

THE MAIN RISKS OF THE DEATH OF CIVILIZATION ON EARTH AND IN THE UNIVERSE.

THE HOMEOSTATIC ARK OF MOROZOV AS THE MAIN MEANS IN THE STRATEGY OF SPACE EXPLORATION

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Abstracts. In its geochronological history, the Earth has experienced at least five Glacial periods of almost complete extinction of flora and fauna. The Earth is a toy of Nature and the Laws of the Big Bang universe. The eruption of Santorini volcano on the island of Tira and Mount Vesuvius in Italy. The exodus of Jews and Hyksos from Lower Egypt. Ice ages are almost entirely a product of the activity of supervolcanoes such as the Yellowstone Caldera in the United States. The probability of an eruption of the Yellowstone caldera supervolcano. The orbital zone of life in space. The effect of the expansion of the "red" Sun. The salvation of human civilization lies in Morozov's homeostatic ark, located in space in general, and on the Moon in particular. On December 11, 2017, US President Donald Trump signed the "Directive No. 1 on Space Policy".

Keywords. The risks of the destruction of civilization. Morozov's homeostatic ark. The sixth Ice Age. Santorini volcano. Vesuvius volcano. Supervolcano of the Yellowstone Caldera. Triple point of water. The annihilation of the Earth. The Exodus of Jews and Hyksos. The Exodus of civilization and humanity.

Ancient Egypt was divided into two kingdoms: Lower Egypt on fertile lands in the delta of the Nile River at the confluence with the Mediterranean Sea with its capital in Avaris; and Upper Egypt with its capital in Thebes. In the period of about 280 years from the XVIII to the XV century BC, the Hyksos and the Jews ruled in Lower Egypt [from about 1720 to 1440/1446 BC].

The eruption of the Santorini volcano on the island of Tira in 1440-1446 BC in the Aegean Sea led to the catastrophe. The ash from the eruption crossed the Mediterranean Sea and poisoned all wells and pastures in the Nile River delta throughout Lower Egypt.

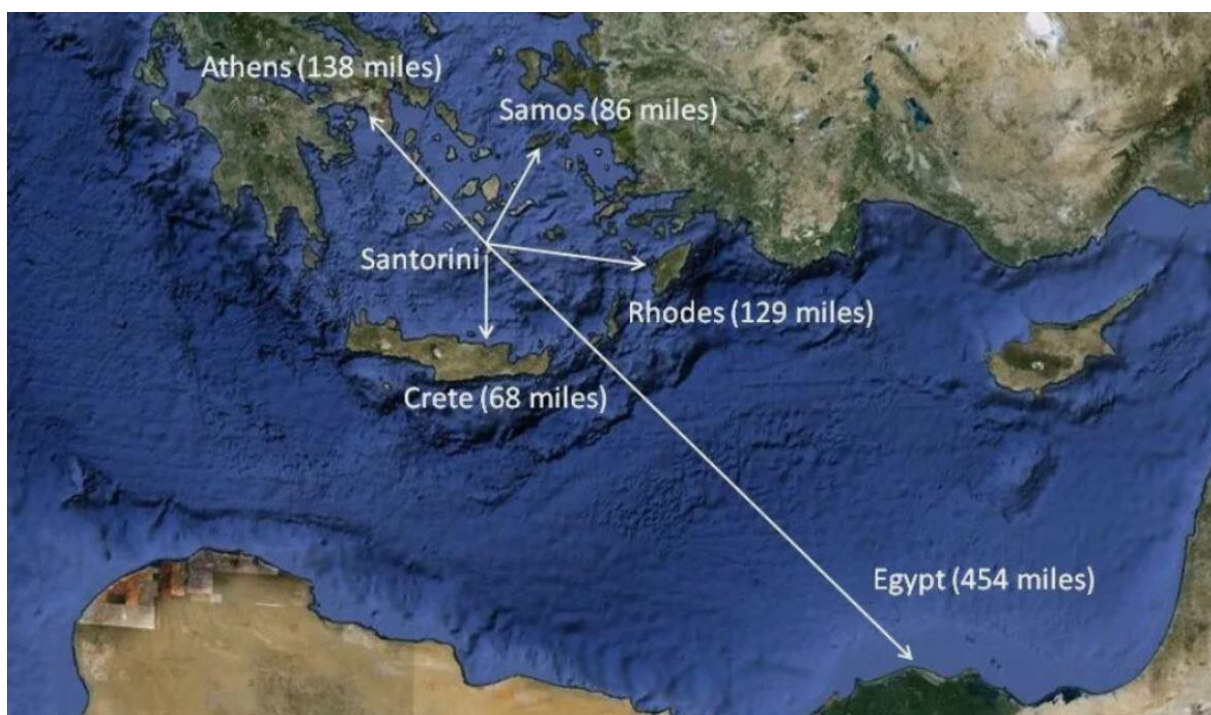
Pharaoh Thutmose III of Upper Egypt [personally ruled for 33 years from 1458 to 1425 BC. He took advantage of the situation and refused to allow Jewish refugees, Hyksos, and herds of animals from Lower Egypt to enter his territory.

Other sources of drinking water were located only in the Mount Sinai area of the Sinai Peninsula.

To save themselves from destruction, the Jews and Hyksos were forced to make an Exodus [Pesach] from Lower Egypt to the Sinai Peninsula under the leadership of Moses, Aaron and their sister Mariam.

In Lower Egypt, in the gap between the Red Sea and the Mediterranean Sea, there was a chain of lakes with salty sea water, on which grew thickets of reeds in abundance, from which Jews and Hyksos made papyrus and sold it to Upper Egypt and throughout the Ancient World.

These lakes temporarily connected the waters of the Red and Mediterranean Seas at high tide. Subsequently, it was here that the Suez Canal was dug.



The direction of the spread of ash and tsunami after the eruption of the Santorini volcano on the island of Tira. [1]

During the earthquake and eruption of the Santorini volcano, a giant tsunami wave formed. At the time of the departure of water from the shore in the Mediterranean Sea in the area of salt lakes adjacent to the Mediterranean Sea, the bottom of the sea was exposed.

Along this bottom of the salty reed lakes [the "Black" Sea], Jews and Hyksos came out of Lower Egypt, along with their herds of animals, to the Sinai Peninsula to clean drinking water sources and were rescued.

The troops of Pharaoh Thutmose III, who were chasing the fugitives of Moses, were too late and were caught by the tidal wave of the tsunami. As a result, all the persecutors, as the Bible testifies, died. Exodus (chapters 1-15) of the Pentateuch (Torah in Judaism). ru.wikipedia.org*; ru.ruwiki.ru Santorini volcano in Greece exists to this day. It was local in its power, like volcano Vesuvius in Italy.

The ash emissions did not penetrate the stratosphere and did not have the global effect of the volcanic winter.

The supervolcano in the United States, which has a "time bomb" on its territory, the huge Yellowstone Caldera, is quite another matter.

This volcanic caldera is located in Yellowstone National Park in the northwestern United States, in the northwestern corner of Wyoming. In science, it is called the Yellowstone supervolcano. *ru.wikipedia.org; ru.ruwiki.ru*

The Yellowstone supervolcano is active. A huge active source of molten magma remains under the caldera. Earthquakes, hydrothermal explosions and other phenomena are constantly being recorded in the caldera area.

Under the most conservative forecast, the awakening of a supervolcano will entail a colossal explosion — as if it were 1,000 atomic bombs detonated over Hiroshima at the same time. Is no nuclear war necessary?

In this case, the crater itself will instantly collapse into a funnel with a diameter of fifty kilometers. Millions of people will die almost instantly as a result of powerful shock waves. Most of the North American continent will be covered with the layer of ash up to half a meter thick.

For comparison, the 79 AD eruption of Vesuvius in Italy was local, not global. Therefore, the ash did not rise into the stratosphere and did not cause the global effect of a volcanic winter and another Ice Age.

For the United States itself, the eruption of the Yellowstone supervolcano will most likely mean the physical end of existence.

In fact, an environmental disaster will engulf the entire Earth. Global clouds of dust and sulfur formed in the stratosphere as a result of the explosion will block out the Sun and lead to a sharp decrease in global temperature [the effect of a volcanic winter for millions of years to come] and **the cessation of plant photosynthesis**. Agriculture, flora and fauna will be under threat everywhere. ***This will be the sixth Ice Age.***

All 450 missile silos of the US strategic nuclear missile forces in the states of Nebraska, Colorado, Wyoming - 150 ICBM mines; North Dakota - 150 ICBM mines; Montana - 150 ICBM mines will be destroyed. At least 9 of the 14 operating spaceports will also be disabled.

The probability of such a course of events for today allegedly ranges from about 0.00014% per year to 89.6%. With such a range of estimates, there is no question of any science? And this probability of unscientificity is constantly shifting towards "reliability" – with a trend of up to 95%?

Volcanoes do not erupt "on schedule." There is no elementary global meteorite service organized on Earth today. It is impossible to fully organize such a service without colonizing the moon. The activity of volcanoes strongly depends on the activity of the Sun. This was established by Chizhevsky.

There are estimates of tens of years of waiting. There are longer deadlines.

However, it is officially reported that "the surface of Yellowstone Park emits 30-40 times more thermal energy than the rest of the continent." And this is a stubborn and really scientific fact.



A map of the predicted death of the United States territory during the eruption of the Yellowstone Caldera supervolcano. [2]



Map of the location of 450 mines - the strategic core of the US ICBM in the states:
Nebraska, Colorado, Wyoming - 150 ICBM mines; North Dakota - 150 ICBM mines
Montana - 150 ICBM mines

Космодромы США



Map of 14 active US spaceports – the southern arc of US Air Defense and missile defense

"America lives on the powder keg." In the USA, they are afraid of a supervolcano explosion. [3] No one can accurately predict today the specific period of time during which the laws of geophysics of the Earth will pass these 5-10% to the last day of normal life on Earth.

But this process is naturally inevitable, as it is a consequence of the Second Law of Thermodynamics by Rudolf Clausius. The "sword of Damocles" of inevitability and uncertainty is suspended over humanity at the same time.

Therefore, colonization of the Moon has become the main trend of the entire world civilization in the USA today, starting with the work of *astrophysicist O'Neill* [1927-1992], who published the article "Colonization of Space" [1974].

He became a member of the Senate's National Space Commission under President Reagan in 1985. NASA provided him with an annual grant of \$0.5 million to develop the topic.

The National Space Commission of the U.S. Senate has proposed **to inhabit the inner Solar System within 50 years [by 2035]**, using, in particular, the "Space Shuttle" technology.

This settlement program is still being implemented today. But this has been done not through the Apollo and Space Shuttle programs, but through the Artemis program since 2017.

The United States is the first to follow the path of K.E. Tsiolkovsky in this matter. And in this, they - experts from Texas, the capital of US space research from Rice University – are historically right.

The priority of colonizing the Moon has been officially legislated since **December 11, 2017**, when US President Donald Trump signed the "**Directive No. 1 on space policy**", which provided for a change in the national space policy of the United States. *ru.wikipedia.org**

The document provides for a comprehensive program to return Americans to the moon after the Apollo program, followed by missions to Mars and beyond. *ru.wikipedia.org**

In 1975, the Apollo program was prematurely terminated due to the high cost of producing disposable Saturn rocket systems.

For 57 years in the United States, from 1953 to 2010, *\$486 billion* was spent on the lunar colonization program at 2010 prices.

But it wasn't until 2010 that a fundamentally new *reusable* rocket technology appeared. It was created by Elon Musk and Jeff Bezos. This was the impetus for the second part of the colonization of the moon, which we are witnessing today.

In 2017, the 45th President of the United States, Donald Trump, launched the second lunar colonization program in the United States called Artemis.

Within the framework of Artemis, it is planned to organize regular flights of astronauts to the Moon on the Orion spacecraft using the SLS (Space Launch System) rocket, as well as create a Lunar Gateway station in lunar orbit, and an Artemis base station on the Moon itself. *ru.wikipedia.org *; rbc.ru*

Two successful flights to the Moon – unmanned Artemis-I" [2020] and the manned Artemis II [2026] have been implemented.

In principle, it is impossible to build a permanent station on the Moon without reusable heavy [45 tons of payload per LEO] and superheavy class [100 tons of payload per LEO] rockets.

Therefore, a program of *space industrialization* has emerged, which requires the involvement of global resources, the development of special IT programs, robotics and energy support.

Therefore, the United States began to *rebuild* the entire global infrastructure for its space tasks.

Today, the new economic and political trend has been created. Today, this is the "being" that more and more de facto forcibly determines the adaptive consciousness of the rest of the world.

The whole world will suffer from the eruption of the Yellowstone Caldera supervolcano.

Few will be saved – only those who manage to comfortably fit into Space and, in particular, on the Moon in the artificial "homeostatic ark of Morozov."

Morozov S.L. The homeostatic Ark as the main means in the strategy of space exploration. //The aerospace sphere. 2018. No. 3(96). pp. 28-37 [4]

Since July 10, 2026, China has adopted the rules of the global space policy of the United States. 16 years after the United States, China for the first time mastered the technique of using reusable heavy and superheavy missile systems.

Competition has developed between China and the United States for the primacy in colonizing the Moon.

In 2030, the ISS will end its program and be decommissioned in Earth orbit. The ISS has already exhausted its entire resource many times.

The United States will transfer all research on the surface of the Moon to a permanent station. ***This is the end of the era of disposable rockets.***

The United States has begun a deep modernization of the three main spaceports at Cape Canaveral for the launch and maintenance of reusable rocket systems, which is ***designed for 50 years [from 2024 to 2074].***

Colonization of the Moon and space industrialization have become the main trends of modern civilization.

However, Russia today does not have a single spaceport for launching reusable rockets. Russia today has no physical means of delivering astronauts to the moon. There are no reusable heavy and superheavy class missiles.

This was directly reported by Murtazin from RSC Energia. ***The missiles are only mid-range and only disposable.***

Russia has almost ideal 56 sites on the Kuril Islands, which only need varying degrees of refinement, for the deployment of launch complexes for launching reusable rockets.

However, ***Russia has not yet made a single starting table on the Kuril Islands***, although it has the best possible position. Russia's position in this region is ***better than that of Japan and the United States.***

In Japan, south of the Kuril Islands ridge, two such complexes of three launch tables have been deployed. These are the ***Tanegashima Cosmodrome*** (successfully operating since *October 1, 1969*) and the ***Uchinoura Cosmodrome***, located near the cities of *Hiroshima and Nagasaki*. The Uchinoura Space Center has been operating since *February 1962*. All three Japanese launch tables are not very convenient in terms of ecology.

The United States in this region has only one such launch complex on ***Kodiak Island***, which is located in Alaska, that is, much north of the Kuril Islands ridge. It has been successfully operating since *November 5, 1998*.

There was a whole queue for launches from it. This is the current need for reusable spaceports. "Our country has ceded leadership in space. The Soviet past can no longer serve as a screen for the lagging space industry in the present. " ***Reusable rockets are not produced in Russia in principle.***

There is *not a single cosmodrome* in Russia from which reusable heavy and superheavy rockets can be launched. *Reforms are needed.*

Критерий	Россия («Роскосмос»)	США (NASA + частный сектор)	Китай (CNSA)
Ориентировочный годовой бюджет	~2-3 млрд USD	~25 млрд USD (NASA) + частные инвестиции	~12-14 млрд USD
Ключевые ракеты-носители	Союз-2, Ангара-A5 (одноразовые)	Falcon 9, Starship, SLS (многократные / сверхтяжелые)	Семейство «Чанчжэн» (разных классов)
Орбитальная станция	Стареющий сегмент МКС, отдаленные планы на РОС	Сегмент МКС, активные планы на частные станции	Собственная станция «Тяньгун» (эксплуатируется)
Статус лунной программы	Авария «Луны-25», неясные сроки пилотируемых полетов	Программа Artemis (подготовка к высадке астронавтов)	Успешный сбор грунта, план лунной базы к 2030-м годам

"Otherwise, we will be watching the exploration of Mars and the construction of Lunar bases solely as spectators." That's according to Vlad Falcon [D.N. Kaleev] from *the engineering company Complex KAD*. [5]

If Roscosmos wants to follow China in making Russia one of the "world leaders", then in 2026 it needs to start building its own space launch complex, the *Far Eastern Space Complex*, which will become the "*Russian Texas*" and the "*Russian Cape Canaveral*" at the same time, the center of active development of *Russian space industrialization*.

Surprisingly, the main follower of Lomonosov and Tsiolkovsky is the US President Donald Trump, who hardly knows anything about these Russian scientists?

The Okhotsk Sea region is unique. It can be developed on the principle of self-investment, practically "free of charge" from the state budget. [6]

It is to Trump that civilization will pay tribute if he succeeds in colonizing the Moon and *creating comfortable homeostatic bases* on it for permanent human habitation. Only those who manage to settle in space will be able to survive the sixth Ice Age. *Jared Isaacman, Elon Musk, Jeff Bezos, and Donald Trump are the real "Saviors" of humanity today?*

During the eruption of a supervolcano like the Yellowstone Caldera, the world will at one moment be divided into *two unequal parts*: "*life in space*"; and "*life in the permafrost of the Earth*", along with fossil dinosaurs and not only with them.

The threat of total destruction from the eruption of a supervolcano such as the Yellowstone Caldera threatens the entire world, but it is in the United States that it is most obvious and sensitive.

Therefore, maybe it is the Americans who will be able to save themselves and continue the human species in history on the Moon? Will this «lunar species» of humanity be "American"?

Will natural selection take place according to Darwin? Is space industrialization gradually turning the United States into the engine of history and progress?

Today, the Earth inside the Solar System is temporarily and accidentally located in the *zone of life*, in the *zone of the triple point of water*.

There is no liquid water on Venus. It doesn't exist on Mars either. These planets are not in the cosmic zone of life. Nuclear processes on the Sun are gradually shifting the space orbital zone of life from Earth to Mars.

The temperature on Earth will gradually rise and when the boundary level ***reaches only 57 degrees Celsius***, all liquid water will evaporate from the surface of the Earth. *mk.ru*

Nature and climate will move to a new level of self-regulation, which automatically eliminates the factor of modern biological Life. Biological Life on Earth will simply end as a fact. *The Earth will look like a lifeless Venus.*

This will be a complete change in the current balance of homeostasis of direct and reverse connections, in which the life of people, animals, birds, microbes, viruses and plants on the Earth's surface will be impossible even without any eruptions of supervolcanoes such as the Yellowstone Caldera.

Such the temperature level could theoretically be triggered, for example. greenhouse gases of any etiology in a certain extreme concentration. Would their level in the atmosphere be incompatible with biological Life on the Earth's surface?

In any case, humanity has no future on Earth in the historical perspective. The absolute negativity of her complete annihilation.

The Earth's surface will gradually become more and more hot, like the rocky surface on Venus, to "plus" 460-470 ° C.

To preserve biological Life, it is necessary to build artificial "homeostatic Morozov arks" as protected oases of Life in the Universe.

"The Earth ["planet"] is the cradle of Reason. But you can't live forever in a Cradle," Tsiolkovsky wrote in 1911. The very "natural cradle" on the territory of the Earth is a ***temporary*** phenomenon.

The natural cradle must be replaced with an artificial cradle, that is, the ***"homeostatic ark of Morozov"***, in order to preserve Life. ***Biological life can only be preserved artificially.***

The Yellowstone Caldera supervolcano is just one of the special cases of the risks of destroying Life on Earth. In this case, it is one of the most likely of all the "improbable." The risk of its implementation is not yet scientifically reliably predicted.

Therefore, we simply need a flotilla of hundreds of heavy and superheavy spaceships that will allow the **Exodus of civilization to the Universe**.

The science of astrophysics predicts the expansion of the corona of the "red" Sun to the radius of Earth and Mars, which will lead to the destruction of all the planets and their satellites of the terrestrial group.

Biological Life in these conditions of *the complete absence of the Earth itself, as the Cradle of humanity*, can be preserved in the Universe only if «*the principle of the artificial homeostatic ark of Morozov*» is respected.

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