lunar terrain,

Now let's try to imagine how exactly the technical procedure took place, as a result of which three beautiful frames of Fig. 13 appeared, one of which astronaut Bormann solemnly presented to President Johnson (Fig. 11).

According to NASA, the well-known "Orbiters" were no longer working by the beginning of the Apollo flights **[1]**. It may very well be, but nothing prevented NASA by the time of "landing on the moon" in advance (it is possible for several months in advance) to put the next "Orbiter" into circumlunar orbit, but without any publicity. Let's call this satellite conditionally "Orbiter-X". All the necessary prerequisites for this were in place. This is the experience of launching and operating the vowels of the five "Orbiters" (1966-1967), and the availability of a wide selection of television equipment for direct and for photo-television transmission of images, tested on the "Rangers" (1964-1965) and those the same vowels "Orbiters", and the wide practice of launching secret spacecraft (up to 50% of the total number of launches). And finally, a very low comparative cost of such devices - about 1/1000 of the cost of the Apollo program **[22]**. During the entire program of "landings" on the moon, if necessary, additional "Orbiters-X" could be launched. The well-known Orbiters could execute commands from the Earth, for example, change the orbit **[23,24]**, and Orbiters-X also worked under the direction of an operator sitting on the Earth.

While "Orbiter-X" is flying over the side of the Moon, invisible from the Earth, there is no connection with it: the Moon is blocking. As soon as he leaves from behind the Moon, and for him this is the rise of the Earth, radio communication is restored, and the first images come to the operator. At this stage, according to the author, the "direct" TV camera "A" from the "Ranger" is used. This camera view angle 23 is ^{about} (chapter 4). Knowing the angular size of the Earth in the lunar sky (2°), it is easy to estimate the field of view of the studied poor-quality frame Fig. 16. It turns out to be equal to 24° , that is, it corresponds to the camera "A". This tells us that we are on the right track. The incoming frames are of a relatively low quality (Fig. 15), but they follow every 5 seconds, as it should be when the camera

"A" is working (Chapter 4). These are, so to speak, "reconnaissance" personnel. "Rangers" transmitted black-and-white "straight" images, "Orbiter-X" - sent color. This further degrades their quality, but quality is not so important for preframes. But the bluish image of the rising Earth against the background of the gloomy lunar terrain is easier to see. And now the Earth appeared (ill. 15a, b). The operator immediately sends a command to the photo-television installation to take a photo. Only it can provide high-quality images to which the astronauts will "report". Photographing is carried out at a narrower viewing angle, than "intelligence" (cf. ill. 17a and ill. 17b). This is an additional factor in improving image quality. The photograph has been taken, and it will be developed and transmitted to Earth later. The first photograph is taken and transmitted in black and white for the sole purpose of ensuring its high quality. This will be the high quality image of Figure 14.

Despite the participation of the operator, the satellite orientation system is not working well. Therefore, within 15 seconds after the first high-quality photograph (Fig. 14) is taken, the Earth floats out of the field of view (Fig. 15d). There is nothing to photograph. Through the joint efforts of the automatics and the operator, after 80 seconds, the Earth returns to the frame, and immediately the photo-television installation is ordered to take two more photographs. Now they are in color, since they have already managed to make a black-and-white photograph. This is how the sunrise views of Fig. 13b and Fig. 13c appear on board the Orbiter. But after that, the aiming of the lens at the Earth, apparently, was completely lost. As a result, Orbiter-X managed to make only three high-quality images of one sunrise (Fig. 13). The best of them (Figure 13b) was chosen to be presented to President Johnson.

And for the subsequent "lunar" "Apollo" pictures of the rising of the Earth, "made by astronauts" were transmitted to the Earth in approximately the same way. Sometimes the automation worked better, sometimes worse. For example, astronauts A-11 got six high-quality sunrise images [25]. However, "Orbiter-X" could not make them on time - for the return of the astronauts A-11 "from the moon". Therefore, in the special issues "Life" and "A Look", which were hot on the heels of the first "landing", they were absent and appeared later on the NASA websites. Other "lunar" "Apollo" were less fortunate, so that on average astronauts were "allocated" 3 high-quality images of the Earth's rise per trip "to the Moon" (Chapter 6). Very modest, considering that according to NASA, the "lunar" "Apollo" made a total of 373 orbits around the moon. But thanks to proper propaganda support, this circumstance passed unnoticed.

Unspoken "taboo"

The creation of Surveyors and Orbiters was a significant success for American astronautics. However, NASA and its advocates rarely mention them in their publications on the moon race. Apparently, they do not want to remind that these automata could do everything that NASA has presented as evidence of the landing on the moon. For a long time, the moon was deleted from NASA's plans as an

object for exploration by space robots. Other planets were actively explored by automata, but the Moon was not. Only 22 years after Apollo, in 1994, the Americans sent the next spacecraft to the Moon (Clementine). Now the automatic devices of other countries have already reached the Moon (the European "SMART", the Indian satellite, the Japanese "Kaguya").

Of all the countries of the world, Russia is, in fact, the only country that can be vitally interested in disclosing the essence of the "landings" on the moon. After all, they deceived her, first of all. It is quite obvious that within the framework of the "partnership" policy, the current Russian leadership will not agree to aggravate relations with the United States. But hardly all Russian space experts unanimously share this position. In the event of launching automatic Russian spacecraft to the Moon, discoveries are possible that are highly undesirable for the United States. For example, establishing the fact that there are no remnants of the "landed" "Apollo" on the Moon. And behind this, information leakage is possible through individual Russian specialists. Therefore, what is possible for other countries, Russia is not allowed. And Russia well-meaningly demonstrates its indifference to the Moon.

Links:

- 1.** [http: // www.skeptik.net/conspir/append3.htm](http://www.skeptik.net/conspir/append3.htm) - Automatic exploration of the Moon. devices in 1958-76.
- 2.** NASA [http : // www . astronautix . com / craft / surveyor . htm](http://www.astronautix.com/craft/surveyor.htm)
- 3.** NASA [http : // nssdc . gsfc . nasa . gov / database / MasterCatalog ? sc = 1968-001 A](http://nssdc.gsfc.nasa.gov/database/MasterCatalog?sc=1968-001A) Surveyor-7. All 7 devices cost \$ 469 million
- 4 .** NASA <http://nssdc.gsfc.nasa.gov/planetary/lunar/surveyor.html> - information about the program of launches of American automatic devices for soft landing on the Moon of the "Surveyor" type (1966-1968),
- 5.** <http://apervushin.narod.ru/book/Moon/Moon6.htm>
- 7.** <http://www.astronautix.com/details/pro18137.htm> сообщение «1969.06.03»
- 9.** “ A Look ”, August 1969, see also [un1] section 28
- 10.** "Lunar laser reflector". "Uspekhi fizicheskikh nauk", 1971, January, volume 103. Issue 1, pp. 130-154. J. Voller - Wesleyan University, J. Wampler - UCLA Lick Observatory.
- 11.** NASA <http://ilewg.lpi.usra.edu/resources/ranger/>
- 12.** Ya. Golovanov, "The truth about the APOLLO program ", M .: Yauza - EKSMO-Press, 2000, ch. 7, p. 197; see also <http://www.epizodsspace.narod.ru/bibl/golovanov/apollo/08.html>

13. California Institute of Technology. Pasadena. California. "Information Summaries", PMS 010-a (JPL). June 1991/ Our Solar System at a Glance, p. 2-4.

14. Rene Ralph " How NASA showed America the Moon ", M. , ENAS , 2009, - 256 p . <http://www.x-libri.ru/elib/rener000/index.htm> , cited:

1.<http://www.x-libri.ru/elib/rener000/00000047.htm> and 2.<http://www.x-libri.ru/elib/rener000/00000033.htm>

15. US spaceports

1. <http://ru.wikipedia.org/wiki/%D0%9A%D0%B0%D1%82%D0%B5%D0%B3%D0%E>

2. <http://vadim-andreev.narod.ru/ufo/kosmos.htm>

16. <http://www.epizodsspace.narod.ru/bibl/ejeg/1969/69.html> - summary of spacecraft launches in the USA for 1968

See the section "Launches of satellites and spacecraft abroad", subsection "Spacecraft"

17. HACA Apollo Lunar Surface Journal <http://www.hq.nasa.gov/alsj/>

18. <http://ru.wikipedia.org/wiki/%D0%9B%D1%83%D0%BD%D0%BE%D1%85%D0%E1>

19. <http://www.epizodsspace.narod.ru/bibl/kamanin/kniga3/11-68.html>

20. <http://www.manonmoon.ru/articles/st10.htm>

22. NASA <http://nssdc.gsfc.nasa.gov/database/MasterCatalog?sc=1966-073A> : All 5 Orbiters cost \$ 163 million .

23. Little encyclopedia. Cosmonautics. Ed. V.P. Glushko. M .: SE, 1970, p. 273, article "Lunar Orbiter",

24. <http://epizodsspace.testpilot.ru/bibl/ejeg/1968/68.html> about the Lunar Orbiter satellites. See the section "Launches of artificial earth satellites and spacecraft abroad", subsection "Spacecraft"

25. NASA http://www.apolloarchive.com/apollo_gallery.html («The Project Apollo Image Gallery») section A -11

Versions, opinions

23-29 minutes

Versions, opinions. Chapter 19

The hard burden of glory

We talked a lot about technology, space, and the moon. Now let's talk about people. To begin with, let's take an interest in how the astronauts carried the honorable load of the glory of the conquerors of the moon.

Melancholy of the pioneers

Quarantined!

The first conquerors of the Moon - the crew of Apollo 11 “ *were waiting for the roads of glory: solemn meetings, celebration on the Washington Capitol Hill, parades, dinners, a series of endless receptions and press conferences, 38-day trip to 22 countries of the world. And memories. For life* ” [1] . But first they were put in an isolation ward.



Fig. 1. The A-11 crew is quarantined in a special van aboard the Hornet aircraft carrier.

<http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2001-000007.jpg>;

Immediately after the Apollo 11 splashdown, the crew is met by a special team wearing masks, the astronauts themselves also put on masks. The ship is sprayed with bleach [2, 3]. Astronauts are lifted onto an aircraft carrier and immediately sent to a quarantine van for a full 18 days (Figure 2). Immediately a detachment of military police surrounded the van.

Chief Designer of the Soyuz spacecraft K.P. Feoktistov speaks about this with bewilderment [4]:

"The laboratory where the astronauts who returned from the Moon were quarantined, as the American experts told them laughing, was apparently also built in vain. As expected, no microbes, viruses or any other signs of organic life, "brought from the moon", could not be detected, of course, and where would they come from there? "

Indeed, what could be bacteria on the moon, treated for several billion years, every 27 days the cosmic cold -150°C , the heat of the sun 150°C and flow of radiation from solar flares? Do doctors on Earth have such sterilizers? And why spray a ship with chlorine, if on return it flew through the atmosphere in a plasma cloud with a temperature of several thousand degrees? And, if there are lunar bacteria, and they are so stable that they withstood the lunar cold, and the lunar heat, and solar radiation, and hot plasma, then what kind of chlorine will help against them?

So, have the prudent Americans really not thought about such simple things that the chief designer of the Soyuz spacecraft is perplexed about? Unlikely. According to the author, quarantine played an important role in the hoax scenario .

Black masks on the faces of the astronauts helped the "pioneers" of the Moon to avoid unnecessary glances from the masses of people meeting and suppressed unnecessary questions from their side. The military police cordon is also useful (Fig. 2). All this for astronauts is a great psychological help at first. After all, they started the most important part of their assignment - the stories about "flights to the moon". And not only on TV, but also looking into the eyes of the interlocutor. Without a transitional period, you can break.

Quarantine ensured this transition period and cut off communication between pioneers and strangers for almost three weeks. 18 days passed, and during this time the directors of the hoax were convinced that world public opinion believed in the landing and that everything was going as planned. The "pioneers" came out of isolation to practice the legend of "landing on the moon" at numerous meetings, press conferences and receptions. On the whole, they coped with this task brilliantly. The astronauts of the subsequent "Apollo" were only consolidating the success of the pioneers. And after Apollo 14, the "quarantine" for the astronauts of the subsequent "lunar" "Apollo" was canceled

(<http://www.nasm.si.edu/exhibitions/ATTM/a11.jh.3.html>).

They are such funny guys, but taciturn and melancholic and prone to alcoholism.

Look at the friendly faces of the pioneers at the moment when they are talking from the window of the quarantine van with the President of the United States R. Nixon (Fig. 2). According to the reviews of colleagues and acquaintances, they were people who were pleasant to talk to **[1]** .

Michael Collins - *"funny, funny, ... if a competition for everyone's favorite was announced in Houston , Collins would definitely win . "*

Neil Armstrong is *"slender, calm, smiling, typical American, and if it differs from others, it is only modesty and silence ... the closer you get to know Neil, the better you understand what a warm person he is . "*

Edwin (Baz) Aldrin - *"a bit like a Hollywood superman, loved the audience, spoke accurately and brightly . "*

And was there any reason to doubt that the crew for the first flight to the moon was composed by NASA specialists from people who will not only do a good job, but will also be associated with the people of Earth with the best features of the promoted image of a typical American? All this is true, but the information given is in rather strong contrast to the way the three astronauts behaved during the flight and especially after it.



Fig. 2. Astronauts from the quarantine van talk with the President of the United States R. Nixon

<http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2001-000007.jpg>

"Local reporters dubbed the Apollo 11 crew the most taciturn crew of all American spacecraft crews ... the messages from Apollo 11 are extremely laconic..." - Pravda correspondent B. Strelnikov reported on July 17, 1969 from Washington **[6]** ... The special issue "A Look" writes about the same (see July 16) **[7]**.

But the astronauts A-11, judging by the above reviews, are people completely normal in terms of communication? True, Armstrong is "silent", but Collins is "funny and playful", and Aldrin "loved the audience and knew how to speak accurately and brightly." Why is this laconicism at a time when the whole of humanity expects an exciting story about an outstanding event firsthand? Six months before that, one tacit team had already flown - the Apollo-8 crew. By then from the A-8 astronauts waiting for the story that they see a lunar orbit, they were silent **[1]**. It turns out that as soon as the astronauts took the next "historic step", they were attacked by a strange stinginess in communicating with the rest of humanity. It looks very much like they were advised to speak less, so as not to blurt out too much by negligence.

From warm communication with others through "extreme brevity" to clear manifestations of melancholy - this is what an interesting path the A11 crew members have gone through in a very short period of time, which included three most important stages of their life: "before the moon", "on the moon" and "after the moon". As Y. Golovanov writes, some time after their return to Earth, strange things began to appear in their behavior and lifestyle.

"All three astronauts soon left NASA. They ... do not strive for meetings" **[1]**. How is it "not striving for meetings"? As a rule, everything happens just the opposite: people who have gone through difficult trials together tend to meet in order to remember the glorious past. And, it happens, for the sake of this, putting off their daily affairs, people travel from afar. War veterans, climbers, and tourists know this, not only having gone through the crucible of difficult hikes, but also together experienced the joy of the first simple trip. But...

Armstrong showed an acute tendency towards self-isolation. *"He stubbornly wanted to occupy only such a place that he would not owe to Apollo 11. Stubbornly avoids meeting with the press and lives rather closed in the circle of his family ... Neil lives in a castle surrounded by a moat with dragons. At will, he lowers the drawbridge and makes sorties, which, however, rarely happens"* **[1]**.

For "superman" Aldrin, it came down to mental health problems. *"Baz was thrown from the Apollo and began to swim frantically in search of something else. Aldrin has not found his new dock. This is evident from his book ... "Return to Earth". In the book ... more is written not about space and the Moon, but about the Earth. "Returning to Earth" is a bitter, but frank confession ... "I deeply experience what is called melancholy ... On the day I was supposed to address the Congress, I was in a state of numbness ... I mumbled stamped phrases. I felt uneasy. But I*

had to smile ... Previously, I always knew what to do, and now I began to need to be instructed on what to do ... I felt that I was sick ... the sedative pills did not help me. I said that I need psychiatric help! "... Aldrin's illness was widely written in America ... His health recovered, but he had to leave the aviation ... [one].

Moreover, according to the correspondent of Pravda in Washington V. Ghana, Aldrin “drifted” from alcoholism and depression for many years ” **[8]**.

How did it happen that a person selected by NASA supposedly for a flight to the moon, as it turned out, has an unstable psyche and a tendency to alcoholism? After all, the selection of astronauts in the formation of lunar crews was carried out "by the piece" (Chapter 3). Plus, the A-11 astronauts weren't new to space. Before that, they flew in near-earth Gemini, and they had no problems with the “nerves”. This Moon somehow influenced Armstrong and especially Aldrin in a strange way.

But the third member of the crew, M. Collins, had no mental problems. *“Collins said that maybe it’s even good that he circled near the moon, and did not sit on it, because the load of glory is a very heavy load” [1]* . Recall that according to NASA legend, Collins, although he flew around the moon, but did not land on it. So he didn't have to tire himself with stories about how great it is to walk on the moon.

Not a word besides the script! Strictly limit contacts!

The author believes that in reality everything was not in people, but in the “work” that they had to do. The crew consisted of normal people - not talkers, but not pedants either, but exactly as their friends and acquaintances described them. But the task these people solved out of the ordinary - to make humanity believe that they are making (or have already made) a trip to the moon. The risk of breaking loose, blurting out an extra word is huge. And therefore - not a single superfluous word: everything is strictly according to the scenario developed by NASA. And sometimes it is useful to remain silent.

After returning, the astronauts did not want to stay at NASA. First, the overwhelming majority of NASA employees were, of course, not aware of the true content of the A-11 flight. Second, NASA employees are a qualified audience. They could ask many competent and therefore difficult questions. In addition, very many of them knew the astronauts well personally. And lying to your comrades is not so easy. Therefore, all three should have left NASA.

There was no need for extra contacts either with journalists, or with new colleagues, or simply with acquaintances. Therefore, Neil sits in a "castle with dragons" and demands not to link his future fate with "Apollo". And both "pioneers" (he and Aldrin) "do not like" journalists, but rather, they are afraid to blurt out too much under their pressure.

Easier than all Collins - because his role in the expedition does not need the legend of "landing on the moon". And how the Moon looks from a height of 100 km can be well studied using NASA's photo atlases and lunar globes. Therefore, he says that *"it is even good that he circled near the moon, and did not sit on it."*

Armstrong "was on the moon." But since he is a "silent" character, it is enough for him to remain silent, refrain from contact with journalists, and in the circle of friends and colleagues to distance himself as much as possible from everything connected with the Moon. So he behaves himself.

Hardest of all to Aldrin. Since he is a "standard hero who can speak brightly and accurately," he is assigned an active role in the propaganda campaign. How can you explain his depressed state before speaking in Congress? After all, he spoke to people, without whose consent the Apollo program itself would not have existed. The author believes that very few in Congress knew about the true nature of flights to the moon. If so, then Aldrin and his colleagues, talking about flights to the moon, deceived the highest legislative body of the country, and this is one of the most serious crimes in the United States.

Of course, Aldrin reported on behalf of the highest authorities. But in case of failure, he and his colleagues would be among the first scapegoats. This is why Aldrin was *"in a state of daze"* on the day he spoke to Congress . He, able to speak *"brightly and accurately"*, is forced to *"mutter stamped phrases."* Any departure from these prepared phrases was fraught with the danger of failure. And the *"standard hero"* Aldrin *"began to need to be told what to do."* In general, Aldrin copes with the task successfully, but at the cost of a huge overvoltage. Hence - complaints of illness, melancholy, sedative pills, the need for psychiatric help. And is it not these circumstances that explain the fact that subsequently Aldrin for a long time *"drifted from alcoholism and depression"*?

The pioneers took on the heaviest burden. They created the image of a lunar victory. Over time, when it became clear that the hoax had completely succeeded, the "pioneers" lost their nervous tension, and Aldrin's health recovered almost completely.

Melancholy of the chief designer

"Lunar" melancholy amazed not only the pioneers, but also Werner von Braun, chief designer of the Saturn-5 lunar rocket. The unpleasant turns in his fate amid the triumph of the lunar victory have already been written in Chapter 1. Let's try to understand how these turns could be connected with the vicissitudes of the lunar race.

Von Braun was born in Germany in 1912 [9-11] . There, under his leadership during the war in Nazi Germany, the world's first ballistic missile ("V-2") was created. At the age of 24, von Braun was the scientific and technical leader of this

work. Thousands of scientists, engineers, designers, technicians and workers worked under him. Until the end of the war, the Germans fired 1402 V-2 rockets, of which 517 hit London.

The political past plays no role. For 25 years he was the country's chief rocket officer

At the end of the war, moving through Germany, the Americans staged a "hunt" for German specialists and scientists. For this, a special operation of the American intelligence services was carried out under the name "Paper-Clip" ("Paperclip"). This operation is described in [9-11]. Quotes are also taken from there.

Von Braun “perfectly understood the importance of his persona for the Americans and he himself sought contacts with intelligence (American - AP) . He “surrendered to the US army authorities near the quiet town of Garmisch-Partenkirchen, in the foothills of the Alps, on May 2, 1945, immediately after the defeat of Nazi Germany. The footage has survived: the lively, cheerful Brown is clearly posing in front of the movie camera. *When he surrendered, he looked more like a celebrity than a prisoner* ” (ill . 3) .



Fig . 3 . May 1945 Wernher von Braun (center) during his surrender to the Americans

(Brown's left arm is broken in a recent car accident)

http://waralbum.ru/wp-content/uploads/yapb_cache/dornberger_axter_von

What the American occupation authorities thought about the Nazi threat from German scientists can be clearly seen from the instructions of the head of the operation: *“If you just come across anti-fascists who are not valuable for science, do not take it. If they are of a certain scientific interest for us, then their political past does not play any role.* ” Von Braun did not come to the Americans alone and not empty-handed. He *“arranged for the delivery of the best 500 missile*

specialists to the Americans, along with their plans and prototypes." Together with the missilemen, the Americans took out about a hundred V-2 missiles.

Very often, if not every time, in publications and television programs about American flights to the moon, they write and say that von Braun was the director of NASA, that he directed the American lunar program. This is completely untrue. He was never the director of NASA, and the lunar program was not led by him, but by Bob Gilrut (chapter 20). But in the history of American rocketry, von Braun, of course, occupied an outstanding place. *"In January 1970, the Washington Post wrote, "For the last 25 years he has been the nation's chief rocket officer."* His success was closely followed by the highest authorities in the United States (Fig. 4).

After moving (more precisely, delivery) to the United States, von Braun received American citizenship and continued to develop rocket technology. A year later, the first "American" V-2 rocket was launched in Texas at the White Sands test site. Subsequent rockets, created by von Braun, launched the first American artificial satellite and the first American astronaut. In 1960, its rocket design center was transferred from the army to the newly established NASA. Today it is the famous Marshall Space Flight Center in the town of Huntsville with a staff of several thousand people. Von Braun became its first director. He is entrusted with the development of the Saturn-5 rocket, which should deliver the Americans to the moon. He is also working on the Skylab orbital station project and on the shuttle-type reusable spacecraft, that is, he is involved in almost all main directions of the development of American astronautics.



Fig. 4. Werner Von Braun (left) and US President D.F. Kennedy

<http://img821.imageshack.us/img821/8185/kennedyvonbraun19may630.jpg>

But at the height of this lunar success, von Braun's career takes an unexpected turn (Chapter 1). In January 1970, six months after the victorious flight of the A-

11 and just two months after the second launch "to the moon" (A-12), he was released from the directorship of the Center. Marshall [9]. Formally, he is entrusted with an honorable job. *"In 1970, von Braun was asked by NASA to move to Washington to lead strategic planning, but after less than 2 years he decided to leave NASA."*

That Brown was not happy about this promotion was obvious to many. One of the leaders of NASA said that von Braun *"became like a conductor suddenly left without an orchestra"* [11].

Von Braun resigned *"deeply disappointed"* in the words of other authors [12]. At the time of his "promotion" from the post of director of the Center, von Braun is 58 years old. For a major leader, this is a completely normal creative age. The wording "for health reasons" is not present in his biographies (Brown died much later - after 7 years). And here is what the author writes about the end of von Braun's career [13]: *"Brown reached the pinnacle of his career in 1972 when he became Deputy Director of NASA and Chief of the Cape Canaveral Cosmodrome. However, already in 1972, amid an economic downturn, he was offered to cancel expensive flights to the moon and engage in more profitable programs - the launch of reconnaissance and technical satellites. Apparently, von Braun did not obey, as he was soon **dismissed**. Immediately, lunar flights were terminated, and the dispatch of a manned spacecraft to Mars, which was being prepared by von Braun, did not take place. Many warm words were said on the wires, but the baron, as always, did not betray his feelings in any way."*

So, before the epic with the moon race, von Braun's career in the United States was simply brilliant, and in the course of this epic it ended abruptly. Precisely "in the course", because the first blow - the dismissal from the post of the director of the Center, that is, the removal from direct supervision of the design work on the creation of new rocket technology - was received by von Braun in 1970. Explanations for this end of the "rocket baron's" career by his Nazi past, which are constantly circulating in the media, are clearly stretched. From 1945 to 1970, 25 years passed. Isn't it a lot to wait a quarter of a century, in order to suddenly remember the Nazi past in 1970? And all these years, von Braun not only lived in the United States, but was "the main rocket scientist of the country." And let us recall what the Americans said when they took hundreds of German missilemen to America: *"the political past does not play any role."* And on the last journey (in June 1977), von Braun was carried out with the appropriate honor, and not as a person with a Nazi past. They buried him in the same Huntsville, where he worked for the glory and might of America for 25 years, *"solemnly"* in the words of the author [13]. Therefore, we will look for the roots of a sharp break in von Braun's career in the twists and turns of the lunar epic.

On April 4, 1968, the tests of Saturn-5 failed so much that they became the last. Together with this test, the hope of realizing a real flight to the moon and to the moon finally failed. 700 developers of the failed Saturn-5 were "temporarily

fired." "Temporarily" is a convenient form of taking them away from von Braun and placing them under other leaders. At this stage, von Braun, as director of the Center, was already a played card. But for the sake of the overall success of the hoax of flights to the moon, von Braun was assigned for some time to act as the "successful" creator of the supposedly real lunar rocket. When, after the second "landing" on the moon, the general excitement subsided, the acting role of Brown was exhausted for the chiefs. In addition, it can be assumed that at this stage, von Braun's personal interests and the highest interests of the United States came into conflict.

Von Braun dreamed of flying to other planets (Fig. 5). *"Astronautics is all that interests me,"* he said [10]. As an outstanding designer, he could not help but want to make a real flight to the moon. But the continuation of work in this direction would mean that the tests of the lunar rocket would begin again, which were stopped after April 4, 1968. And who cares if everyone already believed that the Americans were so successful in "flying to the moon"? And the higher authorities were not interested in such a continuation. The fact that such interest has clearly disappeared is also written by the author cited above [13] (although he explains this circumstance differently). Therefore, after the first successes of the lunar scam, the interests of von Braun and the ruling elite, apparently, diverged. *"Von Braun did not obey, as he was soon dismissed "* [13] . In January 1970, von Braun was relieved of his post as Director of the Center. As usual, the bitter "pill" was sweetened by transfer to another, seemingly honorable job. For some time, von Braun, apparently, still hoped for something, but in 1972, when the Apollo program was closed without any chance of continuation, he left NASA altogether.



Fig. 5. Von Braun at his desk against the background of a poster on his favorite theme - travel to other worlds

<http://grin.hq.nasa.gov/IMAGES/SMALL/GPN-2000-000070.jpg>

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1. I. Golovanov, "The truth about the APOLLO program ", M.: Yauza - EKSMO-Press, 2000 , ch. 6, p. from. 140-147, 176-

179, 182-183

<http://www.epizodsspace.narod.ru/bibl/golovanov/apollo/07.html>

2 . " Life ", August 1969 g .. See also Chapter 26 IP2

3 . Izvestia, July 25, 1969, No. 174 (16179), p. 4, "Apollo 11 on Earth."

4 . K.P. Feoktistov. Experience of the lunar program

<http://www.epizodsspace.narod.ru/bibl/feoktistov/traektoria/09.html>

5 Thor Heyerdahl. "Journey to Kon-Tiki", M., "Young Guard", 1956, p.73

6 . "Pravda" July 18, 1969 , communication from the correspondent B. Strelnikov from Washington

7 . " A Look, " August 1969 , see also ip1 chapter 26

8. Yu.I. Mukhin. Antiapollo. Lunar scam of the USA. - M .: Yauza, Eksmo, 2005, p. 103

9 . NASA <http://history.msfc.nasa.gov/vonbraun/bio.html> - biography of Wernher von Braun

10 . Y. Golovanov. "The road to the cosmodrome", M .: "DL", 1983, p. 374 - 400.

The whole book is [http : // www . epizodsspace . narod . ru / bibl / golovanov / doroga / obl - dor . html](http://www.epizodsspace.narod.ru/bibl/golovanov/doroga/obl-dor.html) . Brown's Fate Section: Chapter 5

"The Crash of Retribution" - [http : // www . epizodsspace . narod . ru / bibl / golovanov / doroga / 20. html](http://www.epizodsspace.narod.ru/bibl/golovanov/doroga/20.html)

11 . Encyclopedia "Cosmonautics". Under the scientific ed. academician B.E. Devil. M .: Avanta +, 2004, p. 57, 325

12 . Sm . f 1 chapter .26

13. [www.profile.ru]

33

40-50 minutes

How did they manage to keep it a secret?



The aforementioned NASA representative Brian Welch said: *“The Apollo program directly involved about a quarter of a million people, and also about half a million people across the country. Three quarters of a million cannot be forced to hide any secret ”* **[1]**. NASA eagerly spreads this thesis (there was no hoax, because it was impossible), since it allows, as it were, to dismiss all unpleasant questions from the doorway. Of course, when executing a secret program, a very narrow circle of people knows about its full content. But, if we discard this obvious exaggeration on the part of Mr. Welch, the question still remains: "Is it possible to keep secrecy in such a big business?"

Let's start with an example from the history of our astronautics. Let's remember our lunar rocket N-1. What a colossus it is, you can see from Fig. 1. The tiny figures of people around her give a sense of her size. Four such missiles were made. Although the Soviet Union was not inferior to the United States claim about the number of personnel involved in the lunar program **[2]** , so at least, the vast majority of Soviet people did not know about its existence.



Fig. 1. Soviet lunar rockets N-1

But maybe everything was in plain sight in the "democratic" USA? After all, this is how the famous writer B. Strugatsky thinks (ill. 2): *"In my opinion, it is absolutely impossible to keep any secret for 30 years if more than ten people are aware of it. Especially if the action takes place not in a totalitarian, but in a democratic country with a strong tradition of a free press"* [3]. Well, the writer suggested an interesting topic for discussion.

III.2. Б.Стругацкий

The West knows how to tightly control the media and keep secrets

Section 17 tells about how tightly NASA controlled the information about the "landings" on the Moon and how the American press was coordinated, how, at the wave of an invisible director, it turned 180 degrees in its comments when covering the flights "to the Moon". Here are examples from recent history that show how, in Western countries, they know how to control the media and keep secrets when state interests require it.

The then Prime Minister of England W. Churchill recalls [4]: *"On November 21 (1939) the new cruiser Belfast was blown up by a (German) mine, and on December 4 the battleship Nelson came across a mine. Both ships managed to reach the port with a dock. It should be noted that thanks to the measures we took, enemy intelligence learned about the damage to the "Nelson" only after the ship was repaired, and it again entered service. However, in England these facts were known from the very beginning to thousands of people."*

In May 1941, an event happened that seriously affected the outcome of the Battle of the Atlantic. The crew of the German submarine "U- 10" was captured by the British. At the same time, the British captured the most valuable booty - the Enigma encryption machine. Now they could decipher the orders that their commander-in-chief, Admiral Dennitz, gave on the radio to German submarines. But at the same time it was extremely important that the Germans thought that the boat had died along with the crew. Hundreds of British sailors watched the submarine's capture. And, nevertheless, the secret about the capture of "U- 10" remained even 14 years after the war [5].

On January 26, 1944, German aircraft sank the Rhone transport in the Mediterranean Sea. About 1,000 out of 1,149 American soldiers were killed. This was the worst American loss at one time. This secret remained for 40 years [5], although 149 witnesses survived.

These are examples in which the initial events took place during a hot war. But even during the Cold War, one of the episodes of which was the lunar race, there are plenty of such examples. Here is one of them [6] :

"Margaret Thatcher, when she was Prime Minister of England (from 1979 to 1990), believed that all means were good to compromise the USSR. It was with her sanction that the British Navy submarines carried out secret operations in the territorial waters of Sweden, and the West invariably accused the Soviet Union of intrigues, - writes the weekly Echo of the Planet in the article "For the information of the Swedes: these were not Soviet, but British submarines." The USSR indignantly denied the violation of the borders of the Swedish kingdom, but no one listened to him. And only now, at the beginning of February 2008, a message confirming this fact was published by the London newspaper 'Sunday Times'. At the same time, the Swedish government was not aware of the disinformation campaign carried out by the British and their American allies. "

So in the West they know how to keep a secret from both the enemy and the ally, and in the presence of hundreds and thousands of "their" witnesses.

Apollo was the most important strategic program for the United States. The defeat of the United States in the lunar race would mean catastrophic consequences for the entire political system, not only of the United States, but of the entire West, consequences incomparable with the loss of the most powerful battleship. Recall what was written in Chapter 3: *"Apollo" was a truly emergency program, carried out almost with the haste of war. Center them. Kennedy and the launch sites really looked like a military camp before the decisive battle. "* Therefore, the secret of the mystification of the "lunar" victory had to be guarded in the most serious way. And this, as the above examples show, in the West they know how to save. And the "powerful traditions of a free press" in this case are not a hindrance. The obsessively demonstrated American "openness", if necessary, serves as a dense smokescreen, helping to hide really important secrets.

Smoke of "openness" over the veil of secrecy

How did the USSR keep secrets in its space programs? TASS reports of the following kind were published: "To continue the exploration of outer space, the Kosmos satellite No. ... was launched." And no details, which meant: "a secret satellite has been launched, we will not tell you anything else."

Americans are working thinner. They demonstrate openness wherever possible. For example, if outsiders were not allowed to the launches of Soviet

space rockets, tens and hundreds of thousands of spectators saw the launches of Saturn-5 directly on the spot and with their own eyes (Section 5). And it did not occur to the Soviet specialists that it was necessary to carefully monitor how the rocket flies after the launch and where it flies. After all, the Americans are so open.

Let's look again at the special issue “ Life ” for August 1969 **[7]** , dedicated to the flight of “Apollo 11” (Fig . 3) .This magazine effectively uses the method of "openness" to mask the fact that there is very little "lunar" information in the special issue. The magazine contains a lot of photos and accompanying text on the topic of how astronauts grew and matured from infancy, what kind of athletes they are, what caring husbands they are, how they like to cook and what they like to cook, etc., etc. Scientists appear in the magazine with articles on related issues, the history of the space competition between the USSR and the USA is considered. And in this sea of openness, the fact that the list of illustrations about the landing itself is extremely poor somehow drowns. It is interesting to carry out a simple classification of the images published in it. Except for the repeated repetitions in his illustrations (the astronaut took a step, one more step!), Do not consider the footprints of shoes in the sand and photographs of completely earthly pits, then there are only 10 pictures with a lunar theme in the magazine, many of which are considered in this book as dubious. The total number of illustrations in the magazine is about 160, and this abundance of openness and sociability makes it possible to hide the fact that immediately after the Apollo 11 flight, supposedly to the moon, there is practically nothing to show on this topic. Of course, all the decades that have passed since then, the NASA propaganda machine has not been idle and now hundreds, if not thousands of photographs are posted on NASA's websites (where did they come from and where were they in August 1969?). The "open" version, spiced with a lot of accompanying unnecessary information, is better at hiding secrets than a gloomy silence with a "secret" stamp. then there are only 10 pictures with a lunar theme in the magazine, many of which are considered in this book as dubious. The total number of illustrations in the magazine is about 160, and this abundance of openness and sociability makes it possible to hide the fact that immediately after the Apollo 11 flight, supposedly to the moon, there is practically nothing to show on this topic. Of course, all the decades that have passed since then, the NASA propaganda machine has not been idle and now hundreds, if not thousands of photographs are

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Fig. 3. Showy openness helps hide secrets

But the rocket was not shown

In 1969, a prominent Soviet designer, cosmonaut K. Feoktistov came to America. The program of the visit included visits to space centers, a reception at the US President, meeting movie stars, conversations with astronauts, sightseeing

tours and openness, openness, openness ... And the conclusion necessary for hospitable hosts is formulated by itself. K.P. Feoktistov writes [8] :

"To arrange such a hoax is probably no less difficult than a real expedition ... they did not hide the scale of work on Apollo. And what they showed me in Houston in 1969 (Control Center, stands, laboratories), factories in Los Angeles for the manufacture of Apollo spacecraft and the descent vehicles that returned to Earth, according to this logic, should have been an imitation ?! Too complicated and too funny. "

And what so convinced the designer? Here he saw "the descent vehicles returning to Earth." And how to establish that they have been in the vicinity of the moon? What, in their cracks, moon dust clogged? According to the author (see chapter 23), NASA did not have a real lunar rocket. And notice that K.P. Feoktistov does not mention the rocket on the list of what he was shown.

During his visit, the next "lunar" rocket, intended for the A-12, was being prepared for launch. It would seem what luck both for the guests and for the hospitable, "open" hosts. You can invite guests directly to the cosmodrome. They will see the rocket up close, and walk around the launch site, and the A-12 astronauts will not be distracted from preparing for the flight. But it was not there. Meeting with astronauts A-12 - C. Konrad and A. Bin K.P. Feoktistova was organized on "neutral" territory. After all, K.P. Feoktistov is a graduate of the Moscow Higher Technical School, a university that trains personnel for missile designers. And not an ordinary graduate, but a prominent designer. And be a guest at least three times America's friend, and the state secret is more important.

KP Feoktistov also visited the North American company, which was the main manufacturer of the rocket. The guest was introduced to the production of the Apollo ships, but Feoktistov did not mention that he should be shown the production of the rocket.

"Bob Gillart was the only director of the moon landing"



Wernher von Braun's name is always mentioned in publications about the lunar race. Thus, the belief is formed that he was the main organizer of the "lunar" victory. The fact that Brown was removed from the leadership of the Rocket and Space Center in Huntsville in the midst of the moon race and his subsequent departure from NASA does not agree well with this myth. Who was the main director?

Fig. 4. E. Sthlinger - a witness from the circle of von Braun

a) E. Sthlinger (left) next to Werner von Braun

b) he is in the 90s

One of von Braun's assistants, Ernst Stuhlinger (Fig. 4), tells the following during the film [9]: *"Brown's main task was to create a vehicle, but the lunar module itself was created in Houston under the leadership of Gillart . "*

The following is the text of the authors of the film: *"Bob Gillart was the only director of the landing on the moon. He and his team supervised all radio communications, photographs and all events in space and on the moon, Gillart was responsible for the training of astronauts . Most of them were military personnel and were required to maintain complete silence "[8] .*

One and the same person controls the development of lunar technology, the reception and dissemination of information, and the training of astronauts. Why combine such heterogeneous functions? But this question disappears if the victory in the lunar race was obtained by the United States through deception. Then, in order to avoid information leakage, everything should take place under a single and strict leadership. In Figure 5a, you can see how happy von Braun and Bob Gillart are to see each other. On ill. 5b we see the hard, strong-willed face of B. Gillart, as he is shown in the NASA film [8]. As far as we know, B. Gillart was at the helm of the Apollo program until its end. And von Braun by this time was no longer either the chief designer or the director of the main rocket center of NASA.

Have you heard the name of Bob Gillart? Unlikely, although it is not secret. But in the media programs and printed publications devoted to the landings, the name of the main director of the landing on the moon (or one of the main directors) is practically not mentioned. This is what well-organized "openness" means. And after all, this name is not known not only to you, but also to many venerable specialists. In this regard, the following statement of Academician B. Chertok, an active participant in the lunar race from the Soviet side, is interesting [1] :

"... The world does not know the names of many true creators of the American lunar program, with the exception of Wernher von Braun. He is the head of the launch vehicle development. Who are the chief designers of lunar ships, engines, control systems? "

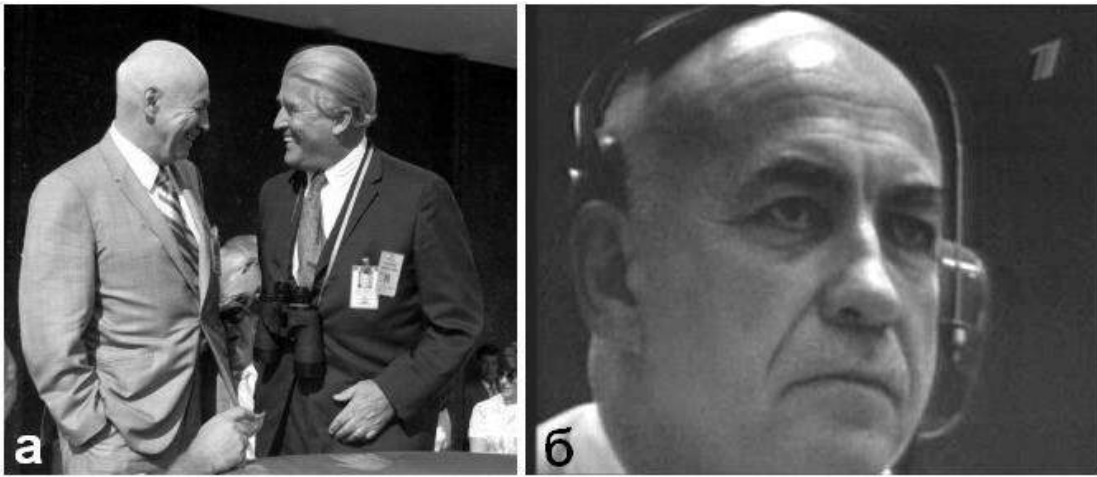


Fig. 5. Bob Gillart was the only director of the moon landing.

a) Gillart (left) and von Braun, **b)** Bob Gillart - unpublished director of the Moon Landing

Limit the circle of "dedicated", get rid of the unreliable in advance

The Apollo astronauts understood as well as Inspector Baron that their ships "would not allow reaching the moon" and "were required to maintain complete silence." But a well-thought-out system sometimes fails, and then the "competent authorities" had to go to any lengths to prevent information leakage. It is this, most likely, that caused the chain of "accidental" deaths that carried away to the grave during one 1967 11 people who found themselves dangerously close to the secrets of the Apollo program and, by their personal qualities or by virtue of circumstances that became potential sources of disclosure secrets. This was the last year before the Apollo manned flights began. The option of a hoax was clearly highlighted. Defenders V. Yatskin and Yu. Krasilnikov write about these deaths **[10]:**

"All the 'dissenters' died in 1967 or earlier. Before the first flight to the moon - at least another year and a half, and NASA is already in full swing searching and eliminating "those who did not know how to keep the secret of the lunar hoax." And when the Apollo program went in full swing, for some reason the astronauts stopped dying in disasters. Strange, isn't it? "

However, what is so strange about that? The author spent more than 25 years within the walls of his native institute. And he well remembers how fire safety inspectors appeared at the institute's premises with enviable frequency. They identified and demanded to eliminate possible causes of fire. It is easier to prevent a fire than to extinguish it. Therefore, the cleaning of the "unreliable" had to take place, of course, before the flights "to the moon". Information leakage must be nipped in the bud. As in the case with Inspector Baron.

Most likely, Baron was not aware of NASA's top secrets. But, unfortunately, he turned out to be too smart and, observing the construction of the Apollo complex,

he realized that with such a technique you could not fly to the moon. He made a competent report, otherwise no one would have set up a commission of the Congress to hear it. Itself *"NASA feared that this would be the end of the whole project."* Voices on the phone advised the inspector to calm down. He did not heed them, and soon the train "accidentally ran over" his car, where he ended up with his entire small family. If the wife and stepdaughter had stayed alive, they could tell the details of the accident or the content of the threats to Baron.

Consider the case of the Apollo 1 fire. At first glance, this is an expensive way to remove unwanted people. But on the scale of the entire hoax (\$ 25 billion), the cost of the burned out ship (several tens of \$ million) is not so noticeable. And a few victims on the road "to the moon" will even decorate the overall "happy ending" of the moon race. True, not only the critic Grissom died in the fire, but his comrades White and Chaffee, about whom there is no information that they were also critics. Well, this is, as American officials put it after the "pinpoint" bombing of one country or another - a "side effect."

Of course, the author does not in any way believe that the "lunar" astronauts participated in the hoax as victims of coercion and intimidation. No, all of them, of course, were patriots and were guided, first of all, by the motives of patriotism. But frequent "accidents" contributed to their refraining from unnecessary conversations. As a result, by the time the flights "to the moon" began, a "reliable" composition of the "lunarists" was formed.

Chapter 3 recounts astonishing cases of NASA condescension to the health of astronauts on flight. According to the author, this can also be associated with the need to observe the strictest secrecy. After all, the astronauts were testing technology, "with which you can't fly to the moon." At all times, the first condition for ensuring secrecy was considered to reduce to a minimum the circle of initiated people. The Americans have created a very narrow group of "lunar" astronauts. If one of the selected "reliable" candidates "for the moon" had an illness, like Collins or Cunningham, or had an old medical history (Lovell), then they tried not to involve understudies anyway. Reliability is more important. And a sick person can be treated. Moreover, many "lunar" astronauts with a high degree of probability did not have to fly into space, but depict a flight there (Chapter 24).

It cannot be ruled out that some of the described "diseases" could have been simply invented. This was done in order to write off the strangeness and omissions in the coverage of the flights themselves to "diseases". This is another reserve of secrecy.

Reconnaissance before decisive battle

The lunar race was a war to the bitter end between the USSR and the USA. The success of the hoax of the A-8 flight initiated the USSR's refusal to implement the first logical stage of the real lunar program - a manned flyby of the Moon. The

leadership of the USSR and the leaders of the Soviet space program decided to "bypass" the rival in a jerk and set a course for the implementation of the direct landing on the moon. As it is now clear, this task is at the limit of technical possibilities by today's standards. But then it was just a road to a dead end. And to tell the enemy the wrong path for an offensive is a great success.

In May 1969, in the wake of the A-8, the A-10 "circled around the moon". He cemented the success of the A-8. It was time for the United States to "cross the Rubicon" and announce the first "moon landing". And at this point, the risk of exposure increased sharply. We'll have to release a lot of fakes. Therefore, before embarking on this main part of the play, it was necessary to additionally probe (it is easier to say, to conduct reconnaissance) the degree of credulity of Soviet specialists, their readiness to "swallow" the next, larger portion of disinformation.

It can be assumed that it was for this purpose that on July 2, 1969, 2 weeks before the A-11 launch, the Soviet cosmonautics center, Zvezdny, was visited by none other than the main performer of the first act of the hoax, the commander of the Apollo-8 spacecraft, astronaut F. Bormann **[11]** . Colonel Bormann (Fig. 6) was an outstanding figure in the astronaut corps. **[12]**... After graduating from the elite US military academy, he stayed there and already as an assistant professor taught thermodynamics and mechanics of fluids. Not every graduate gets such an offer. After joining NASA, Bormann became an instructor at the Edwards Aerospace Pilot School. In 1967 he was a member of the commission to investigate the causes of the fire on the A-1 ship. Bormann then leads NASA on the redevelopment of the spacecraft, and later he is the director of the Skylab program. Bormann, according to Kamanin, during the period under review is working in the White House on the political support of lunar flights. **[11]** .



Fig. 6. Political scout

(the commander of the Apollo 8 spacecraft, a White House employee, Colonel Borman visits Zvezdny on the eve of the Apollo 11 launch)

This was a very unusual visit. First, it was the first visit of an American astronaut to Zvezdny. Secondly, it took place at the most dramatic, the most turning point of the lunar race, about which B.E. Chertok wrote that *"such a combination of one's own defeats with other people's victories has not been experienced since the time of the war"* (Chapter 6).

Since B.E. Chertok used a comparison with the then, relatively recently, the hardest war that ended, then the author of the book would like to make a comparison with it, and precisely with that initial period when we experienced the bitterness of continuous defeats. Imagine that in the difficult days of the summer and autumn of 1941, a prominent German general would arrive in Moscow with the permission of the Soviet government and at a meeting of Soviet officers and generals, as well as politicians, personally tell them how successfully and wonderfully the German army smashes the Red Army. Would this contribute to raising the morale of our military, soldiers, and indeed the entire people? And then would there have been victories at Moscow, Stalingrad, Kursk and, finally, a great Victory? Unlikely.

So it is with F. Bormann's visit. It doesn't take much imagination to imagine what a powerful, far from inspiring influence on Soviet specialists and leaders a detailed report from a man who was at the forefront of the US lunar offensive and personally involved in inflicting the first major "lunar" defeat on the Soviet Union could have. The author may well imagine that already at that time, in the leading Soviet circles, there were significant pro-American forces that "pushed through" Bormann's visit, but it is still difficult to understand the motives of those top leaders who allowed this visit.

At first glance, the timing of the visit is also surprising. It began just 2 weeks before the start of the A-11 and ended on July 10, 1969, just 6 days before the start of the A-11. According to N.P. Kamanin, Bormann was in a hurry "to be at his workplace at the time of the A-11 flight" **[11]**. And then the question arises: it seemed that since your presence in the White House is so important these days - stay there. You can go to Zvezdny and after. But Bormann wants to get into Zvezdny just "before." Why?

This haste becomes understandable if we consider that Bormann arrived in Zvezdny just for the political support of the first "flight to the moon". He was solving an urgent reconnaissance task:

1. Make sure personally that Soviet specialists and leaders believed in the A-8 and A-10 flights around the Moon;
2. Strengthen the psychological pressure of success with your stories and first-hand materials;

3. Make sure that the USSR does not independently control the Apollo program and fully relies on American information supplied directly through the media or by other means. Make sure that such control does not threaten in the future.

His stories had the right psychological impact. Here are the relevant notes by N.P. Kamanina **[11]** :

July 7. *On Saturday, July 5, we received Bormann with his family at the Gagarin Center. At 16:00 Commander-in-Chief Kutakhov, Marshal Rudenko, me and the cosmonauts with their wives met the guests on the doorstep of the Officers' House. Frank Bormann was presented with flowers by Valentina Tereshkova, and Mrs. Suzanne Bormann - by Evgeny Khrunov.*

The official part of the meeting took place in the hall of the House of Officers. After Marshal Kutakhov read out his welcoming speech, Frank Borman briefly spoke about himself and the Apollo 8 flight, answered questions, demonstrated and presented to Soviet cosmonauts a 15-minute film with views of the Moon from a distance of 100 kilometers and a view (not species) of the Earth above the lunar horizon. We showed Bormann fragments of the film about Gagarin "The Road to Space" and the film "Four in Space". On behalf of our cosmonauts, Georgy Beregovoy handed him a copy of the Vostok spacecraft, and Pavel Popovich - photo albums and badges. During the tour of the Zvezdny Museum, German Titov acted as a guide.

In the evening, at dinner, which was attended by about twenty people, Kutakhov, Borman, Titov, Beregovoy and others made toasts. Boris Volynov presented Mrs. Borman with a Palekh casket, and Bormann and both his sons - a Poljot watch. In response, Frank Bormann took off his watch and handed it to German Titov with the words: "I am giving this watch to the Zvezdny Museum. They were with me on the Apollo 8 flight around the moon. "

In total, Bormann and his family spent more than 8 hours in Zvezdnoye, making a very favorable impression on everyone. Frank Bormann is modest, precise, disciplined. He is a brilliant and witty orator, a subtle diplomat and politician. In terms of intellectual development, he could be compared with Gagarin or Titov, but he has more experience and, perhaps, a higher sense of responsibility and self-discipline. In all his speeches, he persistently pursues the following thought: "Our planet is very small, it serves as a home for all mankind, and you cannot fight and destroy your home. The path to the Universe is open before us - we are obliged to achieve peace and mutual understanding on Earth in order to direct our efforts towards space exploration ".

Bormann thanked me very sincerely for organizing the meeting with the astronauts. He said: "I understand that you, General Kamanin, play a decisive role in organizing our trip to the Soviet Union, and I thank you for the attention shown to us, for the warmth and cordiality of the meetings."

In general, it seems that F. Bormann managed to make the most favorable impression on his hospitable hosts. And please note that all the information that Bormann provided about the flight of the A-8 is perceived with 100% confidence.

As a result, returning to the USA, F. Bormann could report with full satisfaction: **“ They believed. You can "fly to the moon"! ”** And the flight with the first "landing" was given the green light, so just one week after F. Bormann's return to the United States, Apollo 11 took off "to the moon." But, despite the pleasant aftertaste left by the Americans from a successful visit, they did not lose their vigilance in terms of protecting their secrets: the start of Apollo 11 took place with the observance of all appropriate precautions.

Operation "Crossroad" ("Crossroads"): from the **means of tracking the enemy - to suppress**

In the active phase of the flight, the rocket is extremely "chatty". It transmits by radio the so-called telemetric information about its condition, about the operation of its systems, about the flight speed and much more. By listening to it, you can learn a lot about the rocket. Therefore, if there is a desire to hide the main parameters of the rocket, third-party observation of the active section of its flight of the rocket is unacceptable. And the Americans did not allow him.

In those years, in neutral waters near the United States and, in particular, not far from the cosmodrome at Cape Canaveral, Soviet radio observation vessels were constantly on duty in compliance with all then international laws. The USA conducted similar activities in relation to the USSR.

But during the Apollo launches, Soviet radio reconnaissance vessels posed a great danger to the success of the hoax, since, listening to telemetry from the Saturn-Apollo, they could, for example, find a discrepancy between the speed and altitude of the rocket to the official NASA data. And the Americans completely drowned out the work of the Soviet radio surveillance equipment during the passage of the rocket through the active phase of the flight. Here is what is written (in abbreviated form) about such jamming on the day of Apollo 11 launch **[13]**.

“The top-secret operation carried out by the US special services in the spring and summer of 1969 is one of the “ Russian pages ” of the Apollo program. In terms of its scope, it can claim to be one of the most ambitious events of this kind. But Americans don't like to think about her. The name of this large-scale operation - "Crossroad" ("Crossroads"), once flashed in the pages of newspapers, was never mentioned again.

The landing of Americans on the moon (the Apollo program) was considered the most important matter of US national policy in the second half of the 1960s.

Even the Vietnam War had less priority. The source of a potential threat was considered to be Soviet radar reconnaissance ships, which were located in the immediate vicinity of Cape Canaveral, where the Apollo launch sites were located.

New in 1969 was that now every such Soviet ship was under round-the-clock surveillance of American intelligence. Their movements were monitored by surveillance aircraft, coastal radar posts, and warships. According to American data, in the spring of 1969, two Soviet reconnaissance ships were constantly within "reach" to the cape. On the days of the Apollo 10 flight (May 1969), their number increased to four. And a few days before the start of Apollo 11 (there were) already seven. They were "opposed" by up to 15 surface ships of the 2nd Fleet and several submarines. These forces were put on a 24-hour basis. The White House even prepared a directive from the US President to retaliate against the Soviet Union when "the spaceship is destroyed." Theoretically, there was such an opportunity, but in practice, during the period of confrontation between the USSR and the United States, no one ever did this.

And then came July 16, 1969. On warships, at electronic reconnaissance points and at electronic countermeasures stations, a combat alert was "played" at night. The Americans were ready to immediately open fire to kill if they thought that signals were generated on Soviet ships that could interfere with the normal flight of the rocket.

At 8 o'clock in the morning local time, the Americans recorded the inclusion of equipment on Soviet ships at full power. True, there were no suspicious impulses - Soviet ships continued their activities to collect information about the American continent and about the US armed forces.

At 0810 hours Orion planes equipped with electronic countermeasures approached the Soviet ships. The ships have reduced the distance to our ships to the minimum possible.

At 0820, coastal stations, equipment on airplanes and ships designed to create interference were turned on at full power in all previously identified operating ranges of Soviet systems.

At 0832 hours, the Saturn- 5 rocket with the Apollo- 11 spacecraft soared upward.

At 8:41 a.m. Apollo 11 entered low-earth orbit.

At 8:45 a.m. the shutdown of most of the systems on Soviet ships was recorded.

At 8:47 am, the Americans stopped jamming Soviet ships.

At 8:50 a.m., the ships of the 2nd Fleet received an order to cover their guns. Orion planes left the zone.

The Americans did not manage to record any signal that could be interpreted as a danger to Apollo 11.

Judging by the tone of the article, its author, A. Zheleznyakov, seriously believes that all this vigorous activity of the Americans was caused by the fear of the "ghost" of the Soviet threat. For self-defense purposes? But after all, according to A. Zheleznyakov himself, in practice the USSR never influenced the launched American missiles. Why on earth should the USSR have behaved differently on the day of Apollo 11 launch? Of course, for the USSR it was a great moral blow - the flight of the Americans to the Moon. But to destroy a missile with people on board, which is being watched by hundreds of thousands of spectators, that is, practically in full view of the whole of America, is a direct declaration of war and not some kind of one, but nuclear. This is suicide. The moon is not worth it.

And why do the Americans prefer not to remember this operation? After all, if her main goal was to take care of the astronauts, so that the malicious "Soviets" did not shoot down the spaceship, then what is wrong with her? It means that those who conceived this operation were not concerned about the astronauts.

In general, A. Zheleznyakov's explanation about the motivating reasons for such an aggressive and uncompromising operation that the Americans conducted in the short minutes of the rocket flight does not work.

For comparison, let us recall how the USSR "behaved" in a similar situation 10 years before the Apollo flights. Then, in 1959, for the first time in the history of mankind, six years ahead of the Americans, the USSR hit the moon with a rocket. Here is an excerpt from the memoirs of academician B.E. Chertoka [1]:

*“The rocket was launched on September 12 without a single comment The first concern is to edit the TASS message. The second is to obtain permission to immediately notify Professor Lowell, director of the Jodrell Bank Observatory in England, about the launch. In all of Europe, only this observatory possessed an antenna that was able to track our rocket on its way to the moon and confirm that we really did not miss . (President of the USSR Academy of Sciences) Keldysh demanded permission from the State Commission. In the end, Keldysh overpowered and instructed to immediately contact Lowell and give him the predicted time of the meeting with the Moon and the current ephemeris (coordinates - A.P.) so that he could find the emitting container among all the cosmic noise and crackles. There was a fear that our messages would not be believed, except for their own, **foreign witnesses** to the moon were **also required** . We had no doubt that the Americans would also try to keep an eye on our second lunar. We had no connection with American scientists. They expected that they themselves would guess to turn to Lowell for help. And so it happened. NASA Deputy Director Professor Hugh Dreiden: “We were not able to visually track its lunar landing. But we received signals from Luna-2 in the United States. We kept in touch with Professor Lowell, who informed us of every step of the Soviet lunar*

rocket. Our scientists, based on the data of Professor Lowell, calculated the trajectory of the rocket. Thus, NASA has confirmed that the Russian lunar rocket has reached the Moon "

So, the USSR is taking care to find foreign witnesses who could independently confirm the fact that the rocket hit the moon. And he does everything necessary for this.

And the Americans do exactly the opposite. During the launch of the rocket, please see. You won't see much by eye. But in terms of control over the details of her flight, the **Americans not only do not look for outside witnesses, but also jam them** . And after such a comparison, how not to think about it? If the ship really flies to the Moon, if the rocket in the active phase "behaves" exactly in accordance with the announced flight plan to the Moon, then why jam other people's surveillance equipment? After all, Saturn 5 is not a military rocket. In fact, according to the author of the book, the goal of the Americans was not to allow "outsiders" to recognize that the missile was not flying according to the announced program. Consequently, the rocket launched from the cosmodrome was not at all what NASA reported about it.

Soviet contribution to the success of the hoax

Two political factors of purely Soviet origin also contributed to the success of the hoax.

Firstly, under the influence of information about the success of Apollo 8, the USSR excluded from its plans a manned flyby of the Moon and thereby deprived itself of one of the most effective means of control over the "lunar" activities of the Americans.

Secondly, this success was helped by the idea of classifying the achievements of Soviet science and technology, driven to the point of absurdity . Here is a copy of the page " Life " **[7]** (ill. 7a, b, c) . Here are the silhouettes of three rockets - Saturn-5, Soyuz and Saturn-1B. Next to the American missiles, the Soyuz looks more than modest. But at that time the Proton rocket had been flying in the USSR for about two years (ill . 7d) . As far as the author remembers, photographs of "Proton" were not published in the Soviet press at that time. But if on the considered comparative diagram instead of the "Union" were shown "Proton", then the comparison would not look so overwhelming, and there it would be possible to think about what is hidden under the wide body of "Saturn-5". And here is what her contemporary, General N.P. Kamanin **[11]** :



June 5, 1963. In the evening we watched a secret film about the flight of Nikolaev and Popovich. The film could have been more interesting, although what is in it, ordinary people would have watched with exciting interest. But this film is not shown due to the presence of "big secrets" in it (rocket, ship, launch, leaders). These secrets have long been known to Americans. They made their "Saturn", knowing well our "Seven". And about Korolev and other chief designers in America and Europe they give lectures and write huge articles. It turns out pretty stupid: we hide our achievements and outstanding designers and scientists from our own Soviet people. "

III. 7 .

Silhouettes of rockets: **a)** Saturn-1B, **b)** Soyuz and **c)** Saturn-5, **d)** Proton rocket

Of course, state secrets were, are and will be. But, having surpassed in their time a reasonable measure of secrecy, our leaders have deprived their people of many reasons for pride in their science and technology. And the less a person knows about the achievements of his country, about his outstanding scientists, designers, heroes, the easier it is to convince him of someone else's superiority [14,15] .

Versions, opinions

16-20 minutes

It is widely believed that "our people followed everything" and, therefore, there is no point in doubting the reality of the Americans' stay on the moon. Here are some quotes on this topic.

"Ours" followed the entire flight of the Americans with their equipment "[1].

"We then ... followed their every step, every stage of preparation for a flight to the moon" [2].

"Our radio equipment received signals from the Apollo 11 board, conversations, a television picture about the exit to the lunar surface" [3] .

Unfortunately, with the one exception below, these faceless "we" and "ours" tend to end up with such information. But you can also watch on the TV screen "on the Eurovision channel", as Academician B.Ye. Chertok (Ch. 6). Of course, the TV show, which is hosted by NASA itself, is an interesting source of information. But we are interested in what the anonymous "ours" and "we" did to track the Apollo flights with their technical means. It is especially important to know the following:

1. Did our people follow the movement of the "Apollo" in a temporary near-earth orbit, did they record the fact that the "Apollo" left this orbit towards the Moon?
2. Did our people follow the Apollo movement along the Earth-Moon track?

E.P. Molotov: "We" saw "how the Americans landed on the moon"

In August 2005, an interesting article [4] appeared in the Novosti Kosmonavtiki magazine [4] entitled *"We" saw "how the Americans landed on the moon ... an article by E.P. Molotov, a participant in the events of 30 years ago, finally closes the ridiculous question" There were Are the Americans on the Moon?* "E.P. Molotov - specialist of the Russian Research Institute of Space Instrumentation, at that time Research Institute-885 (Moscow). Here are short excerpts from this article:

"Secretary of the CPSU Central Committee DF Ustinov, who was in charge of the country's defense industry, at the end of 1967 . instructed the chief designer of NII- 885 MS Ryazansky to develop a radio-technical complex that could receive signals from the Apollo spacecraft.

M.S. Ryazansky at that time was responsible for the creation of radio-technical means of control of spaceships of the Soviet lunar program. Under his leadership, to control Soviet manned and unmanned spacecraft for exploration of the Moon, the Ground Control Complex was created, which included two flight control centers, six ground and three ship control centers, equipped with appropriate tracking stations and located on the territory of the Soviet Union and at certain points World Ocean. However, these means could not be used to receive information from the Apollo spacecraft, since they operated in a different frequency range with signals having a different structure. Therefore, it was necessary to create a special control complex capable of receiving data from the Apollo.

*A complex was created based on the TNA-400 antenna with a mirror diameter of 32 m , operating in the 13 cm range (Fig. 1a). **The antenna pattern covered almost half of the moon's disk.***

*To track ships in their orbits around the Moon and when landing on its surface, it was necessary to have data from these orbits. However, such information was not published by the Americans. Therefore, the **data on the orbits of the flight were calculated by ballistics based on the time of launch and arrival to the Moon of the Apollo spacecraft, which were reported on American radio.***

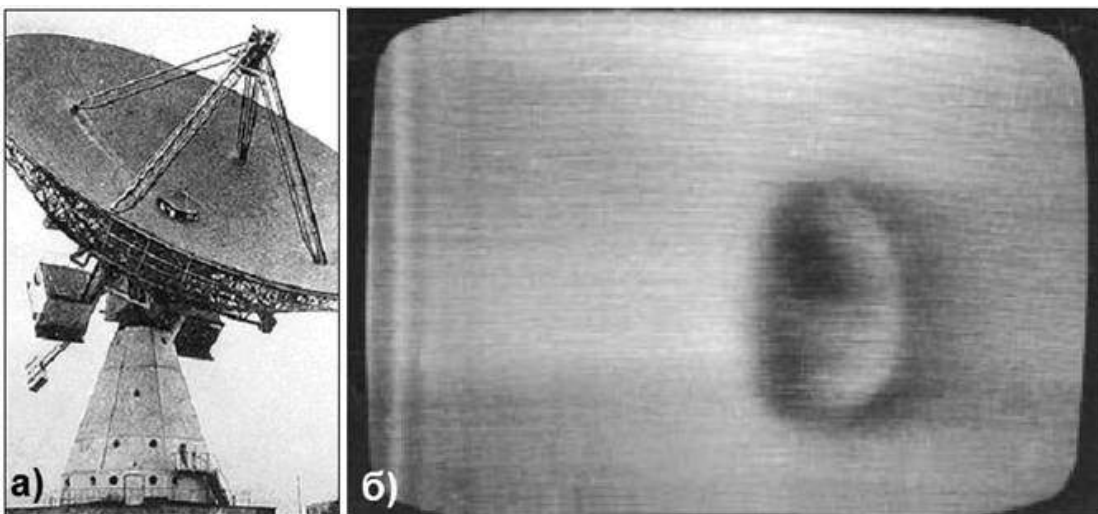


Fig . 1 . a) antenna for tracking Apollo (Simferopol, Crimea)

b) the image of the rise of the Earth above the lunar horizon, taken by the tracking station in the Crimea

Tracking was carried out for the ships A-8, A-10, A-11 and A-12 from December 1968 . November 1969 g of . The astronauts' telephone conversations with the Earth were received with good quality. Figure 1b shows an image of the Earth rising above the lunar horizon, taken on a television channel from one of the Apollo spacecraft.

Moon forwarding A-8 December 1968 g of . carried out the first manned flight to the Moon. Flight of A-11 with an exit to the lunar surface on July 20, 1969 . N. Armstrong and E. Aldrin finally stopped the competition for landing a man on the moon. Information about the creation and functioning of the Soviet special control radio-technical complex has not been previously published. "

Here are the lessons to be drawn from this article:

1. The article clearly states that the existing one **described by E.P. Molotov, the Soviet spacecraft tracking system turned out to be useless for tracking the Apollo. According to Molotov himself, " these means could not be used to receive information from the Apollo spacecraft, since they operated in a different frequency range with signals having a different structure."** And the hastily created station in the Crimea, due to its loneliness, was unable to provide continuous tracking of the Apollo;

2. From the excerpt "*data on the flight orbits were calculated by ballistics based on the time of launch and arrival to the Moon of the Apollo spacecraft, which reported on American radio*", it follows that **"ours" did not record the fact that the Apollo left orbit towards the Moon and did not follow the movement of the Apollo along the Earth-Moon path.** Because if they did, there would be no need to use American radio messages to calculate the orbit.

Thus, the fact of the Apollo's departure from the near-earth orbit to the Moon and the entire flight from the Earth to the Moon remained completely unconfirmed by our means. So **to the question of principle, whether the Apollo flew to the Moon or not, after the results of such "tracking" nothing can be said.** And this is called "followed the entire flight of the Americans with their equipment" **[1]**.

3. Maybe E.P. Molotov was prompted to his decisive conclusions by a muddy picture (ill. 1a)? Then it is worth recalling that the first image of the Earth's rise above the lunar horizon and of much better quality was transmitted by the American automatic Orbiter 2 years and 4 months before the Apollo flights. And nothing prevents us from believing that in Fig. 1a we see the same version performed by another "Orbiter", but adopted in poor quality due to haste in re-equipping the Simferopol antenna.

4. "Nashi" from the Scientific Research Institute of the KP heard the radio communications of the astronauts coming from the side of the Moon. And what does this prove? Don't we know that the Soviet cosmonauts, sitting in a bunker near Evpatoria, successfully spoke from the direction "from the moon", using "Probes - 4 and 6" as repeaters? Why is this impossible for NASA? She had all the necessary equipment for this (chapter 18). Praise to NASA specialists, who, having heard Russian speech from the Moon, quickly figured out what's what. And what can be said about such specialists who, in a similar situation, having heard English speech, rush to report: "We" saw "how the Americans landed on the moon"?

No military data

Often in discussions one can hear the following opinion: "our military could have followed any missile launch from the territory of the United States." In November 2004, the author addressed a relevant question to a competent contemporary of those events - Lieutenant General, Honored Tester of Space Technology, and at that time Assistant to the Commander-in-Chief of the Strategic Missile Forces of the USSR Ministry of Defense VV Semyonov (see the Appendix for the corresponding biographical link). His answer was militarily short: ***"There are no data on the telemetry of the Apollo flights."***

They did not follow the telescope

Of course, it would be very good if "ours" would track with optical instruments the stay of the Apollo in near-earth orbits. But the author could not find any specific information about such observations (who, where, when, what he saw and what he saw).

There remains one more possibility for control by optical methods from the Earth: in a large terrestrial telescope, a spacecraft near the moon can be seen as a very faint star (10,000 times fainter than the faintest stars visible to the naked eye). And if the ship is still on the way to the Moon or closer to the Earth, then this artificial star will be brighter. Therefore, with the help of large telescopes, the Apollo flights could be traced almost all the way from the Earth to the Moon or over a significant part of it. Soviet astronomers showed the feasibility of this task on the example of Soviet "Probes". In 1970, when the flights of the lunar "Apollo" were in full swing, Soviet astronomers observed our "Probe-8" when it was only 30 thousand km from the Moon [8] and 350 thousand km from the Earth. In December 2004, the author turned for advice to the head of the astrometry department of the Sternberg State Astronomical Institute (GAISH, Moscow), Doctor of Physics and Mathematics, Professor Kuimov K.V. Here's what he told the author:

"Observations of the "Probe" were conducted with our participation. In addition to the named observatory, we also conducted them at the same time in Evpatoria, on the telescope of the Center for Deep Space Communication. As for the "Apollo", no one in our institute of astronomical observations of their flights did not conduct and did not participate in such observations. We cannot completely exclude the possibility that such observations were carried out in other astronomical centers of the USSR, but this is unlikely, since it was a rule that such experiments were carried out with our participation. "

Trust must have limits!

Now let's see what sources of information are mentioned in the diaries of General Kamanin [6]:

June 12, 1967. I listened to Belyaev's report on the trip to Paris and on the meeting with American astronauts Collins and Scott.

April 10, 1968. Detailed materials have been received about the second flight of the American Saturn-5 rocket with the Apollo-6 spacecraft without a crew on board. According to NASA ...

December 4th. We have received a cipher-telegram from our ambassador to Washington Dobrynin: "The President of the United States invited the heads of diplomatic missions to be present on December 21, 1968, at the launch to the Moon of Apollo 8 with a crew of three.

December 22. The Saturn 5 rocket appears to be a very reliable launch vehicle. I first saw the mock-up of this rocket in Washington in 1962, when the American astronaut John Glenn was giving us explanations on the US space program at the US State Aviation Museum.

March 29, 1969. "Marshal Kutakhov (Commander-in-Chief of the Air Force), members of the Military Council, generals and officers of the General Staff of the Air Force watched three films on space topics: "Apollo 8", "Apollo 9" and "Aerospace Exhibition of 1968 in Turin". Everyone was very pleased with the opportunity to watch these films (I managed to get the first two of them at the American Embassy through the APN).

June 13. Yesterday Shatalov and Eliseev reported on their trip to France: the cosmonauts got acquainted with the latest in aviation and space technology, met with the Apollo-9 crew.

Astronauts, NASA reports, NASA films - these are the sources of information that the distinguished general refers to in all six cited entries. And so according to all the diary entries of N.P. Kamanina - no other data about the Apollo program, except for the data provided by the Americans themselves, is not mentioned. And what is the reliability of such information, we have already seen numerous examples in this book. N.P. Kamanin was not at all alone in his confidence in the information coming from the Americans, from NASA. Let us recall how the chief designer V.P. Mishin (Ch. 6):

"He did not believe that the Americans would leave low-earth orbit, go to the Moon. He was deeply convinced that this could not happen. And suddenly a message comes - the sustainer engine turned on and "Apollo 8 went to the Moon ... Vasily Pavlovich got up, looked at the screen, and everything was shown well there. I went and slammed the door. "

This reaction shows not only the deep grief of V.P. Mishin, it also demonstrates that the esteemed chief designer and academician, like all "ours", 100% believed the reports of NASA. After all, not out of nowhere, V.P. Mishin did not believe that

the A-8 would leave the Earth. With all his life experience, he knew that in a big new business there is no rush to succeed, without many trials and failures. But as soon as NASA announced that A-8 went to the Moon, all life experience was forgotten.

Let's not be too hard on our fathers and grandfathers. Two factors have merged in this trust. Firstly, the habit of thinking that there, in the West, especially in America, people live smarter than we do, had an effect on the habit, which has not even been outlived by our own cosmic successes. They "can do everything, can do everything." Secondly, no one could have thought that in such a matter as the fulfillment of the centuries-old dream of mankind - a flight to the Moon, deception and deception by the state are possible.

Did the intelligence report everything to our leading space specialists?

B.E. Chertok, who was then one of the closest assistants of S.P. Koroleva writes :

"For us, the participants in the Soviet lunar program, the successes of the Americans were not unexpected. We received information about the progress of work in the USA not only from the materials of the open press "[4] . But the text that follows [4] casts doubt on whether this "more detailed information" was anything other than NASA information. Chertok spent several pages on a detailed description of the American lunar program, and at the same time, with regard to the Apollo program, he cited only NASA materials already known to the reader, materials open to everyone.

True, Chertok still has the only example of the work of Soviet intelligence in the "lunar" direction, which is beyond the scope of NASA information. Unfortunately, this is an example of the opposite property:

"Soon after the assassination of President Kennedy," Chertok writes, at one of our regular meetings on the lunar work schedule, Korolev announced the information that, according to him, our top political leadership had at his disposal. Allegedly, the new President Lyndon Johnson does not intend to support the lunar program at the pace and with such a scale that NASA proposed. Our hopes for a reduction in US space programs did not materialize. "

So has our intelligence service completely failed in its quest for the true content of the Apollo program? Let's not rush to such a conclusion, especially since many facts indicate that the top Soviet leadership had an idea of this content and made their knowledge the subject of a particularly important bargaining. But, apparently, it was not going to initiate the leaders of the Soviet lunar program into its plans. This is described in the article <http://www.manonmoon.ru/articles/st10.htm>.

General Semenov's Syrian awards

Corr: *Among the guests of the anniversary of the Central Proving Grounds of the Navy, a smart elderly man in a uniform with many awards, including the most exotic ones, as it turned out, Syrian, unwittingly attracted attention. But we met an employee of the NPO Mashinostroenie, retired Lieutenant General Vladimir Vasilyevich Semyonov, in an informal setting - in a hotel room. - Vladimir Vasilyevich, you can't do without questionnaire questions ...*

V.V. Semyonov: - *"Retired Lieutenant General Semyonov. Was born in 1920. In the army since July 41st. In 1949 I entered the Frunze Academy. After graduating from it, he taught at the Dzerzhinsky Academy. But with the formation of the Strategic Missile Forces, I was transferred to the Main Headquarters of the Strategic Missile Forces. Soon - in December - it will be 45 years since that day ... Several years later I was appointed assistant to the commander-in-chief. ... Then I was an assistant to the first deputy defense minister, General Sokolov, - continues my interlocutor. - And he completed his service as deputy head of the Main Directorate of military educational institutions. I resigned from the army in 1981 and, at the suggestion of Academician Chelomey, went to work at NPO Mashinostroenie as Deputy General Designer for Testing. I continue to work to this day as a chief specialist in the organization of tests. "*

Corr .: *"You talked with the leading missile designers - academicians Korolev, Yangel, Chelomey; with the military leaders. What were they like in everyday life? "*

V.V. Semyonov: "Yes, I knew them well ..."

Interviewed by Stanislav ZELYANIN (for the full text of the conversation, see this link)

Part 2

39-48 minutes

Versions, opinions. Chapter 22

What do we know about the "lunar" rocket

The root of all hoax

Apparently, one of the main reasons why Soviet specialists - participants in the lunar race did not pay attention to the scarcity of NASA's "evidence", was the strongest impression from the Saturn-5 rocket (Fig. 1). Let's read the memoirs of veterans of Soviet cosmonautics:



N.P. Kamanin **[1]** : “ December 22, 1968. The Apollo 8 launch went well. The Saturn 5 rocket appears to be a very reliable launch vehicle.

January 30, 1969 The American manned flight plan for 1969 is grandiose, and there are many reasons to believe that it can be fulfilled. We do not have a rocket to land people on the moon ”.

B.E. Chertok **[2]** : “ December 21, 1968, Saturday, good weather, but there was no festive mood. At NII-88 we admired the launch of Saturn-5 with Apollo-8. The start even on the TV screen aroused feelings of admiration ... We compared everything we saw with our starts and could not help thinking about the upcoming start of the first H1 in February ”.

Fig. 1. "The launch of Saturn-5 is a particularly impressive event."

Both Kamanin and Chertok are saddened by the absence of a Soviet lunar rocket, and not, say, a lunar module or something else. They understood perfectly well that if there would be such a rocket, there would be a flight to the moon. And the idea that a huge rocket launched from the American cosmodrome could fly somewhere other than the Moon did not occur at that time. But since the evidence of "lunar" flights upon close examination does not seem convincing, the thought arises that a rocket was taken out to the launch complex, outwardly indistinguishable from Saturn-5, but much less powerful, unable to fly to the Moon. The root of the whole hoax must be found in the rocket.

The active phase of the flight is the key to the secrets of the rocket

Chapters 20 and 21 say that during the Apollo launches, the **Americans drowned out Soviet observation vessels, which could receive telemetry during the active phase of the rocket flight, for the sake of it.** Let us note this circumstance as the first interesting fact (**fact No. 1**). This fact suggests that the more complete the information we know about the active phase of the flight, the more likely it is that we will be able to reveal at least part of its secrets. Therefore, we will not spare time and analyze step by step what is known about this site.

Figure 2 shows the flight path of the "lunar" rocket up to the launch of "Apollo" into an intermediate near-earth orbit, built on the basis of NASA materials **[3]**.



Fig. 2. Main events in the active phase of the rocket flight

(according to NASA)

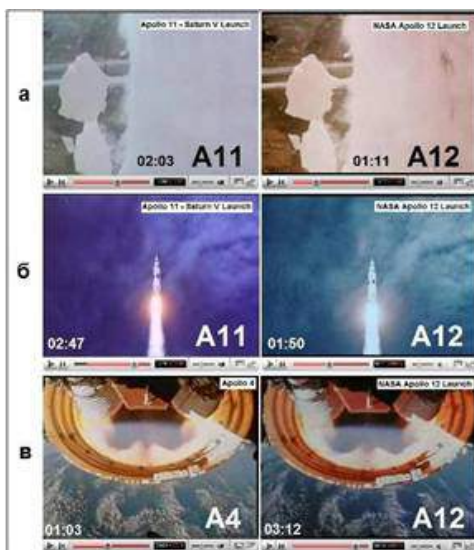
The circles with numbers indicate the main events that, according to NASA, occur during the flight on the active phase:

"0" - the moment of the launch of the rocket from the cosmodrome is conventionally taken as the origin (zero) of time.

"1" - after 154 s the motors of the first stage S - IC are switched off, it is discarded, and after 2 s the motors of the second stage S - IIC are started. All this happens at an altitude of 65 km with a rocket speed of 2.7 km / s;

"2" - 30 seconds after turning off and reset of the first stage, at an altitude of 90 km and at the 184th second, the forward second stage S - IIC is released from the lower adapter, a huge (10m in diameter) ring that previously connected the second stage with the first ... Engines of the second stage S - IIC are operating at full power by this moment;

"3" - After working just over 6 minutes, the second stage engines S - IIC are switched off at about 524th second. It takes about 4 s, and at the 528th second the engines of the third stage S - IVB are switched on for the first time . This event occurs at an altitude of about 190 km at a speed of 7 km / s. It is only slightly less than the circular orbital speed of movement;



"4" - the engines of the third stage are switched off at approximately 685 seconds. At the same time, both the Apollo spacecraft and the third stage, which have not yet used up most of their fuel, are injected into an intermediate near-earth orbit. (This fuel and the S - IVB stage itself will be used by reclosing for the subsequent launch of the spacecraft to the Moon).

III.3.

The same footage appears in videos about the launch of different Apollo:

a) in the first seconds after launch, flakes of frozen moisture fall off from a rocket taking off;

b) the rocket goes into the clouds;

c) the adapter is separated from the second stage

Interesting information about the active phase of the flight can be obtained by analyzing numerous clips of NASA about the launches of "lunar" rockets [4]. There are several clips about the flight of each "lunar" "Apollo". In fact, as the acquaintance with these clips shows, signatures indicating a particular number of Apollo (A-4, A-11, A-12, etc.) are of little value. In fact, all these clips are based on a general and not so large archive of filming. In what specific flight this or that

frame was shot, it is impossible to establish with this approach of NASA. For example, Fig. 3 shows frames from three clips bearing different numbers: A-4, A-11 and A-12 [5,6,7]. It's easy to see that the same frames appear in different clips.

Therefore, we will study all available episodes as a whole, referring to a certain generalized flight of the "lunar" rocket. And mentioning this or that index (A4, A8, A11, A12, A13, etc.) will simply help the coherence of the text and make it easier for the reader to check links. Taking these remarks into account, let us first get acquainted with those clips that show a rocket filmed by film cameras from the ground and from high-altitude aircraft.

The tail of the hull is engulfed in flames

Figure 4a shows the A-13 rocket. She took off from the launch site in the daytime with bright blue skies and excellent visibility (Figure 4a). The flame burns where it should be: behind the nozzles.

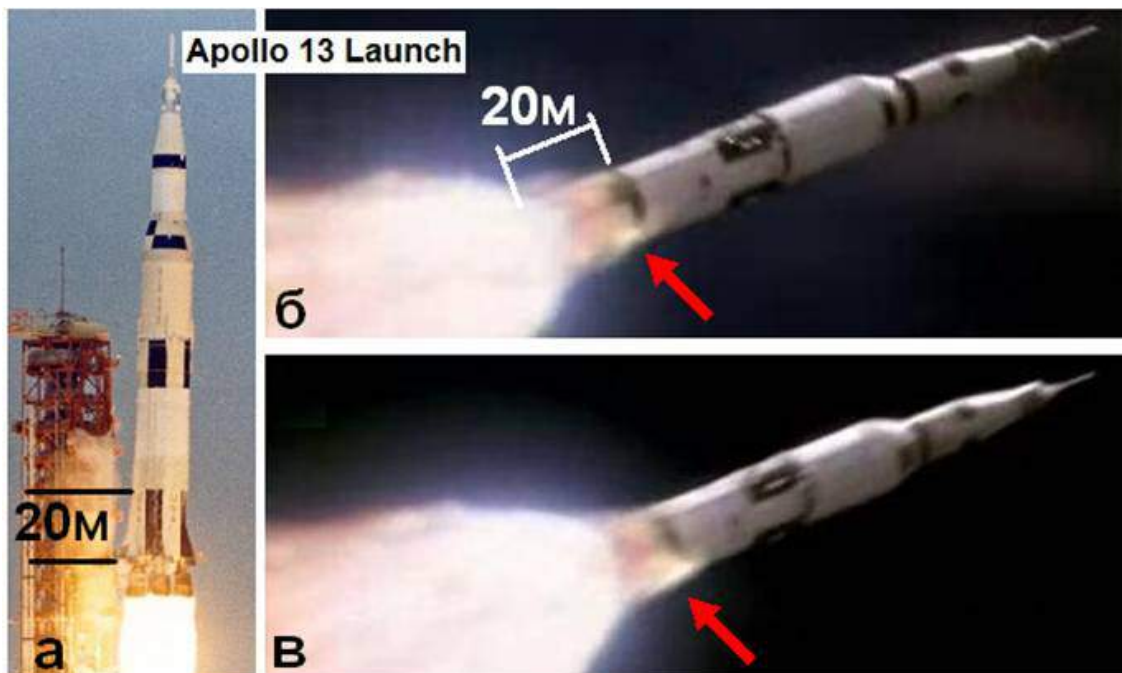


Fig. 4. The burning body of the "lunar" rocket A-13.

a) early stage of the rocket flight - the body does not burn;

b, c) the later stage of the rocket flight - the tail part of the hull burns 20 m above the nozzles of the first stage; isolated sources of ignition of the case are visible

In the next frames (ill. 4b, c, d), the rocket is shown flying already high in the stratosphere. This is evidenced by the blackened sky around her. The rocket is still fully assembled, all its stages are in place. The shooting is carried out from an airplane flying at high altitude in the stratosphere, this is also indicated by the black color of the sky. In these frames, we see a rather unexpected phenomenon:

the entire tail of the rocket is engulfed in flames. This flame, in spite of the oncoming supersonic air flow, rose so high in the direction of the rocket's movement that it covered the lower black stripes on the rocket body, which is 20m in height. In the glow of this flame, you can see clots located on the body as if separately (red arrows point to them). The fact that they are quite distinctly separated from the rest of the flame indicates that the source of the flame, at least within these spots, is located on the body itself. In the author's opinion, it is logical to assume that for some unknown reason the body material itself is on fire.

The author consulted with experts whether the tail part of the hull was burning in our Soyuz and Proton missiles. No, it is not observed. It can be assumed that both skeptics and defenders, who have been discussing this phenomenon for several years, would not have missed the relevant information regarding other American missiles, if there was such a thing. But there is no such information. So we have before us a very unusual phenomenon, not observed on other types of missiles. But for a "lunar" rocket, this phenomenon, oddly enough, is quite typical. In addition to the case with A-13, skeptics discovered this phenomenon in the materials of flights A-6, A-8, A-10 and A-11 [4,8] . It is also shown in the film For All Mankind.

So, let us write it down as **fact No. 2: the appearance of a flame on a multi-meter section of the tail section of the "lunar rocket" body is its typical property. At the same time, it is, apparently, its unique difference from conventional missiles. The presence of discernible separate combustion sites on the housing indicates that its material may self-burn.**

Explosion in four steps

Let us re-read part of the above entry by B.E. Chertok, concerning the next interesting event on the active phase of the flight of the "lunar" rocket: *"we admired the launch of" Saturn-5 "with" Apollo-8 "on the big screen. When the first and second stages are separated, everything is enveloped in splashes of smoke and flame. One gets the impression that an explosion has occurred, but in seconds a bright, clean torch rushes on. "*

The reader can see this explosion between the 7th and 8th seconds of the clip [9], which refers to the flight of A-11 and lasts 30 seconds. In Figure 5a, the rocket is shown 0.28 s before the start of the event. In this and subsequent frames, the image is rotated 90 ° to the vertical in comparison with the original . This made the illustrations more compact. In the frames of Fig. 5b, c, d for 0.2 s, the explosion cloud covers almost the entire rocket.

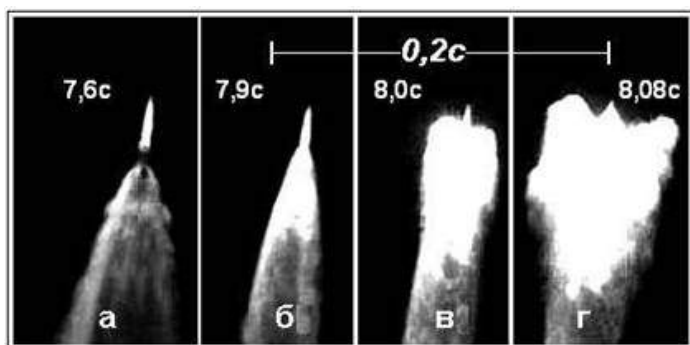


Fig. 5. 4 seconds before the separation of stages I and II , the first explosion occurs.

a, б) the moment immediately before the flash;

с, д) development of the first flash to its maximum

But the process does not end there. After the first flare we saw, three more flares occur within 0.6 s, so that in total, in just 0.83 s, four such flares occur. Let's follow how this happens using the freeze frames shown in Fig. 6.

In the frame of Fig. 6a (repetition of Fig. 5d), one can see the first flash at its maximum. After 0.14 s, the cloud, devoid of the influx of new portions of matter, seems to round up (ill. 6b). After another 0.14 s, new forward ejections of matter are noticeable (Fig. 6c). This is the second outbreak. And again the cloud “floats”, deprived of fresh “recharge” (ill. 6d). Two more flares can be seen (Fig. 6e and Fig. 6g), after which the head of the cloud, devoid of new portions of matter, is decelerated by the incoming air stream, and the head of the rocket enveloped in smoke appears from it (Fig. 6h). The time interval between flashes is approximately the same: $\sim 1/4$ s within the measurement accuracy of ± 0.04 s (which corresponds to one frame). The fact that the explosion consists of four flares, evenly distributed in time, speaks of its non-random, purposeful nature.

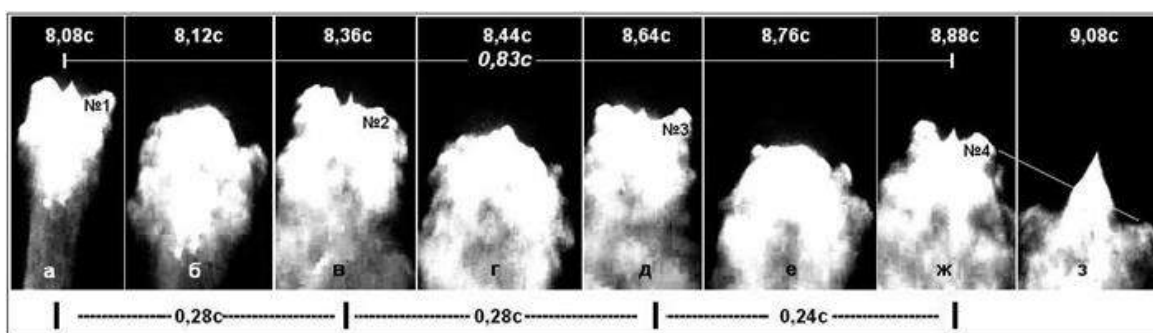


Fig. 6. The explosion consists of four flashes:

a, c, e, г) flare maxima; **б, д, ф)** "melting" of the cloud between separate flares; **h)** the explosion is pumped in, the cloud lags behind, the rocket goes forward

Unfortunately, the body of the rocket in the frames of Fig. 6 is completely indistinguishable, such is the quality of the clip. Therefore, looking at them, it is absolutely impossible to say what is happening at the moment with the rocket

itself: is it still flying as a whole, or has it already begun to separate? But fortunately for us, in the book [11] there is, so to speak, a duplicate of the frame of Fig. 6h (9.08s) - the only found more or less high-quality snapshot of this very moment of the explosion. It is shown in Figure 7.

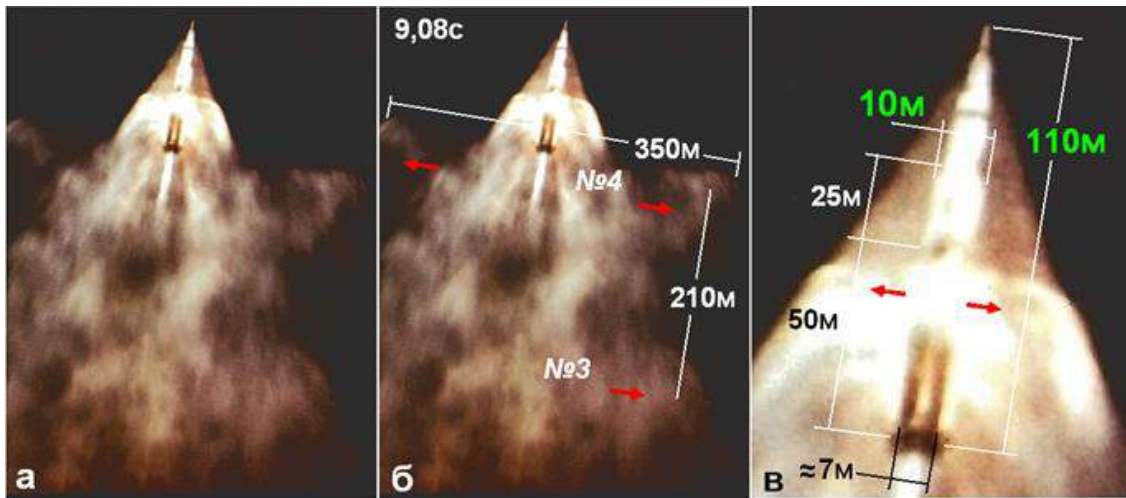


Fig. 7. The last (fourth) burst of the explosion ends:

a) an enlarged fragment of the frame ill. 5h from the clip, **б)** a higher quality frame of the same moment, taken from the book [11], **с)** an enlarged fragment of the frame "b" showing the body of the rocket

Figure 7a shows the photograph without any additions by the author so that it can be better viewed. Figures 7b and 7c contain additional information that will be required when studying this image. In Fig. 7b, in large green print, two basic sizes are set, which are generally known and which will allow us to estimate some other spatial dimensions regarding the explosion and the rocket itself. This is, first of all, the length of the rocket itself (110m), as well as the diameter of its second stage (10m). All other dimensions in Fig. 7b are given in the photograph based on their proportion to the baseline.

The first thing that catches your eye is that the rocket at the moment in question is flying unseparated, in full composition of all stages. Therefore, when B.E. Chertok writes that the explosion occurs "when the first and second stages are separated," he is mistaken. As will be shown below, the explosion begins 4 s and ends 3 s before the separation of the steps. An interval of 3 s between two events (the end of the explosion and the beginning of the separation of the steps) is almost invisible to the eye. But by the standards of a rocket flight, it is quite sufficient to consider these two events independent. Consequently, this explosion is some kind of special independent phenomenon, characteristic only of the "lunar" rocket and the purpose of which is still not clear to us. We will be able to understand it only through further study of it.

In Figure 7, we see another manifestation that the explosion consists of several separate flares. They form the characteristic side sleeves that resemble

the furry paws of a plush toy. These are emissions of combustion products. Figure 7 shows the emissions from the last two explosions: # 3 and # 4. Flash # 3 has already ended, and the outlines of its right-hand ejection have noticeably swam and are not as sharp as the outlines of emissions from Flash # 4. Flash # 4 has just happened and is not over yet. It is still burning in the middle of the rocket, forming a bright white skirt from the resulting combustion products.

The pronounced lateral direction of movement of the explosion products is striking, as indicated by the red arrows. This can be seen both in the "furry" sleeves and in the outlines of the central part of the white skirt. It is important to pay attention to this, since some participants in the discussions are trying to explain the explosion by the inclusion of special engines that ensure the separation of the stages. Such engines can indeed be used, but they do not "blow" across the rocket's course of motion, but only backward or forward.

Figure 7c shows the dimensions 50m and 25m. These are the lengths of the first and second rocket stages, respectively. Please note that the white skirt of the combustion products of the explosion does not rise above the boundary between the first and second stages, that is, the explosion acts purposefully only on the first stage. In doing so, he does two things with her.

First, it changes its color. The first step at the start has the same white or light gray color as the second (Fig. 1, Fig. 4). And in Fig. 7, where it is not hidden by the blast skirt, its color is brownish-brown, as if burnt. And the second stage, located above the explosion boundary, completely retained its original whiteness.

Secondly, which is especially strange, after the explosion, the diameter of the first stage decreases markedly.

At the cosmodrome, the first and second stages together look like an even cylinder with a diameter of 10 m (Fig. 1 and Fig. 4) **[14]**. They look exactly the same in flight before the explosion occurs (Fig. 4). After the explosion, the diameter of the second stage of the first stage becomes noticeably smaller than the diameter of the second (Fig. 7c). With the help of the "Scaliper" program, the ratio of the diameters marked in Fig. 7c was measured on the computer screen, and thus it was found that the diameter of the "narrowed" first stage is approximately 7m (with an error of ~ 0.7m). The narrowing of the diameter of a rocket or at least one of its stages during flight is an unprecedented fact.

We studied the explosion from the clip **[9]** and the image in Fig. 7, which NASA "attributed" to the A-11 rocket. B.E. Chertok left us a verbal description of the explosion that occurred during the flight of the A-8 rocket. The same explosion can be seen in the NASA clip for the A-12 **[7]**, and in the film For All Mankind **[10]**. That is, a large-scale explosion around the entire body of the rocket is a typical phenomenon for a "lunar" rocket. At the same time, this is a unique phenomenon in the sense that it is not observed in any other rockets, except for the "lunar" one.

Let's write down what we learned above about the unusual explosion as **fact number 3**:

- **about 4 seconds before the separation of the first stage, a powerful explosion occurs around the rocket with a cloud size of hundreds of meters. It ends approximately 3 seconds before the separation of the steps. The total duration of the explosion is slightly more than 0.8 s;**
- **the explosion consists of four flares following each other with an interval of $\frac{1}{4}$ s, which indicates its non-random, planned nature;**
- **explosion products propagate in a characteristic transverse direction. This circumstance and the fact of a fourfold repetition make it possible to assert more reliably that we see exactly the explosion, and not the inclusion of any auxiliary engines;**
- **the explosion affects only the first stage of the rocket and does not affect the rest of the stages;**
- **after the explosion, the color of the first stage turns from light to brown-brown;**
- **after the explosion, the diameter of the first stage of the rocket decreases from the initial value of 10m to the value of ~ 7 m;**
- **according to the available data, such an explosion does not occur during the flight of other types of rockets, that is, it is a characteristic feature of a "lunar" rocket.**

The missile speed at the time of separation is 2.6 times less than the declared speed

The study of the explosion cloud in Fig. 7 makes it possible to estimate the rocket speed, since the arms of lateral ejections from two neighboring flares - No. 3 and No. 4 are simultaneously visible here. The distance between these branches is approximately 210m. We know the time interval between flashes - 0.24 s. From this we get a value for the rocket speed of approximately 0.9 km / s.

Note that for the first time the missile speed was determined at the moment under consideration by the candidate of technical sciences SG Pokrovsky **[12]**. He found that this speed does not exceed 1.2 km / s and **thus** made a very important contribution to the disclosure of the secrets of the "lunar" rocket. As the final in further analysis, we will use the average of the two named values of the true speed: ~ 1.05 km / s. According to official data from NASA, the speed of the "lunar" rocket at the time of separation of the first stage is 2.7 km / s. There is an overstatement of 2.6 times.

Let us write down the revealed circumstance as a very important **fact No. 4: by the time of separation of stages I and II, the "lunar" rocket flies 2.6 times slower than NASA says. This means that its technical parameters are far from officially announced.**

After the separation of stage I, the motors of stage II do not start?

The explosion ended by the end of the 9th second of the clip **[9]** . Let's skip 3 seconds in the clip. During this time, the rocket moved far away from the cloud of explosion products (Fig. 8a). Starting from the moment $t \sim 12$ s , the distance L between the separated parts of the rocket begins to increase (Fig. 8c, d, e). This is unambiguously shown by the dependence of L on time t , constructed by the author . The L value was measured on a computer screen using the SCaliper program and only in those frames where the separation is large enough to be clearly visible. The resulting dependence $L(t)$ presented at ill.8e.

The fact that the dependence $L(t)$ has the form of a straight line means that for equal periods of time, the divided parts are removed into equal segments of the path. But this is nothing more than the classical definition of uniform translational motion, that is, motion with constant speed, without acceleration. By the time of separation, the engines of Stage I had practically turned off. Torch Behind Stage I- this is just a "sluggish" afterburning of fuel residues. When separating the steps, short shocks are obtained in opposite directions, which ensure their divergence from each other at a constant speed of the order of 20-30 m / s, that is, evenly in time. This uniform divergence can only be broken after turning on the second stage motors, which will give it acceleration. According to NASA, the second stage engines are switched on no later than 2 seconds after separation and provide the rocket with an acceleration of $\sim 10 \text{ m / s}^2$ **[3]**. Objects on Earth fall with such acceleration, and it never occurs to anyone to consider this fall uniform in time. But the steps for all 18 seconds of observation diverge exactly evenly in time. Consequently, all these 18c second stage engines do not work, although it is high time for them to do so.

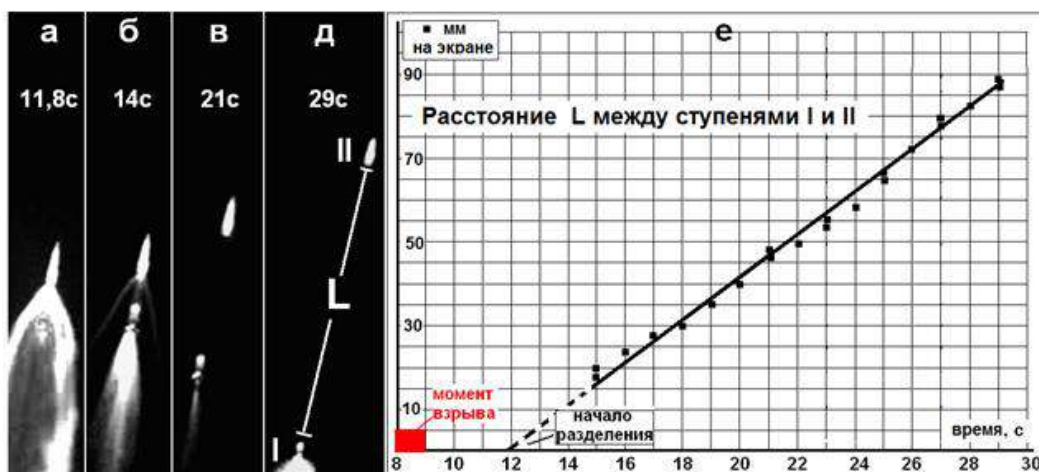


Fig. 8. The distance between stages I and II increases after they are separated at a constant speed.

a) the initial moment of separation, **b, c, e) the** L lag of stage I increases, **f) the** dependence of L on time

This contradicts NASA's information on the "lunar" rocket and generally contradicts traditional rocket flight techniques . Because all these 18 seconds the head of the rocket, instead of rushing forward along the course, will be decelerated in the Earth's gravitational field. The conclusion that after the separation of the first stage the engines of the second stage did not turn on is confirmed by other observational facts set out below.

No flame is visible behind the nozzles of Stage II engines

The Americans filmed the missile not only from ground cameras and from high-altitude aircraft. They installed automatic movie cameras inside the rocket itself. These cameras filmed everything "ordered" on film, after which they were thrown down from a height of several tens of kilometers in special capsules into the ocean, where they were picked up by search teams. A detailed report is available on the NASA website [17] . We will use the appropriate short description from Wikipedia [18]:

"The original NASA film archives show the first stage separation (S - IC) and adapter removed from the tail section of the second stage (S - II). This was followed by the separation of the second stage from the third (S - IVB) taken from the head of the second stage. The glow that can be seen on the thrown stages is due to the hot, invisible hydrogen-oxygen flame emanating from the engines of the second and third stages. The cameras were filming at about 15 times the normal speed. The capsules with the cameras were ejected shortly after the separation of the first stage, which, although at that moment at an altitude of more than 200,000 feet (60 km), was (at that moment) below orbital speed. Only one of the two cameras installed on the second stage S - II of the A6 rocket was fished out "... In the case of A4, both such cameras were returned. " Well, let's see these interesting shots.

According to [17, 18], in the tail section of the second stage, somewhere slightly behind the bells of its nozzles, a "backward-looking" movie camera was installed (k2, ill. 9a). The green lines represent her approximate field of view. Fig. 9b, c shows two frames from the clip (A4) [5] , filmed with this movie camera. The frame of Fig. 9b was taken at a time when stages I and II had not yet separated, but a bright flame flared up in the interval between them. It was the separation

devices that worked **[19]** . This flame illuminated well the contours of the second stage nozzles, as well as the stiffening ribs of the cylindrical adapter, which until now has connected the first and second stages. (In Figure 9a, the adapter is shown in gray).



Fig. 9. a) the approximate location of the "back-looking" movie camera No. 2, installed at stage II

b) stage I separation - the beginning, **c)** stage I is already far away, but the nozzles of stage II are immersed in darkness

But then the flame went out, and against the background of the globe, the receding first step is visible (ill. 9c). According to **[19]**, the engines of the second stage are switched on as soon as stage I moves 2-3 m away. In Figure 9c it is much farther away, but among the blackness that hides the nozzles, not the slightest glimmer of flame is visible.



This is not the first time in the American lunar epic we meet with "invisible torches" (see chapters 8 and 13). Wikipedia **[18]** claims that since hydrogen is burned in Stage II engines , the torch from them is completely invisible: hydrogen burns so cleanly. The American space shuttles will help to understand this issue. They are powered by three hydrogen engines, the total power being comparable to the total power reported by NASA for five Stage II engines .

Fig. 10. If hydrogen engines are working, then the torch from them is clearly visible against a dark background.

(blue flares of hydrogen shuttle engines)

Figure 10 shows a snapshot of a shuttle flying "on horseback" on a solid propellant booster. Despite the masking glow of this booster's powerful white torch, the blue torches from the shuttle's hydrogen engines are great views. So, if there are working engines, then the torches from them are visible. Therefore, the explanation given in Wikipedia does not work.

Of course, the visibility of the blue torches is facilitated by the black background onto which the blue jets of the hydrogen engines are projected. But, something, and the blackness around the rocket nozzles in Fig. 9c is enough. The nozzles just disappeared into it. Then where is the blue glow from the hydrogen flame from the second stage engines? He's gone. Instead, the author put two blue question marks (according to the color of the missing torches).

So, behind the nozzles of the supposedly already switched on second-stage engines, immersed in complete darkness, not a glimmer of flame is visible. This is the second indication that the second stage engines did not start. And what is interesting: NASA had a full technical opportunity to refute such an unpleasant assumption, but it did not use it. More on this below.

Close motion pictures with the image of a working stage II no



According to NASA [17], a "forward looking" movie camera was installed on the first stage being thrown downward (K1, ill. 13). The red lines represent her approximate field of view. And what prevented NASA at the moment when the camera # 2 was filming close to the lagging first stage (Fig. 11), with the help of the movie camera # 1 to shoot an equally close and going forward second stage? If there were such shots, and if the second stage really turned on its engines, then we would, as clearly as in the shuttle in Fig. 10, see five distinct blue torches at close range. The sight would be quite convincing.

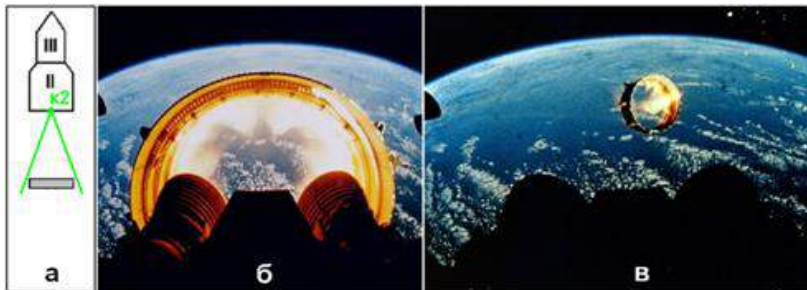
Fig. 11. NASA did not show close-up footage of a working second stage taken from the first stage

However, there are no such frames in the published materials of NASA. Well, after all, it's NASA's business to plan what to shoot and what to show. We are left to state dryly: there are no images of working second-stage engines taken close by on NASA's websites. This is the third indication that the second stage engines did not turn on.

The discarded adapter burns regardless of its position in relation to the second stage nozzles

According to the scheme in Fig. 2 (event 2), 30 seconds after the separation of the first stage, at an altitude of 90 km from the tail section of the second stage, an adapter is dropped down, connecting the first and second stages. And the same camera 2, which filmed the compartment of the first stage, filmed the compartment of this adapter (Fig. 12a).

In Figure 12b the adapter has just detached from the second stage of the A6 rocket, in Figure 12c it is already far away. There are no other similar frames for the A6 flight on the NASA websites. But for A4 there is a whole clip about resetting the adapter [5], six frames of which are shown in Fig. 13. The total time that elapses from the first to the sixth frame is 8 seconds per clip. Since the shooting was carried out at an accelerated rate, the process is actually 15 times faster.



Ill.12 .

a) scheme of resetting the adapter and simultaneous filming of this process (according to NASA)

b, c) frames of the A6 adapter compartment

In the frames of ill. 12,13, we see an interesting phenomenon: when the adapter is reset, a bright flame inside it flares up, flares up, and then goes out. Wikipedia (and after it the defenders) explains this ignition by "hot, invisible hydrogen-oxygen flame" emanating from the working second stage engines (see above).

Can one be satisfied with such an explanation? Unlikely. First, we have just made sure that the thesis about invisible hydrogen torches (Fig. 12) does not correspond to reality (Fig. 10). Secondly, (and we will see it now) the flame inside the adapter burns regardless of its location in relation to the second stage nozzles.

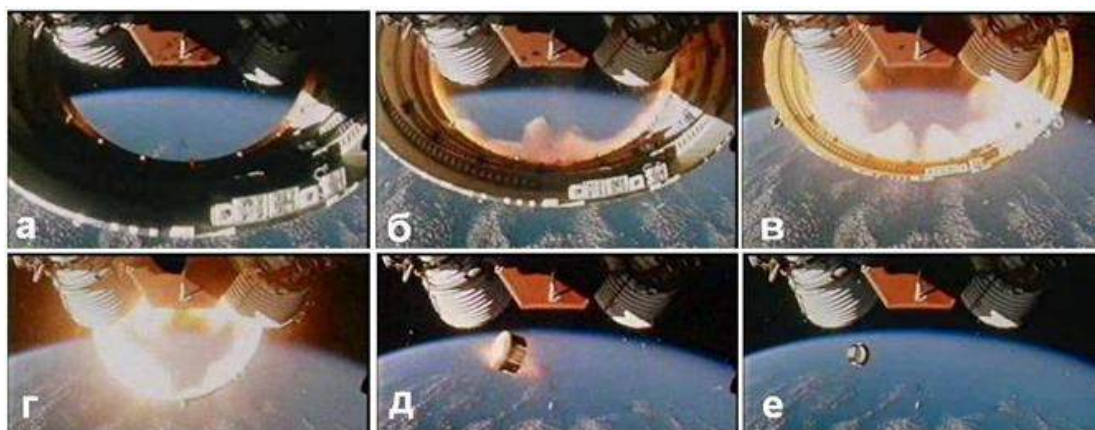


Fig. 13. Six frames from the clip about resetting the adapter in flight A4

Let's assume for a moment that this flame is actually caused by the heating of the adapter by "hot, invisible" gas jets. In the diagram of Fig. 14a, black arrows show five such "invisible" jets escaping from five nozzles of the second stage. Gas jets from rocket engines have supersonic speed and monstrous head. According to NASA, by the time the adapter is reset, the second stage engines should be operating at full power with a total thrust of about 500T. A gas flow with such a pressure should simply throw out the combustion products from the adapter, but nothing like that is visible.

For example, in Fig. 13b, a trickle of an igniting flame is directed upward with a fountain, perpendicular to the jets that allegedly lit it. In Fig. 14b, the adapter turned sideways to the jets and flew far away from them, but the fire inside it still burns, and it knocks out both to the right and to the left at approximately the same distance, not paying attention to the hurricane "invisible" jets. In the frame of Fig. 14d (fragment of Fig. 12c), it can be seen that two tongues of flame are knocked out from the inner surface of the adapter towards its center and perpendicular to the supposedly oncoming streams. And in the center of the same adapter, another tongue of flame "shoots out" towards the flow of "invisible" jets.

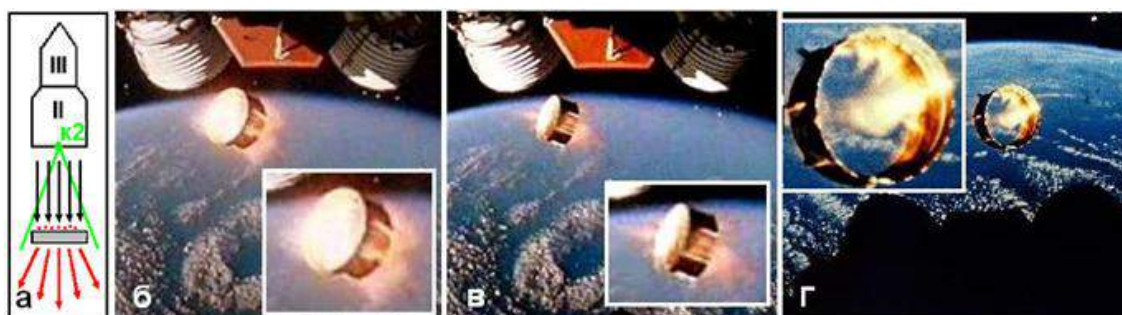


Fig. 14. The discarded adapter burns completely independently and regardless of its position in relation to the second stage nozzles.

a, b) frames from clip A4, **b)** fragment of Fig. 12c

Thus, the combustion process in the ejected adapter proceeds regardless of its position with respect to the second stage nozzles, which means that there are no

invisible jets. This is the fourth evidence that the second stage engines did not turn on.

Let's summarize all the established four evidences as **fact # 5:**

Several indications were found that after the separation of the first stage, the engines of the second stage did not turn on, namely -

1) the separated parts of the rocket move away from each other evenly in time, without acceleration within 18 seconds available for observation. Although they should have turned on no later than 2s later;

2) in the frames with the first stage going down, not a glimmer of flame is visible behind the nozzles of the supposedly already switched on second stage engines immersed in complete darkness;

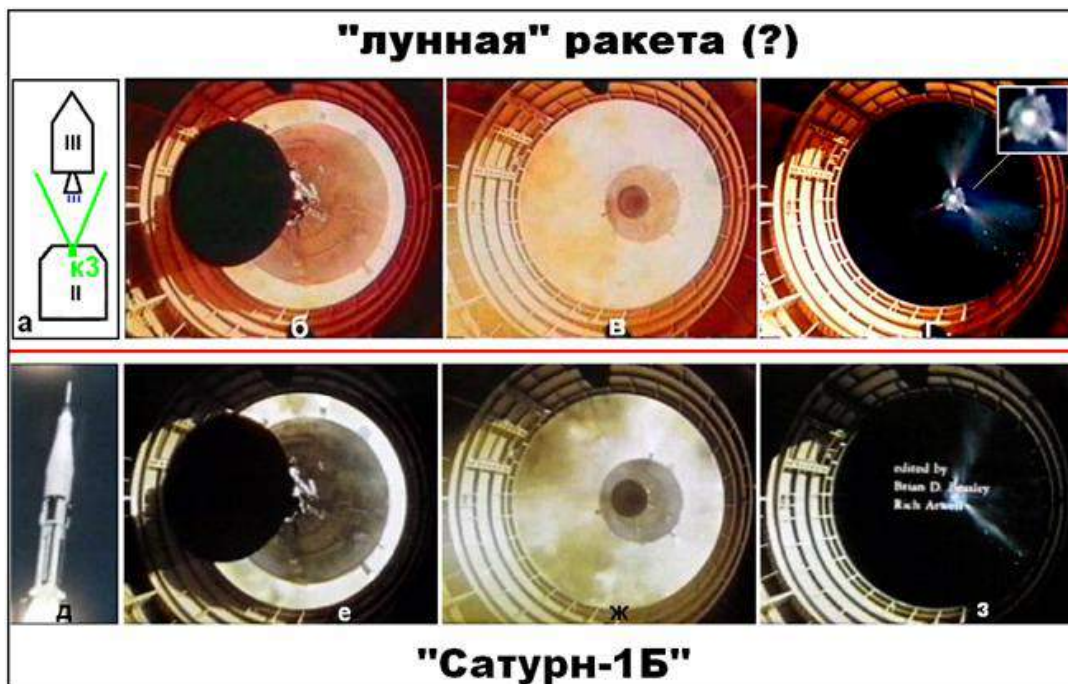
3) NASA websites do not have images of working second-stage engines taken close-by;

4) the process of mysterious combustion in the ejected adapter proceeds regardless of its position in relation to the nozzles of the second stage. Consequently, no "invisible hot" gas jets emanate from these nozzles that could ignite the adapter material.

First start of stage S - IVB - first change?

According to the flight plan of Saturn-5, its last stage (S - IVB) is launched twice. The first time this happens after the second stage has worked and passed the baton to the third. The third stage puts the spacecraft into low-earth orbit (Fig. 2) without using up the entire supply of its fuel. After the ship makes a couple of turns around the Earth, the third stage turns on again and sends the ship towards the Moon. NASA has shown both third stage launches in its films, and there are questions and doubts about both episodes . Consider first how NASA showed the first launch of Stage 3 (Figure 15).

According to Wikipedia, the footage of the first launch was allegedly filmed by a "forward looking camera" installed in the head of the second stage (Fig. 15a). In Fig. 15b, the separation has just begun, and a dark, not yet switched on nozzle of the only engine of the S - IVB stage passes by the camera . And in Fig. 15b, the nozzle is still not working. It is only illuminated by the flame of the auxiliary devices providing separation. When the S - IVB moved further away, its nozzle lit up with a not bright, but quite noticeable blue-white glow of the hydrogen engine that had just turned on (just like the shuttle engines glowed with a blue flame , Fig. 10). Everything indicates that we really see the launch of the S - IVB stage.



III.15.

Top row: footage allegedly taken during the separation of the second and third stages of the "lunar" rocket

а) so, according to NASA, three frames "б, в, г" were taken; **б, в, г)** start S - IVB

Bottom row: footage taken while separating the first and second stages of the Saturn-1B rocket

е) "Saturn-1B" in flight; **в, г, г)** start S - IVB

But, first of all, how did these footage come to Earth, if they were actually filmed during the flight of the "lunar" rocket? After all, what Wikipedia wrote about the delivery of cameras to Earth: *"the capsules with cameras were thrown out soon after the separation of the first stage, which, although at that moment at an altitude of more than 200,000 feet (60 km), had a speed below the orbital speed."* And nothing more about this. And the first launch of the third stage, according to the NASA scheme (Fig. 2), occurs at an altitude three times higher (190 km instead of 60 km) and at a speed of almost three times higher (7 km / s instead of 2.7 km / s). The last circumstance is the most important. The fact is that extinguishing an almost orbital speed of 7 km / s and extinguishing a speed of 2.7 km / s are tasks of incommensurable complexity. According to NASA [17] the cameras, which fell along with the compartment of the first stage at a speed of 2.7 km / s, were hidden in containers filled with foam rubber. At a speed of 7 km / s, all this will burn up in the stratosphere in a stream of incident incandescent air plasma. In this case, the cameras must be lowered according to all the rules, like small spaceships, with appropriate thermal protection. And this is a much more difficult task. Maybe the Americans did solve this problem, but they modestly kept

silent? Unlikely: Modesty is not an American trait. So how did the K3 movie camera descend from suborbital altitude and end up in the hands of NASA?

Secondly, if these footage was taken while separating the second and third stages of the "lunar rocket", then why are they so similar to the footage of the S - IVB launch from the movie "Gemini Legacy" (Fig. 15, bottom row)? There they are shown immediately after the launch of Saturn-1B. The separation of the stages of "Saturn-1B" and the launch of the S - IVB occurs at a suitable altitude (62 km) at a flight speed of "only" 1.45 km / s. And the corresponding reset automatic film cameras on Saturn-1B were also present [20] . (The author is grateful to D.P. Kobzev for drawing attention to this coincidence). So, it seems that we are faced with another substitution, which could not be hidden by the change in the color of the frames.

Second launch of stage S - IVB - second substitution?



The way NASA showed the second launch of the S - IVB (launch to the Moon), we already saw in Chapter 5. Like NASA. Recall that the director of the film "For All Mankind", Al Reinert, having watched "more than 2000 km of film from the archives of NASA", did not find anything better than to present to the public the descent of the Gemini spacecraft from orbit to Earth as the launch of the Apollo spacecraft from orbit to the moon (ill. 16).

Fig. 16. "Linden" start to the Moon (repeat from section 5)

Obviously, not from a good life and not from the wealth of NASA's "lunar" archives, the respected director decided to take such a step. And this is after the supposedly 11 Apollo flights to the Moon.

Let's write down what we learned as **fact number 6: showing the first and second launch of the third stage of the "lunar" rocket, NASA used materials from other "non-lunar" space flights, namely, footage associated with the flight of the Saturn-1B rocket and footage of the descent to Earth by the Gemini.**

Thus, the facts already cited (and this is not all) indicate that the "lunar" rocket was actually very different from how NASA describes it. Let's try to understand at least approximately what this rocket actually was.

Links:

1 N.P. Kamanin. "Hidden space": 4th book - M., LLC "News of Cosmonautics", 2001 - 384 p.

<http://www.epizodsspace.narod.ru/bibl/kamanin/kniga4/obl-4.html> entry of December 21, 1968

2. Chertok B.Ye. Rockets and people. Book 4. Moon Race - M.: Mechanical Engineering, 1999.-576s

<http://www.epizodsspace.narod.ru/bibl/chertok/kniga-4/vved.html> , Chapter 9.

3. HACA http://history.nasa.gov/ap08fj/01launch_ascent.htm диаграмма Apollo 8 Saturn V ascent acceleration

4. NASA <http://www.youtube.com/watch?v=2rXtG3vfAlA&feature=related>

5. NASA <http://www.youtube.com/watch?v=q1vy4xXZynI&feature=related>

6. NASA <http://www.youtube.com/watch?v=wwWHnK2FiCk&feature=related>

7. NASA http://www.youtube.com/watch?v=IKDMQ_2orIE&feature=related or http://www.youtube.com/watch?v=IKDMQ_2orIE Warning: Both links above stopped working with the indication "This video has been removed by user "

8. <http://forums.airbase.ru/2005/11/21/topic-34813--Pochemu-u-Saturna-5-gorela-zadnitsa.1132586557.html>
<http://forums.airbase.ru/2008/03/19/topic-60284--Pochemu-u-Saturna-5-gorela-zadnitsa,tom-.1205893649.html>

9. http://www.stmms.org/apollo11_launchclip03.mpeg

10. film "For all mankind" [f2] section 28

11. Michael Light. Full Moon. London: Jonathan Cape – 1999. – All photographs courtesy National Aeronautics and Space Administration

12. S. Pokrovsky, Americans could not get to the moon, "Actual problems of modern science", 2007, No. 5, pp. 152-166, [un7], [un8] section 28

13. <http://www.epizodsspace.narod.ru/bibl/raketostr3/4-2.html>

14. Wikipedia http://en.wikipedia.org/wiki/Saturn_V

15. Wikipedia http://en.wikipedia.org/wiki/Saturn_1_B

16. HACA <http://www.apollosaturn.com/ascom/s5news/p21-17.htm>

17. NASA <http://www.apollosaturn.com/ascom/s5news/p21-17.htm> sm. Film Cameras

18. http://en.wikipedia.org/wiki/Apollo_6 and http://en.wikipedia.org/wiki/Apollo_4 , section "Cameras"

19. "Less than 1 second after the separation of stages I and II , a command is issued to start the liquid-propellant engine of stage II." <http://www.epizodsspace.narod.ru/bibl/raketost3/1-2.html> . "The motors of the second stage are switched on when the distance between stages I and II increases to 2-3 m. [Http://www.epizodsspace.narod.ru/bibl/raketost3/1-1.html](http://www.epizodsspace.narod.ru/bibl/raketost3/1-1.html) .Five liquid-propellant engines J-2 of the S-II stage are launched simultaneously

20. NASA <http://www.apollosaturn.com/ascom/sibnews/sec10.htm>

<http://apollosaturn.com/ascom/sibnews/sec3a.htm> см. Recoverable Camera System

Илл.1. <http://www.hq.nasa.gov/office/pao/History/alsj/a11/ap11-S69-39961HR.jpg>

Fig. 2. according to [3]

Fig. 3. [4] and accompanying clips

Илл.4. <http://www.youtube.com/watch?v=kf5yLuyCTag&feature=related> и 08 <http://www.youtube.com/watch?v=XKtH0uzg8wU>

Илл.5,6,8 [9]

Илл.7. [11], [9]

Илл.9. <http://www.hq.nasa.gov/office/pao/History/alsj/a410/ap7-S68-48788EN.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a11/ap11-KSC-69PC-241HR.jpg>

and fragment ill.7

Ill.10 . fragment ill.7

Ill.11 . [9] and processing [9]

Ill.12. [5]

Илл.13. 8499409MmLXWVOXlh_ph

Fig. 14. author's scheme based on [17]

Ill.15 . <http://upload.wikimedia.org/wikipedia/commons/b/b3/Ap6-68-HC-191.jpg>

<http://upload.wikimedia.org/wikipedia/en/8/8a/Apollo6Interstage.jpg>

Ill.16. [5]

Ill.17. [5] and

<http://upload.wikimedia.org/wikipedia/en/8/8a/Apollo6Interstage.jpg>

Илл.18. <http://www.youtube.com/watch?v=kf5yLuyCTag&feature=related> и фрагменты илл.6,17

Fig. 19. NASA " <http://history.nasa.gov/ap08fj/video/staging.mpg> and the film "The Gemini Legacy "

Илл.20.

http://upload.wikimedia.org/wikipedia/commons/e/e6/Saturn_V_launches.jpg

Versions

17-21 minutes

Versions, opinions. Chapter 24

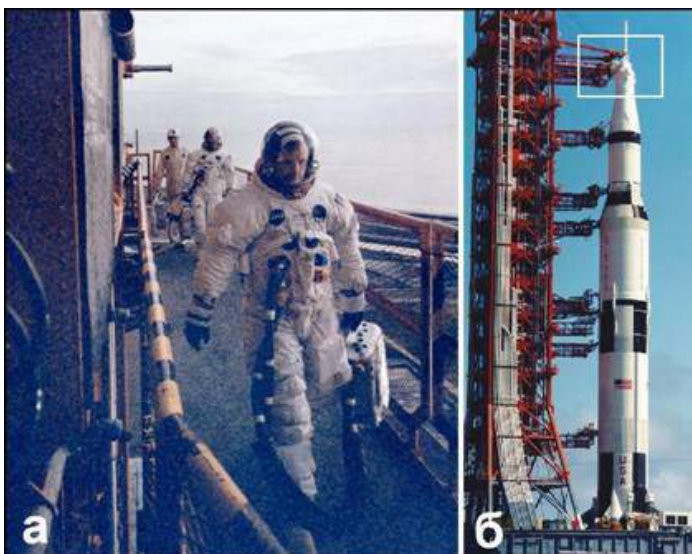
Where were the astronauts?

The situation is clearing up

Because according to the conclusion of the previous chapter, "moon" the missile was most likely unmanned, then the **astronauts "Apollo" is only sent to the "moon" missiles and missile flew without them.** With this view, many previously not so clear details become clear.

It becomes clear that NASA's decision of April 23, 1968, which puzzled many specialists, is to send a rocket with people to the next flight (A8) after an unsuccessful test on April 4. In fact, apparently, no one flew on the A-8 rocket, and therefore the victims were excluded.

And remember the air vortices around the ship A9 (Ch. 7). But, if the A9 astronauts actually stayed on Earth, and the whole world was announced that they were circling around the Earth, then it's necessary to portray something about a near-Earth flight. Here you cannot do without imitation. After this, NASA's claims that the lunar module and the lunar spacesuit were tested in space on this flight are considered very dubious.



Cease to be puzzled by the issues of astronauts' health and neglect of stunt doubles (Section 3). If astronauts stay on Earth, then what are the health requirements: if only they look cheerful enough.

And backup for those who remain on Earth, of course, are not needed. Therefore, when the A9 astronauts fell ill with the flu before the launch, they had to wait a couple of days until they regained their health and were able to cheerfully go through the entire landing procedure.

It looked strange that before the cascade of "lunar" flights, the Americans limited themselves to only one manned test of the Apollo spacecraft (flight A-7). But who cares about the qualities of a ship if it doesn't have to fly in the next few years? They portrayed the tests and okay.

III.1.

a) astronauts A-11 at an altitude of 140m are sent along the bridge of the launch complex, ostensibly to board the Apollo spacecraft;

b) a launch complex with a "lunar" rocket, a fragment with a bridge is highlighted, along which the astronauts are walking.

What then put the "lunar" rockets into orbit and did they put anything at all? Recall that the "lunar" rocket at the time of separation of the first stage had a speed of 45% less than the speed of Saturn-1B in the same situation and 2.6 times less than the Saturn-5 should have had at that moment ... In addition, after the separation of the first stage, the "lunar" rocket flies for 18 seconds by inertia, losing this not too great speed. After all this, it is difficult to expect that it will be able to put any significant payload into orbit. Most likely, the last stages of "lunar" rockets simply fell into the Atlantic Ocean. This would seem to be the best solution for the hoax. Indeed, according to the flight plan to the moon, two hours after the launch from the cosmodrome, the lunar Apollo had to leave the intermediate near-earth orbit and after that no one would have seen it there. But even if the remnants of the "lunar" rocket drown in the Atlantic Ocean, the result will be the same.

Millions of TV viewers saw how the astronauts went to board the ship (Fig. 1a), and, possibly, how they climbed into it, but it was impossible for unauthorized persons to control the fact that they stayed there and did not leave it long before the launch of the rocket. Only a few specialists had access to the ship at the top of the rocket. Nothing can be seen from the ground, because the bridge along which the astronauts go to the spacecraft is located at an altitude of 140m (Fig. 1b) and the passage along it is fairly closed from view. The astronauts had plenty of time for the return transfer from the spacecraft: from the official moment of landing the astronauts in the spacecraft to the launch of the rocket, it takes about 3 hours according to the schedule. Therefore, nothing prevented the astronauts from leaving the complex at a convenient time and moving to the premises from where they conducted their reports on the "conquest of the moon".

How, then, to understand the splashdown of astronauts in the Pacific Ocean? Alas, there is reason to believe that NASA has carried out a simulation of this last stage of the "lunar" journey.

As shown on the Apollo splashdown on modern NASA sites

Let's take a look first at how NASA shows the Apollo splashdown process on its modern websites (Figure 2). The Americans sent one of their aircraft carriers to the splashdown area. Each such aircraft carrier has the helicopters necessary to "catch" the splashdown Apollo. The images shown in Fig. 2 were borrowed from the sites of the last three "lunar" "Apollo" (A-15, 16, 17).



Fig. 2. Apollo flooding (modern NASA sites)

A few hundred kilometers from the splashdown site, the Apollo (more precisely, its descent cabin) enters the dense layers of the atmosphere. When the Apollo approaches the splashdown area, it will already lose its space velocity, and at an altitude of several kilometers above it, a bunch of three huge parachutes in white and red stripes will be deployed (Fig. 2a). The total diameter of this bundle is about 60 m, which makes it possible to see it from afar against the background of a cloudless blue sky (Fig. 2a). And after splashdown (ill.2b, c) bright canopies of parachutes, filled with the wind of wanderings, for a long time do not want to go into the depths of the sea (ill.2d)

When Apollo is just descending on parachutes, rescue helicopters are already circling around it, and as soon as the cabin splashes down, rescuers immediately jump from the helicopter into the water (Fig. 3a). They quickly attach inflatable rafts to the cockpit and bring it to a stable upright position (Fig. 3b). Soon both the Apollo cockpit and the astronauts are delivered to the aircraft carrier.

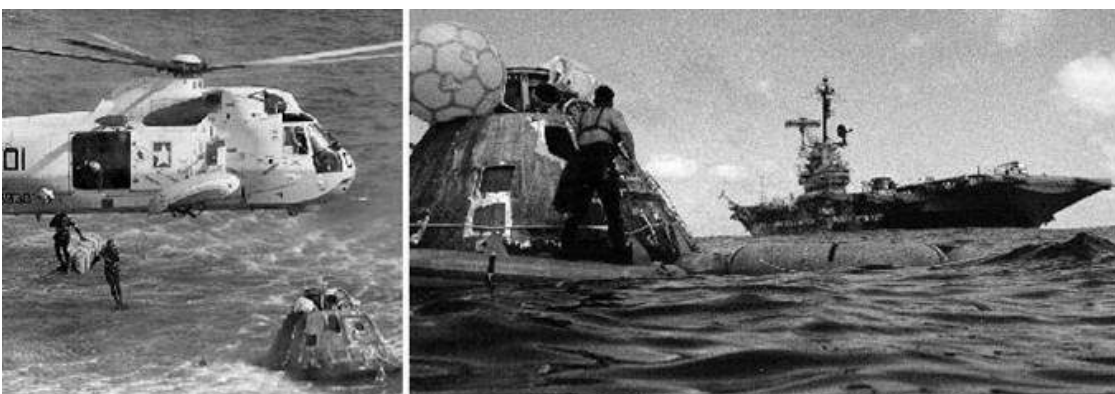


Fig. 3. Astronaut cockpit rescue (modern NASA sites)

As you can see, the overall picture of splashdown and rescue, built according to modern sites, is exhaustive. Note that the operation to rescue the returning spacecraft is rehearsed many times, practiced in every detail to the smallest detail, except, of course, the spacecraft's entry into the atmosphere from outer space. The ship itself during such rehearsals - tests is dropped by parachute from an aircraft. This is a common practice. Therefore, all the above frames could be filmed both during the actual return of the spacecraft from space, and during rehearsals (training) of rescue operations. But, in any case, we now imagine what the Apollo splashdown should have looked like and what exactly the rescue operations consist of.

Armed with this knowledge, let's take a closer look at how NASA described the Apollo 11 splashdown on July 24, 1969. It ended in front of millions of TV viewers, who were, as it were, absentee witnesses of this event and thus somewhat limited the freedom of action on the part of NASA. Thanks to the August 1969 specials "A Look" and "Life", we have a description of this event that has not gone through the subsequent improvements and corrections to which some of NASA's "lunar" materials have undergone.

As described and shown in August 1969

We read the special issue "A Look" (section "July 24"), look at the illustrations "A Look" and "Life", (translation, inserts with the numbers of the illustrations and highlighting in bold by the author of the book):

*"At 12.35 pm, the command module entered the atmosphere like a burning meteor 80 miles above the Gilbert Islands. After 15 minutes, he smoothly descended by parachute **2.7 miles (5 km)** from the design point and **13.8 miles (25 km)** from the aircraft carrier Hornet ... President **Nixon watched the return from one of the Hornet bridges** (ill. 4b). **He saw the fiery entry** of the spacecraft into the atmosphere, but shared the frustration of the crew and millions of viewers **that the spacecraft splashed down out of sight of the Hornet** ... The first rescue swimmer jumped into the water **from one of two helicopters that circled, waiting for a splashdown**(ill . 4a) . He attached the sea anchor to the cockpit ... The whole operation of the cockpit delivery to the Hornet took 3 hours. "*



III.4.

- a) one of the two helicopters that met is circling over the Apollo 11 cockpit overturned in the water;
- b) President R. Nixon and NASA Director R. Payne await the return of the astronauts on the Hornet aircraft carrier;

A short passage, but how many doubts and questions it raises.

First of all, we note that since the president and those around him could see the "fiery entry of the spacecraft into the atmosphere," the **sky in the waiting area was exceptionally clear, which provided direct visibility for hundreds of kilometers**. The point is that the spacecraft enters the Earth's atmosphere along a very flat trajectory, hundreds of kilometers before the landing site, in this case hundreds of kilometers before the Hornet.

And neither the president, nor the crew of the aircraft carrier, nor the cameramen, in short, **no one in the conditions of such remarkable visibility saw a much closer event - the Apollo 11 ship, descending on three huge white parachutes at a distance of only 25 km from the Hornet**. That is, what we see in Fig. 2a for Apollo 16, in the case of Apollo 11, none of the spectators on the Hornet saw. And this allegedly happened because the spacecraft splashed down "out of sight of the Hornet."

Excuse me, A-11 splashed down, that is, it specifically sat down on the water according to the given data, really out of line of sight or at its limit. Still, 25 km of distance make themselves felt. The aircraft carrier's bridge is located at an

altitude of about 40-50 m, which just corresponds to the horizon range of 20-25 km. But such is the line-of-sight range when the observed object, that is, the A-11 cockpit, is already floating on the water. When she hangs on parachutes at an altitude of at least 1 km, then she is in line of sight. The greeters knew the direction to the landing site of the A11 perfectly well in advance (the helicopters did not randomly fly in to circle around the *descending* "Apollo"). What did Mr. President and Mr. Director lacked to admire the A-11 descent? Have you forgotten to bring a magnifying tube or binoculars? And the cameramen, who surrounded tall persons in large numbers, and whose task was to see everything and shoot everything, did they also forget to take long-focus telescopic lenses for their cameras? Something is doubtful. Maybe Apollo 11 did not go down by parachute?

But there were also much closer witnesses to the descent of the A-11 by parachute. After all, the helicopters circled " *waiting for a splashdown*", that is, the people sitting in them, judging by the text of the message, had to watch, not yet splashing down, still descending on parachutes A-11. And then they would have seen A-11 "flopped into the water", spreading its parachutes on the water (like A-16 in Fig. 3c). And when the foam that the A-11 splashed dissipated, probably for a long time the drooping canopies of parachutes floated around it? After all, they did not drown in a similar situation with the A-15 (ill. 3d).

But I didn't take anything like that a photojournalist who sat on one of the two helicopters that circled around the descent Apollo. He only took a picture of the "neighboring" helicopter hovering over the A-11 cockpit lying in the water (Fig. 4a). And not a single floating parachute canopy next to the floating cockpit. And the cockpit itself is placed in the frame at the very border, so that everyone can assume that the floating bubbles of parachutes simply remained there, on the right outside the frame of the frame. How modest all this is in comparison with what we see on modern sites (Fig. 3). And, if the photo reporter did not take pictures of the A-11 cockpit, descending by parachutes, if there is not a single canopy next to the cockpit that has just descended and is floating in the water, if the parachutes did not get into the frame in any way, then maybe they did not exist at all? Everything is simple, as in the aforementioned fairy tale: "The king is naked!" ?

Another fact supports this conjecture. Look, the Apollo ship (supposedly) lands very accurately - just 5 km from the calculated point. Everyone who is supposed to know this design point, and the captain of the aircraft carrier is among them (the helicopters flew to it). But the **aircraft carrier stops 25 km from the calculated splashdown site, instead of being exactly in this place.** Or were they afraid that Apollo would descend directly to the deck? Then a smaller ship would be sent to the calculated point. After all, the return of the first spacecraft in history from the moon is no laughing matter. There is always a risk that he will start sinking, so a small rescue ship at the calculated landing point would be useful. But no, the Americans prefer to do with a minimum of witnesses: no auxiliary ships, two

helicopters, and that's enough, and even an aircraft carrier standing over the horizon.

But all the questions disappear, if we assume what itself begs from this whole story: the Americans delivered the "space" ship to this calculated point in advance and lowered it into the water. There he waited until he was "rescued." Therefore, the aircraft carrier stopped 25 km from the calculated landing site. Why do we need hundreds of extra witnesses to the final simulation? And there is nothing to spoil the viewers with unnecessary details. Enough with them that the US President himself "shared their disappointment that the spacecraft splashed down out of sight of the Hornet."

But what about the fact that the president "saw the fiery entry of the spacecraft into the atmosphere"? In this regard, the following can be said. If something like that happened, then such a "fiery entrance" can be arranged by launching an ordinary intercontinental ballistic missile into the area adjacent to the waiting area. With a suitable selection of material for the head cover, the "fire" will be quite enough. And launching one of the several thousand US intercontinental missiles at the time was probably easier than going to the moon.

Apollo's Super Precision Splashdown: An Unrivalled Achievement or a Bluff?

Let's get acquainted with the data on the accuracy of splashdown of several "lunar" "Apollo". According to [3] "Apollo" for Nos. 8,11,12,14,15,16 and 17 splashed down with deviations from the calculated points in 6, 5, 15, 2, 2, 5 and 2 km, respectively. The deviation averaged over all flights was about ± 4 km. For comparison, our Soyuz spacecraft, even now, 40 years later, land 10 times less accurately. In this case, the descent trajectories of the Apollo and the Soyuz are physically identical. Can't our specialists even today repeat what the Americans did 40 years ago?

And this despite the fact that over these 40 years we have lowered dozens of ships from orbit to Earth, and the Americans - one (ASTP flight, 1975, this was their last Apollo). After that, the Americans switched to shuttles. It turns out that our specialists over the course of 40 years, although during this time they carried out many dozens of Soyuz launches to Earth, they still could not achieve American accuracy. The author sees the reason for this paradox in the fact that the aforementioned ultra-high accuracy of the Apollo landing was precisely "named", that is, invented. If the "lunar" "Apollo" did not fly into space, then they did not return from it. And NASA specialists could have imagined the indicated figures of splashdown accuracy in such a way as to additionally crush the opponent morally. After all, if NASA, unlike the Russians, was able to land astronauts on the moon, then it could land ships much more accurately, than the Russians did at that time. The calculation, apparently, was made on the fact, over time, the accuracy of landing ships for both the Russians and the Americans themselves will reach the indicated figure (± 4 km), and then it will be possible to say: "You see, and we, the

Americans, have planted our lunar Apollo with such precision." But here the Americans miscalculated: progress in landing accuracy stopped at a figure 10 times higher than NASA had named for Apollo. No advances in computing have been able to help exceed this precision limit of ± 40 km from the landing site. Objective physical factors interfered. There was a problem.

But it became clear only now, many years later, when the experience of decades determined the accuracy limit for the landing of spaceships. And then this limit was not obvious. And how many Soviet specialists noted with envy and chagrin: "This is how the Americans are exactly splashing down their Apollo! They can do everything. It is not for nothing that they were able to land on the moon, but we did not, etc. "

So, there are facts that indicate that the return of the Apollo ships from space was also a skillful imitation.

Links

1. special issues " A Look " and " Life " [ip1], [ip2] section 28

2. (AA, p.78)

3. A-8 : <http://www.epizodsspace.narod.ru/bibl/chertok/kniga-4/g9.html> p.162; "Upon entering the atmosphere, the crew compartment passed over Siberia, China and splashed down in the Pacific Ocean six kilometers from the design point where the aircraft carrier Yorktown was located.

Илл.1. <http://www.hq.nasa.gov/office/pao/History/alsj/a11/ap11-KSC-69PC-399.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a11/ap11-KSC-69PC-241HR.jpg>

Илл.2. <http://www.hq.nasa.gov/office/pao/History/alsj/a16/ap16-S72-36235HR.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a16/ap16-S72-36289.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a16/ap16-S72-36300.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a15/ap15-S71-41995.jpg>

Илл.3 . <http://www.hq.nasa.gov/office/pao/History/alsj/a17/ap17-72-H-1559HR.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a17/ap17-S72-56147HR.jpg>

Ill.4. [1]

33

25-32 minutes

Versions, opinions. Chapter 25

Skylab - the brilliant epilogue of Apollo

A Brief History of Skylab



The version of the "lunar" rocket is strongly contradicted by NASA's announcement of the launch on May 14, 1973, of the huge Skylab orbital station with a mass of 75 tons (Fig. 1).

Fig. 1. Skylab station device

(drawing by NASA artist).

- 1 - working compartment;
- 2 - airlock for astronauts into outer space;
- 3 - docking module with two docking nodes;
- 4 - solar observatory;
- 5 - the ship "Apollo"

So let's take a look at this counter-argument . Let's start with a short history of Skylab ("Heavenly Laboratory") [1] .

1. " Skylab" was created and launched in a hurry. As S. Aleksandrov writes [2], *"when it became clear that the lunar program would be limited to several flights, the Skylab station was hastily created"*. It would seem, what is the connection between the two programs of such a different purpose? Why is it necessary to hastily create a near-earth station if the end of flights to the moon is visible? And, nevertheless, just five months after the flight of the last Apollo (A-17), Skylab was launched into low-earth orbit.

2. Starting the Skylab program, NASA seemed to have no intention of continuing. This is evidenced by the fact that just 3 months after the launch of Skylab and six months before the return of the last third crew from space, NASA decided to mothball all the remaining Saturn-5s. And only they could launch the subsequent Skylabs. This looks a little strange, because when starting a new project, developers, as a rule, see the prospects for its continuation in the most rosy tones. And, on the contrary, they do not start a new project if they do not see the prospects for its development. In this light, NASA's decision to shut down the Skylab route, as soon as it starts, looks unusual.

"Skylab" was inhabited only one tenth of the total time of its existence. All 3 visiting crews stayed at the station for a total of 171 days. After the return of the third crew (February 8, 1974), the station flew empty for 5 years. In July 1979, she entered the dense layers of the atmosphere and collapsed .

3. More than three people have never been at the station.

According to NASA, Skylab was visited in orbit by three Apollos with crews of 3 people each. The corresponding flights were named Skylab-2, Skylab-3 and Skylab-4. ("Skylab-1" or simply "Skylab" is the launch of the station itself, which was carried out in unmanned mode). "Skylab", according to the description, had two docking nodes (Fig. 1), and two Apollos could dock at once. But this never happened. First, the previous crew flew away, and after that the next one arrived. The number of astronauts on Skylab has never been increased by the second arriving crew, as was the practice at the Soviet Salyut and Mir stations, and is now taking place on the ISS. As a result, despite the reported very large size of the station's working compartment, more than three people were never on it.

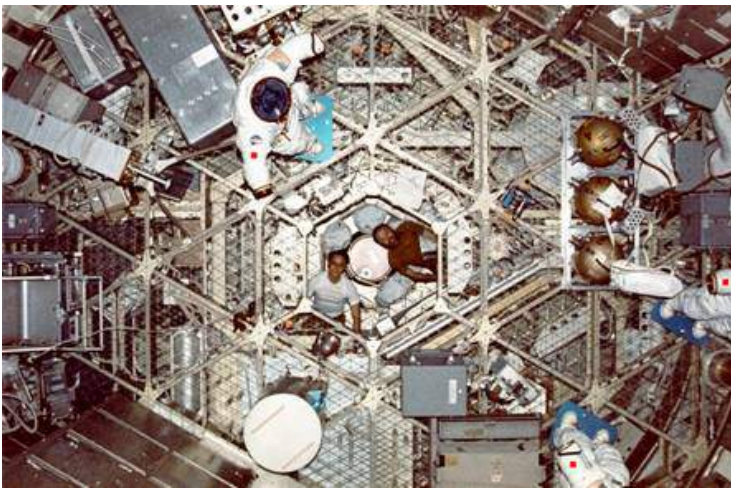
4. Despite the "Skylab experience", NASA was unable to create a full-fledged orbital station and in this it was decisively behind the USSR (Russia). Having amazed contemporaries with its enormous size, "Skylab" disappeared without repeating itself in the history of astronautics. Even the modern ISS, "born" 30 years after Skylab and incorporating all the achievements of world space technology over these 30 years, cannot compete with Skylab in terms of weight and dimensions. It is made up of blocks, the mass of which does not exceed 20 tons, that is, more than three times less than the mass of the Skylab.

After Skylab, NASA tried to create a new orbital station, Freedom, but could not, and after ten years of fruitless efforts, stopped this work, heading for the ISS and relying on Russian (Soviet) experience. *Skylab “did a good job in orbit, but had no development prospects” [2] .*

5. All 9 astronauts who visited the station were US citizens. Not a single cosmonaut (astronaut), not a US citizen, worked at the station, and cannot confirm its real device. So, like the "flights to the moon", this American space record is confirmed only by American witnesses.

All these facts encourage us to continue our acquaintance with this station. Let's take a look at pictures of how the astronauts lived and worked at Skylab.

Such pictures can be taken on Earth



As explained NASA [1], space ny working compartment 1 has been fitted in the fuel tank rocket stage (ill.1). Figure 2 shows the interior of this compartment. Here the author's attention was drawn to space suits marked with red marks.

Fig. 2. An exhibition of space suits?

Usually, designers try to arrange objects of the same type and purpose in one place: it is more convenient to use, and they take up less space. And here - as if some kind of exhibition of spacesuits, whipped up. One gets the impression that we were invited to look into the interior of a real fuel tank, temporarily decorated as a space dwelling. Even if this is the author's subjective impression, one thing can be said for sure: the image in Fig. 2 does not bear any signs that it was taken in space.

Figure 3 shows a contented astronaut Konrad. He climbed into a special bag - a container where he will take a shower. NASA's commentary on this image says this is happening in Skylab, which is in space.

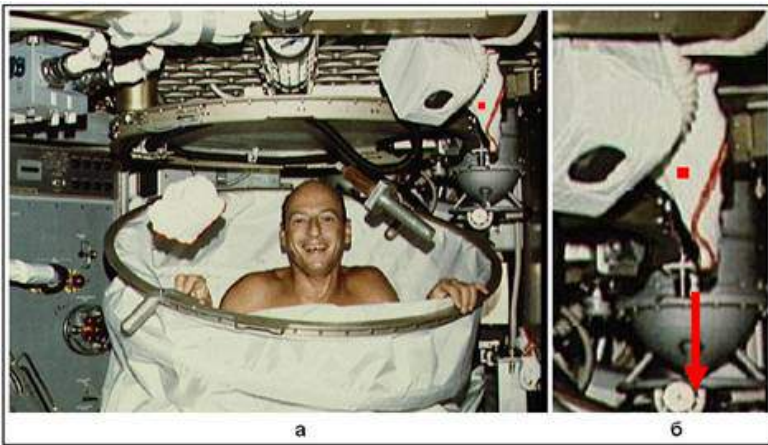


Fig . 3 . The cloth sagged due to

gravity.

(Shower at Skylab)

But this scene would have looked exactly the same on Earth. Doubt is heightened by the red rag that is visible in the upper right corner of the image. She sagged strictly vertically, as if the force of weight was acting on her. And how did this force "make its way" to the orbital station, where weightlessness should reign?

In the pictures of Fig. 4a, b, c, astronauts are trying to convince us how easy it is for them to move in zero gravity.



Fig . 4 . Skylab astronauts need support. NASA Signatures:

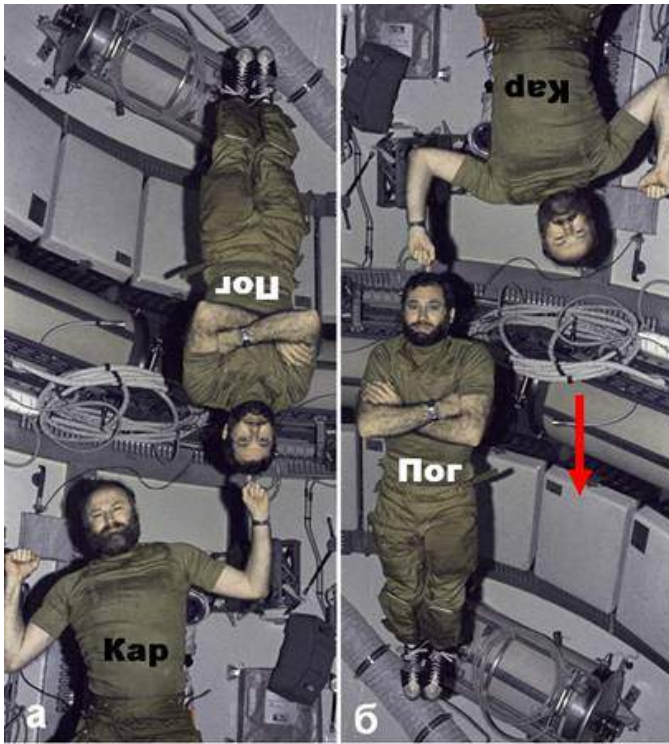
a) Gibson floats through the airlock hatch; **b)** Kar soars in the bow; **c)** Lusma as an acrobat

"Gibson floats through the airlock hatch," is the NASA caption to the image in Figure 4a. However, to get such a picture, it is enough for Gibson here on Earth to stand in the hatch hole and raise his hands. The picture was taken from above.

"Kar soars in the bow" under the domed "ceiling" of the working compartment (4b). But notice that Kar is kind of glued to this ceiling. And imagine that the "ceiling" is actually the floor the astronaut is lying on. Then the picture will become quite "earthly". There is an object under the astronaut's back. He peeks out over his right shoulder. Used as a support, this item provides a small gap between the astronaut's body and the floor so that the astronaut appears to be suspended in

mid-air. In this case, the astronaut, in order to maintain his unusual posture, touches visible objects with his hands and feet .

"Lusma in the role of an acrobat" also depicts "free floating" (ill. 4c). But, again, his legs are very suspiciously close to the cherished support (the edge of the hatch), on which he seems to be leaning with one of his knees.



Particularly noteworthy is the ingenious photograph of Fig. 5a. Here, as NASA describes it, Astronaut Kar is holding Astronaut Pog at his fingertip. This picture, it would seem, convincingly demonstrates weightlessness - on Earth, one person cannot hold another on the tip of a finger, while the other remains in the upside down position.

But take a closer look at this picture. Being in zero gravity, people can be in space in arbitrary positions relative to each other (ill. 6). And in picture 5a, the astronauts in relation to each other are positioned as if some force "builds" them in one line.

Turning over image 5a, you can see how it could have been taken on Earth (5b). It is enough for Pogue to stand "tiptoe" on the pipe, and Karu - to hang on a hidden support (say, on a crossbar). And so that this support is not visible to us, the figure of Kara is shown only from the belt. The hanging Kar touches the crown of the standing Pog with his finger. And the force that builds astronauts in a line may well be the force of gravity.

Fig. 5. And here, too, the force of gravity seems to be at work.

a) n odpis NASA: " Car shows" lifting weights "in weightlessness, astronaut holding Pogue at your fingertip"

b) here's how you can take such a picture on Earth, in the absence of weightlessness

In general, the impression from the pictures of Figs. 2,3,4,5 is that there is no weightlessness on them, but there is a desire to show it. Although, it would seem, if you have a huge space station at your disposal, then why waste your efforts on such tricks?

Such clips about zero gravity can be filmed on an airplane.

On NASA websites and films, you can find up to two dozen separate clips or episodes embedded in films in which the Skylab astronauts actually demonstrate weightlessness [3] . Figure 6a shows a frame from one such clip.



Fig. 6. Astronauts and cosmonauts demonstrate weightlessness:

a) astronauts demonstrate weightlessness allegedly in "Skylab"; **b)** a Soviet cosmonaut in a simulator plane in the same years; **c)** a scheme for achieving zero gravity in a simulator plane

Watching clips on the topic of weightlessness in Skylab shows that **all the episodes about weightlessness allegedly filmed in Skylab are very short-lived.** Their average duration is 10 seconds. And when longer clips are encountered, they consist of a set of separate short scenes. Why were the astronauts-cameramen in such a hurry, if weightlessness in a real space station is a constant “thing”, and there is nowhere to rush to shoot it. There is an assumption that all these short clips were filmed not in space, but in a simulator plane, known to all cosmonauts (Fig. 6c). To achieve a short-term state of weightlessness in the cabin, such an aircraft accelerates upward and, continuing to move by inertia, makes a "slide", and then begins to fall down [4]... In the short seconds of passing the "slide" in the aircraft cabin, a state close to zero gravity sets in. It would be ideal if the outside air did not slow down the plane's fall. The pilot of the aircraft tries to compensate this braking as accurately as possible with the help of the operation of the engines. After passing the slide, the plane cannot fall for a long time, otherwise it will not have time to get out of the dive. **The typical duration of weightlessness in an airplane is about 30 seconds** (at a certain risk, it can be slightly increased).

Aircraft simulators have been used since the earliest years of manned astronautics. In Fig. 6c, we see cosmonaut A. Nikolaev soaring in zero gravity in an airplane in the very years that are discussed in this book. Therefore, NASA could

well have removed for a dozen or two seconds somersaults in zero gravity inside such an aircraft, and then imagine it as acrobatic exercises supposedly inside a space station (Fig. 6a). To reproduce the interior of the station in the aircraft cabin - the simulator does not present any technical difficulties. The size of his cabin is quite sufficient for this. Suffice it to say that whole mock-ups of Soyuz spacecraft were put into our planes, and the cosmonauts hovered around them, training spacewalks.

More difficult for NASA was the case with filming in zero gravity of some subtle physical experiments. Let's talk about one of them. It is known that in zero gravity, water is collected in balls that freely float in the surrounding air. Figure 7 shows several frames from the clip in which the ISS cosmonaut demonstrates this experiment [5]. First, the astronaut squeezed a water balloon out of a drinking syringe, and it hung near his chin (Fig. 7a). After 6 seconds, the astronaut blew on him, and the balloon split into two (ill. 7b). Finally, the astronaut got tired of the balloons, and he swallowed first one, and then another balloon (ill. 7c, d). The whole episode took 13-14 seconds, and all this time the balls were calmly hanging in the air in front of the astronaut, and the astronaut was playing with them without haste. Their immobility was the result of ideal weightlessness on the space station.



Fig. 7. This is real weightlessness.

In the International Space Station, water balls hang in the air for as long as necessary until the astronaut gets tired of it.



Another thing is in an airplane - a simulator. No matter how he regulates the operation of the engines, the plane will fall either a little slower, or a little faster than it would have in a free fall. Tumbling astronauts will not pay attention to these small deviations from the state of weightlessness.

But a water ball under such circumstances will not be able to hang motionless. It will shift in one direction or another depending on who is overbearing whom at the moment: whether the thrust of the engines slightly exceeds the braking from the air, or vice versa. And only in rare moments of transition from one state to another, the ball will freeze in the air of the cabin. Hence it is clear that in a simulator plane the experiment with a freely hanging water balloon, if it succeeds, will be for a very short time. This is exactly what is observed in the clip with a free water balloon, allegedly filmed in "Skylab" [3]. One of them shows a water ball floating freely in the air (Fig. 8). This episode lasts only 1.4s. Say the word "Skylab" once - that's the whole duration of this vaping.

Fig. 8. A short moment of joy:

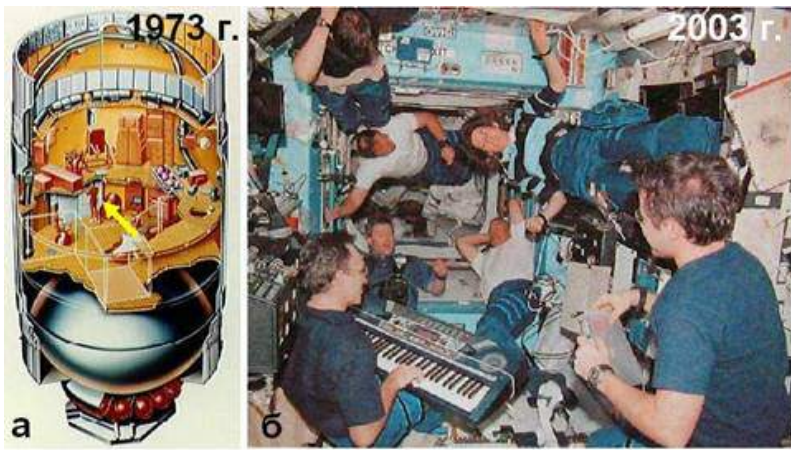
the Skylab astronaut was able to demonstrate the hanging water balloon in just 1.4 seconds.

As a result, it becomes clear that all those short clips about weightlessness in Skylab, which NASA shows, could well have been filmed in a simulator plane, inside which the visibility of the station premises is equipped.

Why did only three people work in the spacious station?

According to [1], the habitable volume of the Skylab working compartment was 270 cubic meters (Fig. 9a). A NASA artist painted the interior of the Skylab (Figure 9a). To help the reader notice a human figure in such a vastness, the author has put an arrow in the picture. *"Such a large volume made it possible to create in Skylab conditions for the life and work of the crew, close to those on Earth. In the rear part of the block there are saloon, cabins for sleeping and rest"* [2] .

Astronauts of the modern ISS can envy such conditions: how crowded they are (Fig. 9b). But why in the spacious Skylab was its crew so small - only three people ? Couldn't there be jobs for more astronauts? Look, in the 5 times cramped room of the ISS module (50 cubic meters) 7 people were resting (Fig. 9b). Of course, such a crowd is not always on the ISS: it happens when changing crews. Usually 3-4 people work there. The change of crews according to the scheme "handed over the watch - took over the watch" allows the station to be transferred in working order, so to speak, from hand to hand, without its conservation. But the two Apollos never docked at Skylab at the same time, although for this, according to the description of NASA, there was the necessary docking module (Fig. 1). As a result , more than three people have never lived in the supposedly spacious Skylab, even for a short time. This can be explained by the fact that **in fact there was no work bay on the Skylab. And the astronauts who flew to Skylab remained to live in what they arrived in - in the cramped cabin of the Apollo spacecraft.**



Snapshot 9 . a) 1973 - how spacious in Skylab (drawing by NASA artist);

b) 2003 - 30 years later, 7 people huddled in the cramped modern ISS

According to NASA, the three visiting expeditions to Skylab lasted 28, 59 and 84 days, respectively. How long they actually were there is difficult to say, given NASA's many-sided experience in imitations. It cannot be ruled out that the earlier actual return of the astronauts of the Skylab-2,3,4 missions from orbit followed by a splashdown performance at the time announced by NASA, since the technique of ostentatious splashdowns was apparently worked out quite well (Chapter 24).

Possible scheme for simulating an orbital station

According to the official version of NASA, the habitable block of the Skylab station was a converted, empty stage III (S - IVB) hull of Saturn-5. The station was put into orbit only by the first two stages of Saturn-5. But everything we have learned about Skylab indicates that it was not an orbital station, but an imitation of it. How was it done?

First of all, we note that according to our version, Fig. 10a shows not Saturn-5, which did not take place, but another "lunar" rocket, that is, a dressed-up Saturn-1B, with one working stage located at the very bottom , and the second working stage (the same S - IVB) crowns the rocket. On the "lunar" rocket, the S - IVB stage is fully fueled, which excludes any options with the Skylab working compartment. He is simply not on the launching rocket. According to our version, the "lunar" rocket is so overloaded with the "masquerade" that even the entry into the near-earth orbit of the simply spent empty stage S - IVB seems questionable. Therefore, most likely, that "lunar" rocket, which NASA launched on May 14, 1973, codenamed "Skylab-1", did not put anything into orbit at all, and its last stage fell into the Atlantic Ocean. But the start itself was not in vain: it depicted the launch of the Skylab, without which the further would have been unthinkable.

But if the next "lunar" rocket fell into the ocean, then how then did the structure that we see in Fig. 10b end up in orbit? In the author's opinion, it could well have been launched in a secret order and at a suitable time in a separate

launch of the "normal" Saturn-1B. Recall that every second space launch made in the United States at that time was secret (Chapter 18). The second stage of the regular "Saturn-1B" (S - IVB) goes into low-earth orbit without any problems and may be called "Skylab". As a payload, this stage carries what is called a "solar telescope module" and a docking station (Fig. 1). After entering orbit, the telescope module leans back on consoles, giving the entire complex a rather picturesque look.

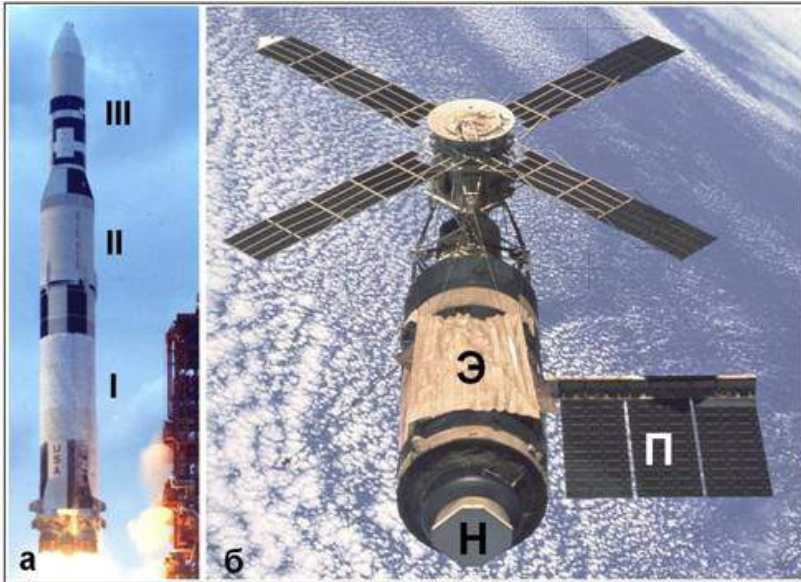


Fig. 10. The version of the hoax of

the "orbital station" "Skylab":

- a) the next "lunar" rocket starts;
- b) Skylab in orbit

Completeness of this view, however, was hampered by the view of a "naked" rocket stage with a nozzle sticking out from behind. To correct this deficiency was entrusted to the stronauts who soon arrived at Skylab on the Apollo spacecraft on the Skylab-2 mission. They had to disguise the spent rocket stage so that it turned into something unlike itself. To justify the need for astronauts to go into outer space, NASA announced that during the launch of Skylab, the sunscreen was torn off, one solar panel tore off and another was damaged **[1]**, so that the arriving astronauts were entrusted with the appropriate repairs. In fact, according to the author, there were no such incidents, because from the bare stage S - IVB срывать нечего. Прибывшие же астронавты же, выйдя в космос, прикрепили к корпусу ракетной ступени муляж панели солнечной батареи «П», установили над ней якобы солнцезащитный, а на самом деле маскировочный экран «Э», и закрыли сопло ракетной ступени накладкой «Н», которую НАСА назвала радиатором охлаждения. После этого «Скайлэб» принял тот вид, который украсил архивы НАСА (илл.96).

A somewhat simpler version of the simulation is also possible, in which there is no need for an additional launch of Saturn-1B. It should be borne in mind that in the launch of the Skylab, the "lunar" rocket was launched for the thirteenth time.

And, most likely, NASA specialists, from time to time, improved their brainchild. It cannot be ruled out that by the time Skylab was launched, the "lunar" rocket could have already brought its last, empty stage (S - IVB) into orbit, plus a few more tons of load (mock-ups of the named modules). In this case, no additional launch is needed.

Imitation of scientific advances does not benefit progress

As S. Aleksandrov writes [2] , *Skylab "did a good job in orbit, but had no development prospects ... In the early 80s, fueled by the success of Salyut, the Americans began designing the Freedom station. The end of research work was not in sight, and its leadership had absolutely no idea how to report to Congress for the money spent . "* And then the United States decided to create an orbital station, *relying on many years of Russian experience [2].*

But the dummy station could not have development prospects . And the Soviet orbital stations were real milestones in the development of cosmonautics, so it was the Soviet (Russian) experience that came in handy when creating the ISS. For the same reason, "Skylab", as an imitation of the station, was "visited" only at the very beginning of its "career", and then, as soon as the need for the performance disappeared, it was abandoned .

Can't be invited to a house that doesn't exist

In 1975, during the Soyuz-Apollo flight of conscience, Soviet cosmonauts saw Apollo in the case, and the American ones saw our Soyuz. Since 1976, foreign cosmonauts began to work on Soviet space stations [6] . Later, the Americans actively invited foreign astronauts (cosmonauts) to fly on their shuttles. But only the Americans saw Skylab in space. This fact is consistent with the version of the imitation of the station, because you can not invite into a house that does not exist .

NASA apparently understood that the US was expected to invite foreign astronauts to Skylab. And in 1975, when Skylab was already flying empty, the following words sounded from NASA [1] : *"After the completion of the Apollo, Skylab and Soyuz-Apollo programs, there will be two Saturn-5 missiles, one Skylab station, and three Apollo command modules. NASA has considered using this equipment to launch a second Skylab station, such as the one launched in May 1973. Saturn 5 will launch Skylab. It will serve as a space station for the Soyuz and Apollo spacecraft. Using existing equipment, these options will cost between \$ 220 million and \$ 650 million. But funds have not been allocated. In August 1973, it was decided to mothball the equipment. In December 1976, the rockets and the spacecraft were transferred to museums. "*

So, it all ended in conversations. It is hard to believe that this happened due to lack of funds. First, the named amount is not large by the standards of large

projects (no more than 3% of the cost of the Apollo program). Secondly, the participation of the USSR, and possibly other countries, would reduce NASA's expenses. Therefore, it is more likely that the international Skylab was discussed only "for a diversion."

Skylab - the brilliant epilogue of Apollo

Why was it necessary to rush to launch and everything that followed? Is it really only because, as S. Aleksandrov writes, the lunar program ends, and something needs to be done, somewhere in a hurry?

The authors of [7] see the reason for this haste in something else. They write that even after the completion of the Apollo flights, some Soviet specialists still had doubts about the reality of the American landing on the moon. Such doubts encouraged the continuation of the lunar race on the part of the USSR, and this threatened to expose the hoax. Already only a manned flyby of the Moon (without landing) could show that there are no platforms on the Moon from American lunar modules. Even sending an automatic satellite to survey the lunar surface would be dangerous for the same reason. Therefore, it was necessary to push the USSR to curtail its lunar program in all directions. This goal was served by the urgent launch of the supposedly heavy Skylab. He "finished off" the last doubts about the existence of a real lunar rocket in the United States. W Erez three months after the success of "Skylab," the Soviet Union closed the work on the program of manned flights to the moon and on the moon, and later stopped and sending to automatic devices.



"Skylab", in essence, was the epilogue of the Apollo program, an epilogue brilliant both in the boldness of its design and in the art of execution. And perhaps it is no coincidence that one of the directors of the Skylab program was Colonel Frank Borman [8], the commander of Apollo 8, who did so much for the success of the entire lunar hoax (Fig. 11). He was the # 1 actor in act # 1 (Apollo 8) of this performance, he did an excellent political reconnaissance before the Apollo 11 flight (Chapter 20), and he also prepared a brilliant epilogue for the entire Apollo program.

Fig. 11. Old friend.

Links

1. NASA [http : // www . astronautix . com / craft / skylab . htm](http://www.astronautix.com/craft/skylab.htm) - detailed information on Skylab, about the delivery of missiles to the museum, see.

the message "01 January 1975 Skylab B Program".

2 Enz. "Cosmonautics". Under the scientific. ed. Acad. B.E. Chertoka. M .: Avanta +, 2004, pp. 126, 193. 336-337, 341-344

3. see [iv27], [iv28], [iv29], [iv30], [iv31], [iv32] Sect. 28 Total in the series "American Space Odyssey" in the films " Skylab : The First 40 days ", " Skylab : The 2nd manned mission ", " Four rooms e a rth view "there are up to two dozen such episodes .

4. <http://www.atlasaerospace.net/zgrav.htm>

5. Life on the International Space Station <http://www.youtube.com/watch?v=ZNnvm12TgT8>

6. "To the stars", "Planet", Moscow, 1980, Nikolaev p. 258, foreigners here 266-267

7. <http://mo---on.narod.ru> "Americans have never been to the moon." Materials of the forum "Membranes"

8. <http://www.jsc.nasa.gov/Bios/htmlbios/borman-f.html>

9. <http://www.lib.cas.cz/www/space.40/1973/027.HTM>

10. Magazine "Computer - Online" N23,2007 from 26.06.2007, Heirs of the Flying Dutchman <http://offline.computerra.ru/2007/691/323379/>

Илл.1. HACA <http://www.astronautix.com/graphics/0/10076019.jpg>

Илл. 2. NASA <http://images.jsc.nasa.gov/lores/SL4-150-5062.jpg>

Илл. 3. NASA <http://images.jsc.nasa.gov/lores/SL2-02-162.jpg>

Илл. 4. NASA a) <http://images.jsc.nasa.gov/lores/SL4-150-5074.jpg>

б) <http://images.jsc.nasa.gov/lores/SL4-150-5075.jpg>

с) <http://images.jsc.nasa.gov/lores/SL3-123-2637.jpg>

the originals of signatures can be read on the Internet by replacing jpg with htm in the image address ;

Fig. 5.a) NASA [http : // grin . hq . nasa . gov / IMAGES / SMALL / GPN -2000-001946. jpg](http://grin.hq.nasa.gov/IMAGES/SMALL/GPN-2000-001946.jpg) **b)** inverted image - by the author;

Илл.6. а) [ф8] «Skylab: The 2nd manned misson, Four rooms earth view» **б)** [5, с.258]; **в)** <http://www.atlasaerospace.net/zgrav.htm>

Илл. 7 . [http : // www . atlasaerospace . net / building . htm](http://www.atlasaerospace.net/building.htm)

Илл .8. [5]

Илл.9. а) 19[1].Skylab the first 40 days ; **б)** 20[1].Skylab the 2nd manned mission.p5-2

Илл. 10. а) fragment ill.1, **б)** [2, p.411];

Fig. 11. Drawing and editing by the author, image from NASA used <http://grin.hq.nasa.gov/IMAGES/SMALL/GPN-2000-001055.jpg>

Insert. Portrait of Bormann [8].

Versions, opinions

8-10 minutes

Versions, opinions. Chapter 26

An approximate general scheme of the hoax

So, there are many indications that the United States organized and carried out a lunar hoax. An approximate general scheme of the hoax is seen in the following form.

1. The Americans were working on the lunar program in two directions: an attempt at a real flight to the moon and a fallback - a hoax. In parallel with the development of the real Saturn-5 rocket, a fake "lunar" rocket was being developed. Probably, at first the main efforts were directed to the first option. But under the influence of failures, starting from about 1966, the hoax option was already actively worked out. Since that time, funding for the real lunar project began to decline, which meant the transfer of a significant part of the funding to a deeply secret version of the hoax. Funding cuts for the first option led to massive layoffs in the sectors involved in the creation of a real lunar rocket and other lunar technology.

2. To ensure the secrecy of the mystification work, in 1967 the critics in the ranks of those "involved" in the secrets of the Apollo program were "eliminated". Although in fact the flights of the "lunar" "Apollo" began from the end of 1968 with the flight of the A-8, already 1967 was a year of extreme intensity of the lunar race. In the first half of 1967, the USSR, by decree of the highest political bodies - the Central Committee of the CPSU and the Council of Ministers of August 3, 1964, planned to make the first flyby of the moon **[1]**... Life later showed that the USSR actually reached the required readiness two years later, in the first half of 1969. But reality only becomes apparent after it has happened. Therefore, in 1967, the Americans were very, very nervous. After all, they perfectly understood their unpreparedness even for a simple flyby of the Moon, that the USSR "came much closer to a manned flyby of the Moon" (Ch. 6). Therefore, the version of the hoax in 1967 was already being prepared by the Americans with might and main, and all factors interfering with it, including unwanted critics, had to be resolutely eliminated.

3. After the failed test of the Saturn-5 rocket on April 4, 1968, all work was completely transferred to the hoax version, and the work aimed at realizing a real

flight to the moon was completely stopped.

4. At this fundamentally new stage of the program, new leaders were also required for its successful completion, the main requirement for which was the ability to conduct an incredible-scale operation of mystification of all mankind. The "old" leaders who had grown up in the care of realizing a real flight to the moon were no longer so necessary. Some of them, including the then director of NASA D. Webb, may have simply been afraid to participate in such a risky scam. From this point of view, the resignation of the former NASA director James Webb, who headed NASA for 7 years, from the very beginning of the Apollo program, does not seem so strange anymore. The leadership of NASA at a fundamentally new stage of the hoax of flights to the moon was entrusted to T. Payne.

Following D. Webb, in less than 2 years, another prominent leader of the exhausted "old" part of the Apollo program, the general designer of Saturn-5, Wernher von Braun, will retire. His plans to carry out, in the end, a real flight to the moon did not meet the interests of the US elite.

5 . The spectacular launch of a giant "lunar" rocket was shown to specialists, viewers and through TV to all mankind. In essence, an imitation of a launch to the moon was performed. The astronauts pretended to march to the rocket to board the ship, but in fact remained on Earth. Lunar rockets most likely did not even enter low-earth orbit. Their remains fell into the Atlantic Ocean. After the time set for the flight to the Moon and back, an imitation of the ship's return from the Moon and its splashdown in the Pacific Ocean was carried out.



Fig. 1. An approximate general scheme of the hoax

All this time, NASA, with the help of Surveyors-X, which were on the surface of the Moon, and Orbiters-X, circling around it, broadcast in advance prepared TV and radio reports of the corresponding content . Upon the return of the astronauts, film and photographic materials prepared in terrestrial studios and obtained with the help of automatic lunar satellites and high-altitude near-Earth satellites were used.

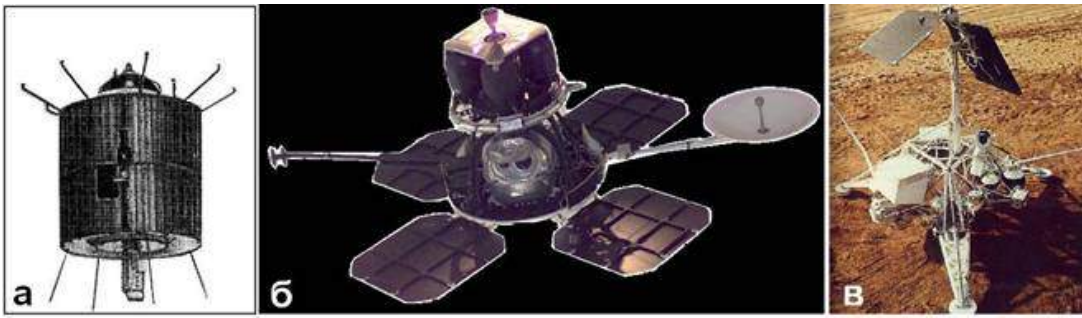


Fig. 2. Automata replaced astronauts: a) high-altitude near-Earth satellite ATS-3, b) Orbiter near-lunar satellite, c) Surveyor soft lander



6 . Before the first "landing" on the Moon, the White House emissary, astronaut Bormann, visited Zvezdny in order to find out how much Soviet specialists believed in the Apollo 8 and 10 flyby of the Moon and, thus, how prepared they were for the next stage of the hoax.

7 . The propaganda campaign around flights to the moon was handled by NASA tough and skillful.

Fig. 3. A powerful propaganda campaign about the "lunar" victories.

The careful direction of this campaign brought public opinion into a state of euphoria, and morally suppressed the rival (USSR). Psychological pressure on the Soviet leadership was carried out through all possible channels. All the media were involved, Soviet diplomats were invited to the launches of "lunar" rockets, meetings were organized between Soviet cosmonauts and American astronauts. An important detail - the first color editions of American newspapers (a new achievement of the American press) were first published not sometime, but precisely by the time of the end of the flight with the first "landing on the moon". Finally, such an extraordinary communication channel as the White House-Kremlin hotline was also involved.

The media then shifted their focus to diminish public interest in Apollo flights in order to secure a reliable US exit from the hoax spectacle.

8. After the completion of the Apollo program, NASA urgently launched the Skylab, which was an imitation of a heavy orbital station. This suppressed the last doubts of Soviet specialists about the existence of the Saturn-5 rocket in the United States.



Fig. 4. Skylab - the last "iron" argument in the campaign of psychological pressure

9 . From the time of the completion of flights to the Moon to the present time, the US propaganda means, their allies and assistants in other countries have been incessantly working to keep the world community confused about flights to the Moon. Periodically appearing publications in print, television programs, and numerous NASA films are devoted to this.

10 . Concluding this list, one cannot help dwelling at least a little on the question that worries many: "Why did our leaders and specialists fail to recognize the deception?" Detailed answers to these questions can be found in Sections 21,22, but here it is worth noting only three main factors that contributed to the success of the hoax.

Firstly, the habit of thinking that there, in the West, people "smarter than us" live, which has not been overcome even by our own cosmic successes.

Secondly, no one could even have thought that in such a matter as the question of the implementation of the centuries-old dream of mankind, deception is possible, and state deception.

Third, the American system of maintaining secrecy turned out to be more perfect than the Soviet one.

And, finally, it should not be ruled out that within the upper echelons of the Soviet political and scientific-technical elite there were influential forces interested in the success of the United States.

In general, NASA carried out the hoax in such a way that the overwhelming majority of humanity accepted it 100%. The Americans have solved an incredibly difficult task, and, to their credit, the relative percentage of mistakes they made is very small. These errors have been exposed by skeptics for many years through a scrupulous analysis of a huge amount of information. The hoax is cleverly conceived and skillfully executed. But is this a reason to continue to believe in it?

35

8-10 minutes

Conclusion

Doom and curse overtaken the loser



Fig. 1. Traces in history:

1957 year. The first artificial Earth satellite - USSR (Russia)

1961 year. The first cosmonaut of the Earth - USSR (Russia)

1969 year. The first moon landing hoax? - USA

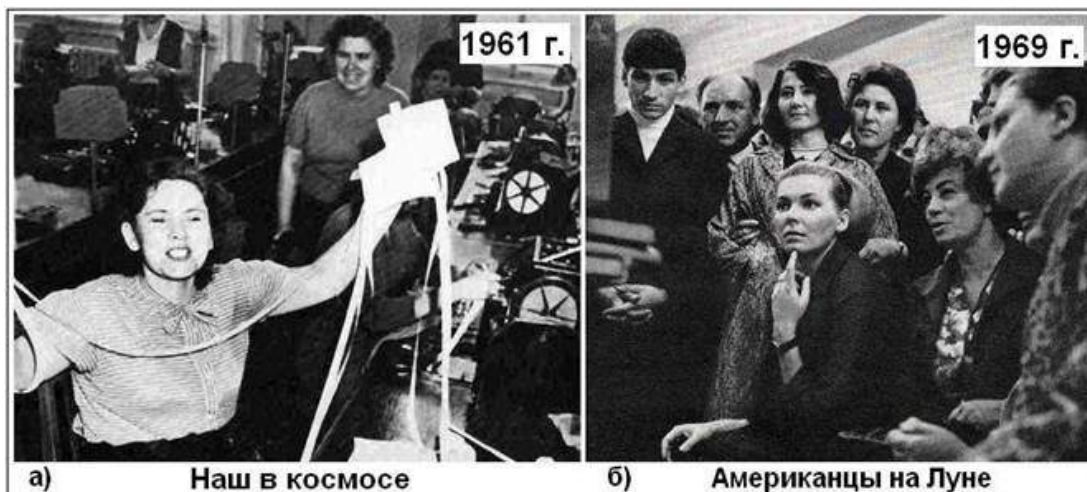
"Trace in history" - this is the name of a note about flights to the moon in the magazine "Around the world", No. 8 for 2003 . It contains the following words:
"Man's flight to the moon is undoubtedly one of the most amazing achievements of the twentieth century. For the first time, earthlings were able to leave their home planet, fly to another cosmic body and return safely. The chain of human footprints left on the lunar surface 34 years ago became the beginning of the road to the Great Space "

Achievements in space exploration have been and remain a measure of a country's ability to lead scientific and technological progress. New confirmation of this is provided by the broadcast announcements of the United States about plans for a manned flight to Mars. The enormous propaganda significance of these statements is obvious. Only the leader of world scientific and technological progress can make such promises!

In the late 50s - early 60s, the launch of the first artificial satellite and the first cosmonaut of the planet of the USSR showed that he was the leader of scientific and technological progress. No wonder at the end of the film "The Other Side of the Moon" the following phrase was sounded: *"The desire to restore the prestige of the United States as the leader of scientific and technological progress was the main stimulus for the adoption of the lunar program."* And in order to restore something, you have to lose something at least temporarily. Of course, people in the USSR then lived much poorer than in the United States. But success in technical competition gave rise to confidence that over time and in terms of living standards, there would be significant progress.

The success of Apollo dealt a severe blow to this confidence. Now, from TV screens, many representatives of our intelligentsia - contemporaries of those events say that they were heartily happy for the success of America. Maybe these people were really happy then, but they were good at hiding their feelings. But in general, as far as the author (then still a student) remembers, disappointment swept over the widest circles of Soviet society.

Let us recall the photo from the introduction (photo 2a), showing how the Soviet people rejoiced at the message about the flight of Yuri Gagarin. For comparison, photo 2b shows a group of Muscovites watching a TV show about the first "landing". The author did not manage to see traces of special joy on the faces of the audience.



III.2.

a) employees of the Moscow telegraph were among the first to learn about Gagarin's flight (1961)

b) Muscovites are watching a TV show about the "landing" of the Americans on the moon (1969).

Here are two memoirs of contemporaries of the events.

Here is the opinion of a high-ranking general **[1]** : *“The flight of Apollo 8 to the Moon is a holiday for all mankind. But for us this holiday is overshadowed by regret that now it is not Valery Bykovsky, Pavel Popovich or Alexei Leonov who are flying to the moon, but Frank Borman, James Lovell and William Anders. Yes, the Americans are doing very well, and it is already clear that Apollo 8 will probably fly around the moon, and I cannot cope with my mood - today I have it disgusting. ”*

And here is the opinion of a simple taxi driver **[2]** : *“In August 1969, getting into a taxi, I called my home address:“ Academician Korolev Street ”. On the way, the elderly taxi driver made it clear that he knows who lives in the "royal" houses. Apparently, he decided that I could express what the people “think”: “We have no Queen now - and the Americans were the first to land on the moon. So, we haven't found another head like this? ”*

The success of Operation Apollo crossed out the most important component of Russian national pride - faith in one's natural talent, faith in the ability to lead scientific and technological progress. And the winner of the lunar race, America, has become an idol for many Russians to follow. The course of alignment with America in large and small has not bypassed the attitude to the exploration of outer space. Russia has shifted its to the space industry for the creation and maintenance of the ISS , which is under full American control. By the decision of the Russian leadership, the Mir orbital station left over from the Soviet Union was sunk (Fig. 3). Russia will not have its own station. And the Americans' position on space has remained the same. *“Space access, use and control of outer space are critical to military strategy.”* This is what the US Secretary of Defense W. Cohen wrote in his 1999 annual report to the President and Congress **[3]**.

Yes, almost 40 years ago an event took place that left a deep mark in the history of mankind. But it is hardly worthy of high feelings, since it says a lot about the fact that in this case the United States carried out the greatest scam in the history of mankind. The United States acted according to the principle - "in war, as in war." In war, to deceive the enemy is the first commandment. "Military cunning" has existed for as long as there have been wars.



Fig . 3 . The last Russian (Soviet) orbital station Mir, docked with the American shuttle Atlantis, <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2002-000063.jpg>

Fundamentally new in the lunar scam was that, as many facts show, **for the first time in the history of mankind, scientific and technological progress became a field for mystification of the state level** . The lunar race was a manifestation of rivalry between the two powers, but it was also a powerful incentive to mobilize the best minds of mankind to solve the problem of traveling to another planet. The US lunar victory really left a mark on history. But this trace is negative from the point of view of the development of science and technology. The United States did not open the way to the "Big Space", but delayed for decades the fulfillment of the age-old dream of mankind - a flight to the moon. So there are different traces in history.

The result of the lunar race justified the money spent by the United States a hundredfold. Let us recall the thought expressed by the authors of the film [4]: “... the rivalry for the Moon was a kind of war. **“The loser will face death and damnation,”** wrote the New York Times at the time. It was a struggle between two systems of power, in which the Americans had to win. By any means ". And wasn't the New York Times sagacious? **The Soviet Union, having lost the lunar race, soon suffered a complete defeat in a psychological war and, indeed, died** , and its image is now being showered with curses, all and sundry.

And in conclusion, the author offers to get acquainted with an interesting letter from his colleague Oleg Tokarev: “Several years will pass, and we will all be

surprised to remember how we were fooled for so many years with stories about flights to the moon. The Americans will declassify the documentation of the most ambitious operation of the Cold War, and will tell with laughter how they fool the naive Russians. And they will say: "Sorry, but war is war, even a cold one." Perhaps it will be so soon. Nevertheless, we Russians need to sort out this bitter history for us ourselves. So that the lesson of defeat goes for the future.

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Fig. 8. Covers and screensavers [10, 12 and 1]

Ill.9. [14]

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Fig. 14. Computer montage of the author from the screensavers of American space films

Fig. 15. Editing borrowed from Internet discussions. The exact address has been lost.

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Ill.3. a) <http://www.visualrian.ru/storage/PreviewWM/0164/64/016464.jpg>

b) [4, p. 44], c) [17. c .106]

Ill.4. a) <http://nssdc.gsfc.nasa.gov/planetary/lunar/ranger.gif> i

http://www.lpi.usra.edu/resources/ranger/images/ranger_moon.jpg

Ill.5. <http://www.lpi.usra.edu/resources/ranger/catalog/9/A/>

Fig. 6. a) http://nssdc.gsfc.nasa.gov/planetary/image/lunar_orbiter.jpg b)
author's drawing based on [5, p.272]

Ill.7. a) <http://www.lpi.usra.edu/resources/cla/images/lores/b16.jpg>

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c) <http://nssdc.gsfc.nasa.gov/planetary/lunar/lunarorb.html> and

<http://nssdc.gsfc.nasa.gov/planetary/lunar/lo5tychoh.gif>

Ill.8. http://nssdc.gsfc.nasa.gov/imgcat/html/object_page/lo1_h102_123.html

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Ill.11. [19]

Ill.12. Fragments ill.10a and ill.11b

Chapter 5

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A-8:

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A -8 - http://www.hq.nasa.gov/office/pao/History/alsj/a410/A08_MissionReport.pdf - the exact data on the height of the compartment is not specified: p. 50, the height of the Spacecraft / S - IVB Separation is shown as 3797.8 miles at the moment of time 3:20:59, the time of Separation maneuver is 3:40:01 (p .12), i.e. in 19 minutes, the height above the Earth at this moment is also more than 10 thousand miles

A-10

http://www.hq.nasa.gov/office/pao/History/alsj/a410/A10_MissionReport.pdf - 17944.7 miles , p.50

A-11 http://www.hq.nasa.gov/office/pao/History/alsj/a11/A11_MissionReport.pdf - 16627.3 miles , p.94,

A -12 http://www.hq.nasa.gov/office/pao/History/alsj/a12/A12_MissionReport.pdf - no earlier than 12504.5 miles, p.87

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Fig. 1. a) [1], letters A, B, C are applied by the author, b) [11]

Fig. 2. f8-8, iv36 "Links-2"

Fig. 3. f2, iv1 "Links-2"

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Ill.5. NASA <http://images.jsc.nasa.gov/lores/S65-61886.jpg>

Fig. 6. NASA Gemini Legacy and 4 Days Gemini 4; f8, iv3, iv4 "Links-2"

Fig. 7. f2, iv5 "Links-2"

Fig. 8. editing of the author based on still frames from f2, f8, iv5, iv6, iv7, "Links-2"

Ill.9. a) <http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS8-16-2583.jpg>

b) <http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS10-34-5011.jpg>

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Илл.10. a) <http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS7-3-1545.jpg>

b) editing of the author with Spanish. Fig. 9a and <http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS8-16-2593HR.jpg>

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Fig. 12. montage by DP Kobzev on f2, iv8 "Links-2" See also <http://www.hq.nasa.gov/office/pao/History/alsj/a17/as17-148-22727.jpg>

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Ill. 14. [1]

Fig. 15. "Earth and the Universe", 1970, No. 1, p. nineteen

Fig. 16. f 8 -9 " Links -2".

Fig. 17. a) NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-36-5404HR.jpg>, enlarged fragment of the Earth was added by the author; **b, c)** - editing by the author based on Fig. 17 "a"

Fig. 18. a) http://nssdc.gsfc.nasa.gov/imgcat/hires/a15_h_91_12343.gif, is1 "Links-2"; **b)** the same image with an increase in the contrast is2 "Links-2"

c) http://nssdc.gsfc.nasa.gov/imgcat/hires/a16_h_118_18885.gif, is3 "Links-2" **d)** the same image with increasing contrast is4 "Links-2"

Ill.19. NASA <http://www.lpi.usra.edu/resources/apollo/images/browse/AS08/14/2507.jpg>

NASA <http://www.lpi.usra.edu/resources/apollo/images/browse/AS08/14/2508.jpg>

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Fig. 20. Top row. The first frame on the left side of NASA

<http://www.lpi.usra.edu/resources/apollo/frame/?AS14-73-10197> , links to the rest can be obtained by replacing the last three digits with 198, 199, 200, 201, 203, 204. Bottom row. The first frame from the left side of NASA

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Ill.18. [17]

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Fig. 20. Fig. 19 with the author's modifications described in the text

Fig. 21, 22. Editing by the author using Fig. 8b

Ill.23. [20] and

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III.3-5. [8]

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l) 2004 [http : // www . hq . nasa . gov / office / pao / History / alsj / a 17 / a 17 . landing . mov](http://www.hq.nasa.gov/office/pao/History/alsj/a17/a17.landing.mov)

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See also <http://www.epizodsspace.narod.ru/bibl/golovanov/apollo/08.html>

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<http://www.hq.nasa.gov/office/pao/History/alsj/a12/a12.landing.html#1102741>
time 110: 32: 06

Translated into Russian: [http : // www . skeptik . net / conspir / moonhoax . htm](http://www.skeptik.net/conspir/moonhoax.htm)
, page 31

15. NASA

<http://www.hq.nasa.gov/office/pao/History/alsj/a12/images12.html#7024> next
Surveyor III Images next Apollo 12 ground track during the landing (101k) ,
direct link [http : // www . hq . nasa . gov / office / pao / History / alsj / a 12 / landpath . jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a12/landpath.jpg)

Ill.1 . a) <http://dayton.hq.nasa.gov/IMAGES/MEDIUM/GPN-2000-001210.jpg> and

<http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-44-6581HR.jpg> ;

b) a snapshot <http://dayton.hq.nasa.gov/IMAGES/MEDIUM/GPN-2000-001210.jpg> with increased contrast;

c) snapshot <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-44-6581HR.jpg> with enlarged

contrast and black and white

Fig. 2 . a) <http://www.hq.nasa.gov/office/pao/History/alsj/a16/AS16-118-18894HR.jpg> **b)** fragment of the image "a" with

increased contrast, see also <http://www.geocities.com/sergximage/> **Fig. 3.**

a)

http://upload.wikimedia.org/wikipedia/commons/e/e3/Saturn_from_Cassini_Orbiter_10-06%

b) the same image with increased contrast

Fig. 4. Courtyard lighting (author's photo)

Ill.5 . NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-44-6574EN.jpg>

Fig. 6. Fragments of Fig. 5

Ill.7. NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS10-27-3856.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a15/AS15-88-11972.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a17/AS17-145-22261.jpg>

Ill.8. <http://gosh100.boom.ru/pics/souz.jpg> <http://gosh100.boom.ru/pics/08.jpg>

Ill.9. [7b]

Ill.10 . Sunrise A-11 <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-44-6547EN.jpg>

Ill.11. [7b]

Fig. 12 . f7, iv14 "Links-2", [3] and

http://farm2.static.flickr.com/1015/1358195595_32736a55a3_o.jpg

Fig. 13 . a , b) f7, "Links-2", **c)** <http://www.hq.nasa.gov/alsj/a11/a11-lam2g.jpg>

Ill.14. NASA

<http://www.lpi.usra.edu/resources/ranger/images/browse/9/A/061.jpg>

<http://www.lpi.usra.edu/resources/ranger/images/browse/9/A/065.jpg>

<http://www.lpi.usra.edu/resources/ranger/images/browse/9/A/069.jpg>

Fig. 15. Izvestia for November 20, 1969 , see also ip3 "References-2"

Fig. 16. NASA [http : // www . hq . nasa . gov / office / pao / History / alsj / a 12 / landpath . jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a12/landpath.jpg) , Russian text - by the author

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2. <http://www.milkandcookies.com/links/4608/>
<http://rutube.ru/playlists/play/699.html?play=37077>

3.
<http://www.telegraph.co.uk/news/main.jhtml;jsessionid=1NVDPGB4IYP4JQFIQMFCIxml=/news/2006/08/14/wmoon14.xml> and <http://www.rambler.ru/db/news/msg.html?mid=8458177>

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<http://news.sky.com/skynews/article/0,,30000-13537349,00.html>

4. [http : // lenta . ru / news / 2006/08/23 / moon](http://lenta.ru/news/2006/08/23/moon) (in Russian)

5. <http://www.manonmoon.ru/>

5.http://rnd.cnews.ru/tech/news/line/index_science.shtml?2007/09/10/26554110.09.07

7. NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a11/a11.landing.html>
sm. records 102: 45: 17 and 102: 45: 44

8. Ya. Golovanov, "The truth about the APOLLO program ", M .: Yauza - EKSMO-Press, 2000, chapters 6-8, p. 165, 222, 244, 264-267; see also
<http://www.epizodsspace.narod.ru/bibl/golovanov/apollo/obl.html>

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18. f3 "Reference 2"

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III.1. [1]

III.2. [2]

III.3. [4]

III.4. NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5873HR.jpg>

III.5. NASA <http://www.hq.nasa.gov/office/pao/History/alsj/a14/AS14-66-9258EN.jpg>

Fig. 6. f3 "Links-2"

Fig. 7. <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5921HR.jpg> and <http://www.hq.nasa.gov/alsj/frame.html>, insert on the picture - by the author

III.8. Fragment ill.7

III.9.

<http://science.ksc.nasa.gov/mirrors/images/images/pao/AS16/10075865.jpg> i

<http://science.ksc.nasa.gov/mirrors/images/images/pao/AS16/10075865.htm>

Video clip http://www.hq.nasa.gov/office/pao/History/alsj/ktclips/ap16_rover.mpg (2MB)

Fig. 10. author's drawings

Ill.11. [17]

Ill.12. [1,14, 18], [http : // www . hq . nasa . gov / office / pao / History / alsj / a 11 / AS 11-40-5880. jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5880.jpg)

<http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5877.jpg>

<http://www.hq.nasa.gov/office/pao/History/alsj/a12/AS12-57-8448HR.jpg>

Fig. 13. Fragments **a)** [http : // www . hq . nasa . gov / office / pao / History / alsj / a 11 / AS 11-40-5915 HR . jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5915HR.jpg)

b) [http : // www . hq . nasa . gov / office / pao / History / alsj / a 12 / AS 12-47-6988 HR . jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a12/AS12-47-6988HR.jpg)

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Ill.1. <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001144.jpg>

Илл.2. http://www.mentallandscape.com/C_Luna17_Horz30.jpg

Fig. 3. fragments of Fig. 1

Ill.4. <http://www.hq.nasa.gov/office/pao/History/alsj/a14/AS14-68-9487.jpg>

Fig. 5. photo of the author

Fig. 6. a) <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001317.jpg>
b) contrasting version "a"

Ill.7. a) <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5866HR.jpg>

b) [9], **insert** - NASA

<http://www.hq.nasa.gov/office/pao/History/alsj/a410/AS8-16-2593EN.jpg>

Ill.8. a) <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5944HR.jpg>

b) <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5905.jpg>

c) <http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-40-5902.jpg>

Илл.9. <http://www.hq.nasa.gov/office/pao/History/alsj/a15/AS15-87-11749HR.jpg>

Fig. 10. a, b) photo of the author; **c)**

<http://www.hq.nasa.gov/office/pao/History/alsj/a15/AS15-84-11250HR.jpg>

Ill.11. <http://www.hq.nasa.gov/alsj/a15/a15psrf5-14.html>,
<http://www.hq.nasa.gov/alsj/a15/a15psrf5-14sm.jpg>

and <http://www.hq.nasa.gov/alsj/a15/AS15-84-11304HR.jpg>.

Chapter 1 1

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see photo description AS 16-113-18339

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14. Yu.I. Mukhin. Antiapollo. Lunar scam of the USA. - M.: Yauza, Eksmo, 2005, p. 41

15. <http://www.youtube.com/watch?v=isVO9AAAhxM&NR=1>

Fig. 1. [1,2], stills by the author

Ill.2. <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001462.jpg>

Fig. 3. [1,2], stills by the author

Ill.4. <http://www.hq.nasa.gov/office/pao/History/alsj/a15/AS15-88-11890.jpg>

Ill.5. [7.8]

Ill.6. [7]

Fig. 7. a) <http://www.hq.nasa.gov/office/pao/History/alsj/a16/AS16-113-18339HR.jpg> **b)** a fragment of the image from Fig. 6a with the author's geometric construction; **c)** computer montage of the author

Fig. 8.9. [12] author's stills

Ill.10. <http://www.hq.nasa.gov/office/pao/History/alsj/a17/AS17-143-21938.jpg>

1. NASA <http://www.hq.nasa.gov/office/pao/History/alsj/alsj-usflag.html>

2. Signature of NASA to the image of Fig. 1a: <http://www.hq.nasa.gov/alsj/a11/images11.html#Mag37> further **AS 11-37-5480: "This photo was taken from the Base window after leaving the ship"**

3. ф7 "Links-2"

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Fig. 1. a) “ A Look ”, August 1969, un1 “References-2” and [http : // www . hq . nasa . gov / office / pao / History / alsj / a 11 / AS 11-37-5480. jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a11/AS11-37-5480.jpg) **b)** [3]

Fig . 2.a) <http://www.hq.nasa.gov/office/pao/History/alsj/a12/AS12-47-6896HR.jpg> , **b)** contrast version of Fig. 2a

Ill.3. [4,5].

Ill.4. a) NASA [http : // grin . hq . nasa . gov / IMAGES / LARGE / GPN -2000-001137. jpg](http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001137.jpg) , is5 «Links-2»

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2 . Ya.I. Perelman. Entertaining astronomy. M. , " Science " , FML , 1966, p. 85

3. D. Wozney. Various Other Apollo Image Anomalies. [http : // internet . ocii . com / ~ dpwozney / by apollo 4. htm](http://internet.ocii.com/~dpwozney/byapollo4.htm) . In this work, a snapshot from <http://www.hq.nasa.gov/office/pao/History/alsj/a17/AS17-137-20960HR.jpg>, similar to Fig. 1, was examined.

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(4 M b). See also iv23 "Reference 2"

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13. f8-10 , willows 40 " Links -2"

14. NASA f8, "Links-2": f8-11, f8-10, f8-4, iv41, iv42, iv43 "Links-2"

Fig. 1. [1], author's inscription

Fig. 2. a, b) [5], f7 "Links-2", c)

<http://science.ksc.nasa.gov/mirrors/images/images/pao/AS11/10075186.jpg>

Fig. 3. Rocket launches "Proton" - Khoruzhy V., Gareikhanov R., Dobrovolsky N., Zharikov Yu. Et al., CD "In memory of those who were first", Baikonur, 2001; See also <http://images.yandex.ru/yandsearch?p=2&stype=image&text=%D1%80%D0%B0%D0%BA%D0%B5%D1%82%D0%B0%BF%D1%80%D0%BE%D1%82%D0%BE%D0%BD&ed=1>

Ill.4. [5]

Fig. 5. f8-10 and iv40 "Links-2"

Fig. 6. f8-10 and iv42 "Links-2"

Ill.7. [5]

Chapter 14

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This book is on the Internet: chapter 7
<http://www.epizodsspace.narod.ru/bibl/golovanov/apollo/08.html>

2. NASA film "Apollo 13: Houston, we have problems", f8 "Links"

3. NASA http://www.apolloarchive.com/apollo_gallery.html («The Project Apollo Image Gallery») section A 13

4. iv37, f8-9 "Links-2"

5. iv44, f8-9 "Links-2"

Fig. 1. Composition of the author from the intros and credits of the film [2]

Ill.2. [2]

Fig. 3. V.I.Feodosiev. "Fundamentals of rocket flight techniques", M .: "Science" FML, 1981, p. 79, with additional sketches by the author of the book; see also <http://www.skeptik.net/conspir/feodosev.htm>

Ill.4,5. [2]

Ill.6. a) [http : // www . hq . nasa . gov / office / pao / History / alsj / a 13 / AS 13-60-8591. jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a13/AS13-60-8591.jpg)

b) [http : // www . hq . nasa . gov / office / pao / History / alsj / a 13 / AS 13-59-8562. jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a13/AS13-59-8562.jpg)

Б) <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001119.jpg> This view of the damaged Apollo 13 Service Module (SM) was photographed from the Lunar Module/Command Module following SM jettisoning.

d) [http : // www . hq . nasa . gov / office / pao / History / alsj / a 13 / ap 13-S 70-35632. jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a13/ap13-S70-35632.jpg)

Ill.7 . a) [2] b) [http : // www . hq . nasa . gov / office / pao / History / alsj / a 13 / ap 13- S 70-15526. jpg](http://www.hq.nasa.gov/office/pao/History/alsj/a13/ap13-S70-15526.jpg)

Ill.8. [2]

Ill.9 . NASA <http://dayton.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001119.jpg> , is7 «Links-2»

Picture ill.6c with increasing brightness and contrast (D.P. Kobzev) is8 "References-2"

1. NASA <http://www.spaceimages.com/apollo810.html>

2. Yu. Krasilnikov and V. Yatskin. "Did the Americans fly to the moon?" <http://www.skeptik.net/conspir/moonhoax.htm> pp. 3 , 5, 85-86

3. "Did the Americans fly to the moon?" 7-40 (V. Pustynsky), Yu. Krasilnikov [http : // menonthemoon . narod . ru / photos _2_14. html](http://menonthemoon.narod.ru/photos_2_14.html) , [http : // menonthemoon . narod . ru / photos _2_12. html](http://menonthemoon.narod.ru/photos_2_12.html) , pages are not numbered

4. HACA APOLLO-11 HASSELBLAD CAMERAS <http://www.hq.nasa.gov/office/pao/History/alsj/a11/a11-hass.html>

5. "Life", avgust 1969 g of ., U 2 " Links -2"

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Ill.5 . a) <http://www.hq.nasa.gov/office/pao/History/alsj/a12/AS12-49-7278.jpg>

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Fig . 7.8 . see links in the text as well as

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<http://www.epizodsspace.narod.ru/bibl/raketostr3/1-2.html> 17. NASA <http://www.apollosaturn.com/s5news/p21-17.htm>

18. http://en.wikipedia.org/wiki/Apollo_6 and http://en.wikipedia.org/wiki/Apollo_4 , section "Cameras"

19. "Less than 1 second after the separation of stages I and II , a command is issued to start the liquid-propellant engine of stage II." <http://www.epizodsspace.narod.ru/bibl/raketostr3/1-2.html> . "The motors of the second stage are switched on when the distance between stages I and II increases to 2-3 m. [Http://www.epizodsspace.narod.ru/bibl/raketostr3/1-](http://www.epizodsspace.narod.ru/bibl/raketostr3/1-2.html)

1. [html](#) .Five liquid-propellant engines J-2 of the S-II stage are launched simultaneously

20. NASA [http : // www . apollosaturn . com / ascom / sibnews / sec 10. htm](http://www.apollosaturn.com/ascom/sibnews/sec10.htm)

Ill.1 . <http://www.hq.nasa.gov/office/pao/History/alsj/a11/ap11-S69-39961HR.jpg>

Fig. 2. drawing by the author according to [3]

Fig . 3 . [4] and accompanying clips

Ill.4. a) <http://www.hq.nasa.gov/office/pao/History/alsj/a13/ap13-KSC-70PC-107HR.jpg>

b, c) <http://www.youtube.com/watch?v=kf5yLuyCTag&feature=related>

Ill.5.6 [9]

Ill.7 . [11]

Fig . 8 . a) [9], b) processing of the author of the data [9]

Fig. 9. a) the author's scheme based on [17,18], b) [5]

Илл.10. <http://community.webshots.com/album/2006482AdovwZDEFp>

<http://outdoors.webshots.com/photo/1008499409000926706MmLXWVOXlh>

see also

<http://outdoors.webshots.com/photo/1064867463000926706fiQcyD>

Fig. 11. author's scheme based on [17,18]

Fig . 12 . a) the author's scheme based on [17,18], b) <http://upload.wikimedia.org/wikipedia/commons/b/b3/Ap6-68-HC-191.jpg> c) <http://upload.wikimedia.org/wikipedia/en/8/8a/Apollo6Interstage.jpg>

Ill.13. [5]

Fig. 14. a) author's diagram, b, c, d) [5] and <http://upload.wikimedia.org/wikipedia/en/8/8a/Apollo6Interstage.jpg>

Fig. 15. a) author's diagram based on [17,18], b, c, d) <http://history.nasa.gov/ap08fj/video/staging.mpg> ,

e, f, g, h) NASA film "Gemini Legacy", f8-2 "Links-2"

Fig . 16 . Chapter repeat 5

A-11. “ A Look ”, August 1969, un1 “Links-2”, 2.7 miles (5 km);

A-12 :

http://www.hq.nasa.gov/office/pao/History/alsj/a12/A12_MissionReport.pdf (p.11-5) shows the layout of the rescue vessels and the coordinates of the calculated point and touchdown point. Judging by the diagram, the error was about 9 km. **A-13:**

http://www.hq.nasa.gov/office/pao/History/alsj/a13/A13_MissionReport.pdf ; p.1-2; "Apollo splashed down in line of sight from the ship." **A-14**

<http://shopping.redorbit.com/product/apollo-14-patch-7583579/index.html> : less than 2 km; **A-15** : <http://www.hq.nasa.gov/office/pao/History/alsj/a15/a15mr-1.htm> about 2 km; **A-16** :

http://www.hq.nasa.gov/office/pao/History/alsj/a16/A16_MissionReport.pdf

p.11-3, the report shows a diagram of the splashdown site, less than 5 km ;

A-17: <http://www.hq.nasa.gov/office/pao/History/alsj/a17/a17mr.html> p.1-3, about 2 km . **Fig. 1. a)** <http://www.hq.nasa.gov/office/pao/History/alsj/a11/ap11-KSC-69PC-399.jpg>

b) <http://www.hq.nasa.gov/office/pao/History/alsj/a11/ap11-KSC-69PC-241HR.jpg>

Ill.2. a) <http://www.hq.nasa.gov/office/pao/History/alsj/a16/ap16-S72-36235EN.jpg>

b) <http://www.hq.nasa.gov/office/pao/History/alsj/a16/ap16-S72-36289.jpg>

c) <http://www.hq.nasa.gov/office/pao/History/alsj/a16/ap16-S72-36300.jpg>

d) <http://www.hq.nasa.gov/office/pao/History/alsj/a15/ap15-S71-41995.jpg>

Ill.3 . a) <http://www.hq.nasa.gov/office/pao/History/alsj/a17/ap17-72-H-1559HR.jpg>

b) <http://www.hq.nasa.gov/office/pao/History/alsj/a17/ap17-S72-56147EN.jpg>

Ill.4. [1]

Chapter 25

1 . NASA [http : // www . astronautix . com / craft / skylab . htm](http://www.astronautix.com/craft/skylab.htm) - detailed information on Skylab, on the delivery of missiles to the museum - see. the message "01 January 1975 Skylab B Program ".

2. Enz. "Cosmonautics". Under the scientific. ed. Acad. B.E. Chertoka. M.: Avanta+, 2004, pp. 126, 193. 336-337, 341-344

3. iv27-32 "Links-2". In total in the series "American Space Odyssey" in the films "Skylab : The First 40 days", "Skylab : The 2nd manned mission", "Four rooms e a rth view" there are up to two dozen such episodes.

4. <http://www.atlasaerospace.net/zgrav.htm>

5. Life on the International Space Station <http://www.youtube.com/watch?v=ZNnvm12TgT8>

6. "To the stars", "Planet", Moscow, 1980, Nikolaev p. 258, foreigners here 266-267

7. <http://mo---on.narod.ru> "Americans have never been to the moon." Materials of the forum "Membranes"

8. <http://www.jsc.nasa.gov/Bios/htmlbios/borman-f.html>

9. <http://www.lib.cas.cz/www/space.40/1973/027.HTM>

10. Magazine "Computer - Online" N23, 2007 from 26.06.2007, Heirs of the Flying Dutchman <http://offline.computerra.ru/2007/691/323379/>

Ill.1. <http://www.astronautix.com/graphics/0/10076019.jpg>

Ill.2. <http://www.hq.nasa.gov/office/pao/History/alsj/skylab/SL4-150-5062.jpg>

Ill.3. <http://mix.msfc.nasa.gov/IMAGES/MEDIUM/7042918.jpg>

Илл.4. а) <http://images.jsc.nasa.gov/lores/SL4-150-5074.jpg>, б) <http://images.jsc.nasa.gov/lores/SL4-150-5075.jpg>

с) <http://images.jsc.nasa.gov/lores/SL3-123-2637.jpg>

the originals of signatures can be read on the Internet by replacing jpg with htm in the image address ;

Fig. 5. а) <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001946.jpg> **б)** inverted image - by the author;

Fig. 6. а) f8-5, f8-6, "References-2" **б)** [5, p.258]; **с)** <http://www.atlasaerospace.net/zgrav.htm>

Ill. 7. [5]

Fig. 8. f 8-5, "Links -2"

Ill.9. a) NASA <http://www.astronautix.com/graphics/0/10076021.jpg> **b)** [2, p.411];

Ill.10. a) <http://www.hq.nasa.gov/office/pao/History/alsj/skylab/skylab-73-HC-440HR.jpg>

b) <http://grin.hq.nasa.gov/IMAGES/SMALL/GPN-2000-001055.jpg>, author's inscriptions.

Илл.11. <http://www.hq.nasa.gov/office/pao/History/alsj/a410/ap8-S68-50655.jpg>

Illustrations selected from the previous sections

1 N.P. Kamanin. "Hidden space": 4th book - M., LLC "News of Cosmonautics", 2001 - 384 p.

<http://www.epizodsspace.narod.ru/bibl/kamanin/kniga4/obl-4.html> entry of December 21, 1968

2. Chertok B.Ye. Rockets and people. Book 4. Moon Race - M.: Mechanical Engineering, 1999.-576s

<http://www.epizodsspace.narod.ru/bibl/chertok/kniga-4/vved.html>

3. G.S. Khozin. "Great confrontation in space" (USSR-USA) .- M.: Veche, 2001, p.84

4. f1, "Links-2"

5. Yu. Krasilnikov. "The Whole Truth About Americans on the Moon." The magazine "Paradox", No. 4, 2004, p. 10-25, ip5 "Links-2"

Fig. 1. Fig. 1 from the introduction and the cover of the magazine "Around the World"

Fig. 2. a) ill.2a from the introduction, **b)** "Life", August 1969, and no2 "References-2"

Ill.3. <http://grin.hq.nasa.gov/IMAGES/LARGE/GPN-2002-000063.jpg>

2. Links to additional sources used in all chapters

List of films

(common to all sections)

f1 . *"The Apollo Case. Were the Americans on the Moon?"* Wili Bruner and Gerhard Wisniewski. Prod. Wili Bruner Production. WDR.Westdeutscher Rundfunk 2002. Shown on the first channel of the Republic of Tatarstan on 21.12.2003 at 12.10, see the film on the Internet site of the book (ISK) http://www.manonmoon.ru/addon/f1/delo_apollona.avi

f2 . *"FOR ALL MANKIND"* ("For all mankind"). Produced by Al Reinert . Production - "Kennedy / Marshal Company". «Filmed on location by the United States National Aeronautics and Space Administration -« film shot on the nature itself of NASA " . Released in 1989 for the 20th anniversary of the A-11 flight. Intro at the beginning of the film: "For 4 years from December 1968 to December 1972, 9 manned flights to the Moon were made. 24 people made this journey. These were the first people on Earth who went from planet Earth to another world. This is the kind of film *they* brought back . " see the film on ISK <http://www.manonmoon.ru/addon/f2/4mankind.avi>

f3 . *"The Incredible Adventures of Americans on the Moon . "* A documentary and discussion film "The Americans' Incredible Adventures on the Moon." Shown on the 7th channel of Russian TV (Ren TV) on November 30, 2003 at 19.00. The creator of the film - by credits in Russian translation - "Nash Entertainment Inc." (National Entertainment Inc.). Directed by John Merritt. The film's release year is not specified. Judging by the portraits of some of the characters shown twice - during the Apollo flights and during the filming of the film, the film was shot about 30 years after the Apollo flights, that is, in the late 90s, see the film on ISK <http://www.manonmoon.ru/addon/f3/npal.avi>

f4 . *"The Incredible Adventures of Americans on the Moon - 2"* . On 11.10.2004, at 8.30 am on the 7th channel of Russian TV (Ren TV) the film was shown a second time. However, despite the old name, its content has been largely updated. Therefore, references to this version of the film are under the abbreviation "NPAL-2". The main commentator of the film was the famous defender, cosmonaut A.A. Leonov.

f5 . *"The Other Side of the Moon"* . Scriptwriter Boris Yanovsky. Producers - A. Limanov, S. Medvedev, O. Volnov. 2004 Ostankino TV channel. By order of the First Channel OJSC. Shown on the first channel of the Republic of Tatarstan on April 13, 2004.

f6 . *Fragment "Time"* . A film fragment on the lunar theme, broadcast on the first channel of the Republic of Tatarstan on November 29, 2003 at 21.00 on the "Vremya" program.

f7 . *"Moon"* . BBC Worldwide production . 1999 Producer David McNAB . Russian edition "Soyuz-Video", 2003, Video film "Planets", part 2, " Moon " . See the film on ISK <http://www.manonmoon.ru/addon/f7/moon.avi>

f8 . "X-Files NASA" - a set of three DVD- disks, manufactured by LLC "Mega Video" (Russia), patent certificate No. 226047202 dated 25.05.2005. The original American title for this series is The American Space Odyssey .

Most of the films in this series are repetitions of films from another NASA series : 25 Years of Glory (1961-1986)

Vol. 2: The Eagle Has Landed/Houston, We've Got a Problem/Apollo 15/Apollo (1961-1986)

(discs and tapes with these names are sold in shops, for example, [http : // www . BizRate.com](http://www.BizRate.com)

http://www.bizrate.com/specialinterestdvds_videos/pid2056898/compareprices__k-25%20years%20glory.html):

Film producer : Production services by AV Corp, Houston, Texas. The film is preceded by the NASA emblem and the inscription "The National aeronautics and space administration presents".

ф8-1. Фильм "Four days of Gemini 4" ("4 дня Джемини 4")
<http://www.manonmoon.ru/addon/f8/06.Four days of Gemin 4.avi>

ф8-2. Фильм "Legacy of Gemini" ("Наследие Джемини")
<http://www..manonmoon.ru/addon/f8/08.Legacy of Gemini.avi>

ф8-3. Фильм "The Eagle has landed" ("Орел приземлился")
<http://www.manonmoon.ru/addon/f8/11.The flight of Apollo 11.The eagle has landed.avi>

ф8-4. Фильм "On the shoulders of giants" ("На плечах гигантов")
<http://www.manonmoon.ru/addon/f8/16.Apollo 17 On the shoulders of giants.avi>

f 8-5. The film "Skylab: The first 40 days" (" Skylab : The first 40 days ")
http://www.manonmoon.ru/addon/f8/19.Skylab_the_first_40_days.avi

f 8-6. The film "Skylab: The 2nd manned mission" (" Skylab : The second expedition to visit ") <http://www.manonmoon.ru/addon/f8/20.Skylab the 2nd manned mission.avi>

f8-7. Film "Four rooms earth view" <http://www.manonmoon.ru/addon/f8/21.Four rooms earth view.avi>

ф8-8. Фильм "The moon: old and new" ("Луна старая и новая") из серии "American Space Odyssey", "NASA: 25 Years of Glory"
<http://www.manonmoon.ru/addon/f8/12.The Moon old and new.avi>

ф8-9. Фильм "Houston, we've got a problem" ("Хьюстон, у нас проблема")
<http://www.manonmoon.ru/addon/f8/04.Apollo 13. Houston we've got a>

[problem.avi](#)

f 8-10. The film "Apollo 16: Nothing so hidden" (Apollo 16: all the most secret)
<http://www.manonmoon.ru/addon/f8/14.Apollo 16.Nothing SO hidden avi>

ф8-11. Фильм "Apollo 15.In the mountains of the moon" ("Аполлон 15: В лунных горах") http://www.manonmoon.ru/addon/f8/13.Apollo 15.In_the_mountains_of_the_moon.avi

f9. Film " *Time of the Moon*" .

f10. Collection of film and TV pieces of A-8 " *Apollo 8: Leaving the cradle* " («*Apollo 8: Leaving the cradle*») on 3 DVD disc production companies [www . Spacecraftfilms . Com](http://www.Spacecraftfilms.Com) .

Disc 3. Cassettes with film materials from the Apollo-8 expedition

Cassette H [http : // www . manonmoon . ru / addon / a 8- film / 16 mH _ CSM _ Separation _ Lunar _ Orbit . Dub . avi](http://www.manonmoon.ru/addon/a8-film/16mH_CSM_Separation_Lunar_Orbit.Dub.avi)

Cassette I [http : // www . manonmoon . ru / addon / a 8- film / 16 mI _ Lunar _ Surface . Dub . avi](http://www.manonmoon.ru/addon/a8-film/16mI_Lunar_Surface.Dub.avi)

Cassette J [http : // www . manonmoon . ru / addon / addon / a 8- film / 16 mJ _ Lunar _ Surface . Dub . avi](http://www.manonmoon.ru/addon/addon/a8-film/16mJ_Lunar_Surface.Dub.avi)

Cassette K [http : // www . manonmoon . ru / addon / addon / a 8- film / 16 mK _ Lunar _ Surface _ from _ orbit . Dub . avi](http://www.manonmoon.ru/addon/addon/a8-film/16mK_Lunar_Surface_from_orbit.Dub.avi)

Cassette Q [http : // www . manonmoon . ru / addon / addon / a 8- film / 16 mQ _ Lunar _ Surface _ from _ orbit . Dub . avi](http://www.manonmoon.ru/addon/addon/a8-film/16mQ_Lunar_Surface_from_orbit.Dub.avi)

Cassette R [http : // www . manonmoon . ru / addon / addon / a 8- film / 16 mR _ Interior _ Spacecraft . Dub . avi](http://www.manonmoon.ru/addon/addon/a8-film/16mR_Interior_Spacecraft.Dub.avi)

Links to additional materials on the book's website <http://www.manonmoon.ru>
(common to all sections)

Rare printed materials

un1. A Look. Special issue of Look magazine, August 1969
<http://www.manonmoon.ru/addon/look/look.html>

un2. Life. Special issue of Life magazine, August 1969
<http://www.manonmoon.ru/addon/life/life.html>

un3. R. Sturua's note from the Izvestia newspaper on November 20, 1969 about the landing of Apollo-12

http://www.manonmoon.ru/addon/a12_on_moon_izvestia.jpg

un4. newspaper Pravda, 04/14/1972, a note on the exchange of lunar soil <http://www.manonmoon.ru/addon/15/imgp4007a.jpg>

ip5. Paradox magazine, N4, April 2004 <http://www.manonmoon.ru/addon/paradox/paradox.html>

un6. An article by M. Ozim from the journal "Nature" <http://www.manonmoon.ru/addon/16/nature03929.pdf>

un7. S. Pokrovsky's article "Americans could not get to the moon", "Actual problems of modern science", 2007, No. 5, pp. 152-166 <http://www.manonmoon.ru/addon/22/Saturn5.doc>

un8. S. Pokrovsky's article "A refined estimate of the speed of Saturn-5" <http://www.manonmoon.ru/addon/22/Saturn5-3.doc>

un9. Article by S. Pokrovsky "Why did the flights to the moon fail?" <http://www.manonmoon.ru/addon/22/inkonel.doc>

Rollers from rare films

iv1. <http://www.manonmoon.ru/addon/5/for-all-mankind-launch.avi> video with the launch of the Saturn-5 rocket carrying Apollo from the film For All Mankind [f2]

iv2. <http://www.manonmoon.ru/addon/5/for-all-mankind-man-in-space.avi> roller in a yield of Cosmo c astronaut from the film [p2] "for all mankind"

iv3. http://www.manonmoon.ru/addon/5/08.legacy_of_geminiedwhite_in_space.avi video clip with the spacewalk of Ed White from Gemini 4 in the film [f8] "Gemini's Legacy"

iv4. http://www.manonmoon.ru/addon/5/08.legacy_of_gemini...edwhite_in_space.avi video clip with the spacewalk of Ed White from the movie [f8] "4 days of Gemini 4"

iv5. <http://www.manonmoon.ru/addon/5/for-all-mankind-start-to-moon.avi> video with the start to the Moon from the movie [f2] "For all mankind"

iv6. http://www.manonmoon.ru/addon/5/08.legacy_of_gemini.gemin_to_earth.avi video with the return of Gemini-2 from the movie [f8] "4 days of Gemini-4"

iv7. http://www.manonmoon.ru/addon/5/08.legacy_of_geminigemin_to_earth.avi video with the return of Gemini-2 from the movie [f8] "Gemini's

Legacy"

iv8. http://www.manonmoon.ru/addon/5/for-all-mankind.earth_decrease.avi video with the "receding" Earth from the movie [f2] "For all mankind"

iv9. NASA Video "First stage separation of Saturn-5" http://www.manonmoon.ru/addon/16/as_11_full.wmv

iv10. http://www.manonmoon.ru/addon/6/for-all-mankind.on_moon.avi video showing the flight over the terminator from the movie [f2] "For all mankind"

iv11. Video "Earth rise over the lunar horizon" from the movie [f8] "The Eagle has landed" http://www.manonmoon.ru/addon/6/eagle_has_landed.earth_on_moon.avi

iv12. Video "Patchwork flying around the A-9" <http://www.manonmoon.ru/addon/7/for-all-mankind.Loskut1.avi> from the movie [f2] "For all mankind"

iv13. Video "Spacewalk (from the book of M. Collins)" from the movie [f1] "The Apollo Case" http://www.manonmoon.ru/addon/f1/delo_apollonaren.avi

iv14. Movie "The Story of Dr. Farouk-el-Baz" from the movie "Moon" [f7] from the series "Planets" <http://www.manonmoon.ru/addon/f7/moon.faruk.avi>

iv15. NASA *Crew A-11* <http://www.hq.nasa.gov/alsj/a11/A11Landing.mov> <http://www.manonmoon.ru/addon/8/a11landing.mov>

iv16. Movie "Rover rides on the Moon" from the movie "Moon" [f7] from the series "Planets" <http://www.manonmoon.ru/addon/f7/moon.rover.avi>

iv17. Rosik "Posadka A-14" NASA
http://www.hq.nasa.gov/office/pao/History/alsj/a14/a14land24fps_DivX.avi
http://www.manonmoon.ru/addon/9/a14land24fps_DivX.andyou

iv18. Movie "Galileo's Experience" from the movie [f2]
<http://www.manonmoon.ru/addon/11/for-all-mankind.galiley.avi> Movie NASA http://www.manonmoon.ru/addon/11/a15v_1672206.mpg

iv19. Movie "Jumping on the Moon" from the movie [f2]
http://www.manonmoon.ru/11/for-all-mankind.ap16_salute.mpg

iv20. Movie "Playfulness on the Moon" from the film [f2]
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iv21. Movie "Flag" from the film [f2] <http://www.manonmoon.ru/addon/12/for-all-mankind.flag.avi>

iv22 . "Taurus-Littrov - landing site of A-17" video from IF5 movie <http://www.manonmoon.ru/addon/13/on the shoulders of giants.taurus-littrov.avi>

iv23. Movie "Takeoff from the Moon" from the film [f7] <http://www.manonmoon.ru/addon/13/moon.ascent.avi>

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iv27. Video " Zero Gravity at Skylab Station" (gymnastics) from the movie [f8] " Skylab : The first 40 days " [http : // www .m anonmoo n. r u / addo n / 21 / 19.Skylab the first 40 days.p9.avi](http://www.manonmoon.ru/addon/21/19.Skylab the first 40 days.p9.avi)

iv28. Video " Zero Gravity at Skylab Station" (43 sec) from the movie [f8] " Skylab : The 2nd manned mission" of the TV series "The American Space Odyssey" [http : // www .m anonmoo n. r u / addo n / 21 / 20.Skylab the 2nd manned mission.p1.avi](http://www.manonmoon.ru/addon/21/20.Skylab the 2nd manned mission.p1.avi)

iv29. Video " Zero Gravity at Skylab Station" from the movie [f8] " Skylab : The 2nd manned mission" of the TV series "The American Space Odyssey" [http : // www .m anonmoo n. r u / addo n / 21 / 20.Skylab the 2nd manned mission.p3.avi](http://www.manonmoon.ru/addon/21/20.Skylab the 2nd manned mission.p3.avi)

iv30. Video " Zero Gravity at Skylab Station" from the movie [f8] " Skylab : The first 40 days " [http : // www .m anonmoo n. r u / addo n / 21 / 19.Skylab the first 40 days.p2.avi](http://www.manonmoon.ru/addon/21/19.Skylab the first 40 days.p2.avi)

iv31. Movie " Zero gravity at Skylab station" (pyramid) from the movie [f8] " Skylab : The 2nd manned mission" ("Skylab: The second expedition") of the TV series "The American Space Odyssey" [http : // www .m anonmoo n. r u / addo n / 21 / 20.Skylab the 2nd manned mission.p7b.avi](http://www.manonmoon.ru/addon/21/20.Skylab the 2nd manned mission.p7b.avi)

iv32. Video " Zero gravity at Skylab station" (gymnastics) from the movie [f8] " Four rooms earth view " ("Four rooms overlooking the earth") of the series "The American Space Odyssey" [http://www.manonmoon.ru/addon/ 21 / 21.Four rooms earth view.p2.avi](http://www.manonmoon.ru/addon/21/21.Four rooms earth view.p2.avi)

iv33. Movie "Discharge of the first stage of Saturn-5" from the movie [f2]
<http://www.manonmoon.ru/16/npal.launch.avi>

iv34. Video "Start of Saturn-1B" from the movie [f8]
<http://www.manonmoon.ru/f8/08.Legacy of Gemini.avi>

and B35. Roller "Gubarev's Story" from the movie [f9] "Time of the Moon"
http://www.manonmoon.ru/addon/1/vremya_luni.p2.avi

iv36. Movie "Moonrise over the Earth" from the movie [f8] "The moon is old and new"
<http://www.manonmoon.ru/addon/4/12 The Moon old and new.rise.avi>

iv37. Video "Step S-IVB against the background of the Earth" from the movie [f8]
"Houston, we have problems" <http://www.manonmoon.ru/addon/5/Apollo 13. Houston S-IVB.avi>

iv39. Video with an example of a TV session transmitted from the A-8 ship http://www.manonmoon.ru/addon/6/a8_tele1.avi

iv40. Movie Docking in the orbit of the Moon from the movie Apollo 16: Nothing so hidden (Apollo 16: all the most secret) http://www.manonmoon.ru/addon/13/Nothing_so_hidden.LM_nad_lunoy.avi

iv41. Output roller into space E.Uordena from the movie Apollo 15. with In the mountains of the moon (Apollo 15: The lunar mountains)
<http://www.manonmoon.ru/addon/13/13.Apollo 15.In the mountains of the moon.Worden.avi>

ivy 42 . Movie release in the open space K . Mattingly and of the movie Apollo 16: Nothing so hidden (Apollo 16: all the most secret)
<http://www.manonmoon.ru/addon/13/14.Apollo 16.Nothing SO hidden.in space.avi>

ivy 43 . Roller output in an outdoor space P . Evans of the film "On the shoulders of giants" (" On the shoulders of giants ") from the series "American Space Odyssey", "NASA : Glory of 25 Years"
<http://www.manonmoon.ru/addon/13/16.Apollo 17 On the shoulders of giants.Evans.avi>

iv44. A clip of flying around the moon from the movie "Houston, we have problems" <http://www.manonmoon.ru/addon/14/04.Apollo 13. Houston we've got a problem.On the moon.avi>

Rare photos

is1. http://www.manonmoon.ru/addon/5/a15_h_91_12343.gif Snapshot A-15 AS15-91-12343 with "Earth in a bag" effect,

checksum MD 5 images 490 BAD 6 E 980 F 1 DF 37 D 79 B 42 FD 51 DBEA 2

is2. http://www.manonmoon.ru/addon/5/a15_h_91_12343g.gif Photo A-15
AS15-91-12343 with increased contrast

is3. http://www.manonmoon.ru/addon/5/a16_h_118_18885g.gif Snapshot A-16
AS16-118-18885 with the "Earth in a bag" effect,

checksum MD 5 image 74D35C12F4335336B40904B8013E21DD

is4. http://www.manonmoon.ru/addon/5/a16_h_118_18885g.gif A-16 AS16-
118-18885 image with increased contrast

is5. <http://www.manonmoon.ru/addon/12/gpn-2000-001137.jpg>
checksum MD 5 93 BB 0 EC 415 F 2 F 53 DA 4305 AC 55872 AA 4 E ,

is6. ... <http://www.manonmoon.ru/addon/12/gpn-2000-001137g.jpg>
image with high contrast <http://www.manonmoon.ru/addon/12/gpn-2000-001137g.jpg>

is7. <http://www.manonmoon.ru/addon/14/GPN-2000-01119.jpg> ,
snapshot <http://dayton.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001119.jpg>
checksum E767BD12EA4F579CC4053782B2F1172F

is8. <http://www.manonmoon.ru/addon/14/GPN-2000-01119g.jpg> ,
snapshot <http://dayton.hq.nasa.gov/IMAGES/LARGE/GPN-2000-001119.jpg> with
increased contrast

Other materials

im1.

<https://manonmoon.ru/addon/www.lpi.usra.edu/resources/apollo/catalog/70mm/>
A copy of the table of contents of the albums of the Hasselblad atlas of images
<http://ilewg.lpi.usra.edu/resources/apollo/catalog/70mm/>

A complete list of the Apollo lunar images taken by Hasselblad cameras is posted on the book's website both for curious readers and in order to avoid all kinds of "accidents", as a result of which some new images may suddenly appear on the Internet in the original atlas. or, conversely, disappear those pictures that are discussed in other sections.