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RUSSIAN COSMISM: HISTORICAL PAST, PRESENT AND FUTURE

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Abstract: The article presents a today's spatio-temporal panorama ahead of the great date of Cosmonautics Day and the events of 20 years ago in the context of the significance of spiritual and cosmic values for Russian people. Russian philosopher K.N. Leontiev, diplomat and publicist, emphasized the danger of liberalism and the philistinism of life in Russia and other Orthodox countries: "You need to strengthen yourself, think less about weal and more about strength.

If there is power, there will be some weal" [12]. A retrospective look at the "zero" years allows us to understand the pain points of the national and spiritual interests of Russia, the importance of reviving Russia's space stronghold, preserving the political and ethical attitudes that meet the goals and objectives for which future generations will continue the cosmic achievements of the previous century.

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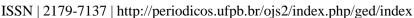
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1. INTRODUCTION

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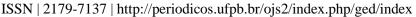
In the 20th year of the third millennium, it is appropriate to speak of the problem dictated by dramatic contradictions for Russia: "100 centuries" The Russian state gathered its lands and its peoples into a single body of the "Supernarod", and now it is dying and is losing its cosmic stronghold in ideological (or mental?) war. Today it is evident that all the priorities and achievements in space beginning with the launch of the first Soviet Sputnik, are systematically consciously and destroyed assuming a permissive hope for "maybe" that everything would so to speak, "synergistically" be settled. However, the adoption of such a strategy for the future generation, does not only loose "quotas" for our contemporaries, but also calls into question the very existence metaphysically implementing their transformation from homosapiens in homo mosahisticus.

The event caused existential splash of thoughts in relation to what is

and will be happening in Russia as a great space power, has become a gesture of "good will" of one of today's leaders, who arranged the distribution of money to walking citizens (... "slaves" ... "serfs" ...) on Red Square.

It is legitimate to ask, "What was that?" On the one hand, is it the loss moral principles, a sense of of bewilderment among the people who cannot arrange their livelihoods and are "ahead of the rest" in speed of ruining their own country? Is it a miracle of waiting for the "coming of the messiah", a post human person with the face of a State Duma deputy, on the other hand? Perhaps this is a postmodern phenomenon. First, they "canceled" God ("God died!" Nietzsche said), then we buried art, admiring Malevich's creative ecstasy ("Black Square"). Is this further "maturing" of the post-man against the background of de-intellectualization, deesthetization. dehumanization. expressed in the denial of the essential certainty of things, the propaganda of a defeatist ideology?

The strategy of the decomposition and destruction of Russia, adopted at the end of 1945 according to the report of Alain Dulles, implied far-reaching plans for an





inconspicuous substitution of Russian values, contributing to the dying out of people's self-awareness, the imposition of "all immorality", the transformation of people into mankurts who lost their tribal memory.

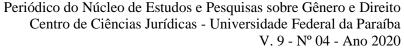
Turning to the history of Russia, it is necessary to clearly understand that since ancient times the Russian people had a saving principle, full of spirituality, the instinct of self-preservation and survival, moral stamina and collective mutual assistance: a tribal memory that permeated all areas of life - religion, ideology, economy, politics, culture, ethical and natural connections (the words «народ» (people), «родина» (homeland), «родник» (spring), «природа» (nature), «родинка» (birthmark), «родной» (native) – have the same root «род» (family, clan)). By the way, in the Czech Republic, Slovakia, Poland, the "family" is capaciously called the "rodzina" (homeland).

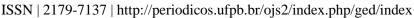
However, life showed that the Russian people weakly resisted the troubles of anti-Russian chimeras, weakly defended the ideology of Holy Russia, Uvarov's triad of "Orthodoxy, Autocracy, Nationality" and others. In asserting our national position in the

information war that is being waged against Russia, we should take into account the foreign practice of using ethno-state myths in the competition of national-cultural civilizations.

Undoubtedly. we have committed and mistakes. sins Nevertheless, let us recall the words of Christ: "Who among you is not without sin, let him throw a stone at Me." myths can also be different: useful and harmful. At the beginning of 2000, the conference "History as an Object and Subject of Myth-Making" was held at the Faculty of Economics of Moscow State University. In his plenary report I.V. Bestuzhev-Lada, a sociologist and historian, thoroughly criticized sensational works of Fomenko-Nosovsky published in large editions even for our time. "It turns out," Bestuzhev-Lada said. Fomenko's Taras Bulba is almost Baty himself!" Such attempts to reduce Russian history to the beneficial effects of the Tatar-Mongol voke are not new (although the positive Eurasian aspects of Russian history have not been canceled).

Unfortunately, during the years of perestroika and reforms, anti-Russian myths rained down like a cornucopia. Take, for example, "Icebreaker", a





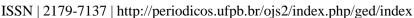


sensational work of London dweller V. Suvorov-Rezun, in which he cites the "evidence base" of the version that the Soviet Union was preparing alleged aggression against Nazi Germany, by virtue of which the latter was forced to commit preventive attack.

One of the characteristics of the Russian people is their credulity. In many ways, this is the tragedy of the ethnic group of Russians of the 20th century - the beginning of the 21st century: a long false orientation towards the fulfillment of the "world revolution", "voucherization", privatization, fabulous "enrichment with the help of financial pyramids" and other intentions that are chimerical in nature. It is enough to cite famous the statements of the of philosopher, author the book "Byzantism and Slavism" Leontiev, who argued, "You need to strengthen yourself, think less about weal and more about strength. If there is power, there will be some weal. Would this weal be possible without strength? There were many falls: they were a real fact. Where is the happiness? Where is this weal? One way or another, Russia needs internal strength, it needs a strong organization, a spirit strong discipline" [12].

Russian cosmism is inherent in the situation of the combination of anthropological and biological, sociocultural factors in the formation of a single humanity as a subject of transformation and the rational organization of the cosmos. These factors are also applicable to the technical aspects of human life. The substantiation of the cosmic future of mankind, the exploration of the Universe are cross-cutting themes of all the works of Russian cosmists, beginning with N.F. Fedorov, that so keenly test today: Homeland cannot overcome the most acute crisis in the great practice of space activities of the Soviet Union - Russia, Russian Theoanthropocosmism.

The default of reforms and "perestroika" of the 90s in Russia, the crisis of Russian society, the drain of impressive funds abroad made a devastating break in the scientific prospects for the development of Russian cosmonautics. According to the disappointing scenario of the analysts of the Moscow Space Club and the Cosmonautics Academy named after K.E. Tsiolkovsky, the Russian space program, not keeping pace with the growth of the world cosmonautics progress, will be doomed to increase the





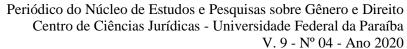
gradient of international cooperation, imposed on unfavorable conditions by foreign partners, which will make the domestic space program only a means to realize the national advantages of other states.

2. MATERIALS AND METHODS

Each epoch, especially the modern one, has certain scientific fields of cognition that reflect the features of the historical era in the worldview. And these ideas of science about its own purpose, its social value can be based on highly abstract concepts of space-time, motion, matter and express moral, aesthetic, socio-political ideas [20, 8, 17]. An example of such ideas are the concepts of "God", "cosmos", and "objective reality". At the same time, each, being a reference point, sets a certain model of the world and the processes occurring in it, and can also serve as a way to distinguish between methods of scientific thinking. The choice of ideas for the basis of models defines a certain logic of scientific and practical analysis, a specific set of tools, a choice of information, a style of thinking and ways of interaction. Thus, at a certain time, the absolute authority of the leader entailed a political

hierarchy of authorities, which made it impossible to create something more substantial, progressive or true in any kind of practice or knowledge than the leader, because this would be a violation of the hierarchy and absoluteness of the leader's authority. This logically implies the need for political and scientific sacrifices, indifference of means to the goal, substitution of means, including scientific political ones, and, therefore, declarative and hypocritical statements about the priority of a person and his well-being over other goals.

Their epistemological significance depends on the correct understanding of universal principles, namely epistemological ideals values, which presuppose the existence of some samples that have historical specificity, constitute a precedent or a model corresponding to the idea, if we follow the Hegelian understanding of the ideal [8,22]. Thus, in the structure of the worldview, the groups of ideals that correspond to the main areas of society's activity are differentiated, one of them forms ideals expressing the attitude of society to nature, the second group consists of ideals expressing relationship of people to each other, the third group is related to the problem of



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the relationship of people to their own consciousness, reflecting the historical memory of forms and types of social activity.

3. RESEARCH RESULTS AND THEIR DISCUSSION

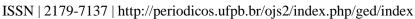
Times have tragically changed for the Russian cosmonautics. The creation of the orbital station was the long-term result of professional achievements of domestic scientists, creative engineering work and hundreds of thousands laborers. The successful operation of the station, which the whole enlightened world admired, crowned the grandiose course of the history of Russian cosmonautics. The station contained more than 240 pieces of equipment that made it possible to carry out studies for creating new medicine, testing unique methods of analyzing the life of organisms in interplanetary of prolonged manned states weightlessness, a huge amount of monitoring data was accumulated, including the ecological state of the Earth's atmosphere, mainland, seas. The Mir orbital station acted as the main link of the 21st century cosmonautics infrastructure; its task was to optimize the acceleration of introducing the latest

scientific and technical achievements by checking them in space and finding optimal operating modes before using them on automatic spacecraft.

According to the conclusion of scientists of the Russian Academy of Cosmonautics after named K.E. Tsiolkovsky, in case the Mir orbital station was liquidated under the pretext of "obsolescence" and working out of its technical resource, Russia would lose the possibility of taking real steps to create profitable astronautics already at the turn of the 21st century. Creating the ISS, because of the lack of experience and technology from American partners that Russia gained over 20 years of hard work, would not allow the Russian side to implement the programs of some planned scientific experiments; the country's important values would be irretrievably lost.

The fourth book of the scientist and designer B.E. Chertok "Missiles and People" [2], gives analysis of the factors contributing to the decision on the liquidation of the Mir orbital station, where the interests of the USA are predominating:

The US leadership, at some point (from 1987 to 1993) recognized the need for an orbital station within the







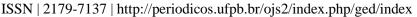
tasks of the 21st century cosmonautics; it was decided to create the Freedom station, which cost the United States 11 billion dollars; the work was stopped to lack of experience technology. Thus, the creation of the ISS was preceded by a strategy for solving two problems at once. Firstly, to eliminate the scientific and technological backwardness of the United States on the of Russian long-term expense experience in space exploration, and to secondly ... demonstrate uselessness of the station (Mir) for of Russia because its technical imperfection and economic inappropriateness.

I.V. Meshcheryakov, Doctor of Technical Sciences, Professor, Hero of Socialist Labor, at that time Chief Academic Secretary and Vice President of the Russian Cosmonautics Academy named after K.E. Tsiolkovsky in his article "Cosmonautics and Security of Russia" listed the following expected indirect losses for the Russian cosmonautics in case the Mir complex stopped its operation:

• "Lost opportunities for implementation ... applications for four additional commercial flights of foreign

astronauts at Mir station (Germany, South Africa, Malaysia, etc.).

- The loss of a significant sector of the high-tech products market ... the ISS scientific and applied resources are largely controlled by the American side ... which will significantly weaken Russia's competitive position.
- The international cooperation developed during the operation of the Mir station, focused on the equipment of the Mir complex, well-developed Russian or joint experimental methods ... determine organizational and technological dependence on other space service providers ... if the station becomes flooded, Russian competitive research will fail for a period of not less than 5-7 years.
- Prepared ... experiments with newly developed equipment ... (Flagship, Lightning, Cable, Alpha-I, Vulcan) ... cannot be implemented on the Russian segment of the International Space Station due to technical reasons and safety standards ...
- The ISS, which is supposed to replace the Mir complex, has a very long deployment transition (about five years) ... the Russian segment performs the functions of a space "change house" ... Due to the well-





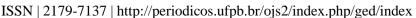
known technical shortcomings of the American segment ... this process may ... require additional costs from the Russian side ... the Russian side will be engaged in a thankless and expensive work for a long time to eliminate at the expense of other people's deficiencies and shortcomings in the complete absence of the ability to carry out any own work in the field of manned astronautics "[14]

The doctrine of"Russian cosmism" reflected in the philosophical and engineering works of N.F. Fedorov, KE Tsiolkovsky, V.I. Vernadsky [5, 19, 21] became the historical foundation for the development of the project "The Movement of Russian Cosmism". This project was conceived by a creative group of the Institute for Management Problems of the RAS, MIPT using achievements in the field of modern mechanisms of the general evolution of processes and systems, specific scientific and engineering studies in the field of information and social systems [1].

The concept of "The Movement of Russian Cosmism" essentially reflects a scientifically based shift of all aspects of the life of human consciousness from today's anthropo(ego)centric positions to the creative-cognitive component of the creative activity of various forms of

highly organized matter (man machine). The approach to the concept "The Movement of Russian Cosmism" is based on computer modeling of the evolution of complex systems, the mechanisms of thinking of the subject and the transfer of these mechanisms to the functioning of socio-cosmological systems. One of the provisions of this concept concerns directly the protection of Russia's interests in space exploration and it is hypothesized that with the loss of the Mir orbital station, Russia will lose its fulcrum in orbit. The reason is the human factor, the responsibility that lies "besides direct performers, on the intelligentsia and scientists: they did not explain the truth of what was happening, they could not have foreseen" (ibid.). At the same time, in order to save the cosmic future of Russian civilization, the concept offers several possible options:

- To use the solar panels of the station for the operation of ion carriers for the gradual transfer of the station to the desired orbits.
- To transfer the station to lunar orbit and use it as a scientific laboratory.
- To invite the countries of the Eurasian region (India, China) to





participate in the life support of the Mir station.

- To use the station to develop an intelligent information support system accessible to any person anywhere in the world.
- To create an orbital space museum of initial space exploration.

The consequences of the elimination of the station Mir will be among other things the offended feelings of its creators and the loss of space exploration starting time for a new generation of Russians. [1]

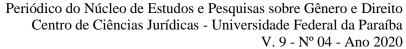
After 20 years 22 March 2001 can, without a doubt, be considered one of the most tragic dates in the recent history of Russia, when the burning remains of the Russian orbital station collapsed into the Pacific Ocean. Russian cosmonauts regarded the liquidation of Mir as a betrayal of Russia. It is known that the Americans carefully monitored the descent of Mir; information from the Russian Mission Control Center was directly transmitted to NASA.

Space is steadily becoming the sphere of ever-expanding competitive advantages of the United States. The U.S. National Interest Commission of the American Congress stated in 1996 "National interests are the functional

868 basis for any discussion of foreign policy issues ... this concept is regularly and widely used by government officials, members of Congress and most American citizens" [6]. The idea of dominance of a superpower is justified by a whole arsenal of means of educating young people in the spirit of undeniable superiority, training personnel conduct an information war against competitors. The obtained ideological attitudes and skills are also applied in the competition for a place in space "now learning to fly ... should be as important as learning to swim" [6].

Russian launch vehicles rightfully earned well-deserved prestige in the international space market, - wrote the chief editor of "Space News" Igor Marinin. Nevertheless, "we are forced to seek permission for many launches from the Americans, ... we got involved in the construction of the International Space Station, supporting our domestic high technologies, but were forced to abandon independent the manned space program"[13].

Achievements of the Soviet country's industrialization, the development of science, technology, aviation, space activities were marked by international recognition. The flight of



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Yuri Gagarin was named by the US Permanent Representative to the United Nations E. Stevenson a great scientific achievement, which opened up unlimited horizons for mankind. American news magazine, published in Washington, "U.S. News & World Report" wrote that the Soviet Union "was two to three years or more ahead of the United States in the field of spacecraft of similar size and importance" [15].

The magazine "Russian space program at a new stage," said that even in case Russia preserved technical capacity of the national space program, it could not avoid the fact that the objectives and methods of practical application would be determined by investors, heads of international projects, among which there would be a limited number of Russian representatives with limited authority. Contributions of the national space program to the social development of the country would be considerably reduced; accordingly, the program would be less supported by legislators, regional leaders, social movements and political parties [18].

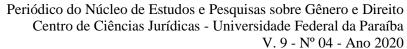
4. CONCLUSION

It is important to say to future generations about the absolute

significance of today's human (psychological), moral values, philosophical as well as political, ideological, economic social and principles in the organization of space freed activities from the stereotypes of the Cold War period and enriched by the ideas of humanism, for which sake the future generation will continue the cosmic accomplishments of the previous century.

The implementation of the humanitarian paradigm requires counter efforts from one of the wealthiest countries on the planet, personifying the entire "civilized community", contributing to the pacification of the existing norms of culture and religion on other continents, including their own claims to unconditional leadership and power in the 21st century.

The revival of Russia's priorities as a space power requires a critical rethinking and search activity in the direction of theoretical constructs and practical dispositions on the world stage. A retrospective look at "zero" years gives insight an into importance of maintaining the potential for building such a bulwark of Russia in space as the space station "Mir" was. This understanding was present in both



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the European and the American space community. In 1999 a group of American scientists who organized the Cosmic Border Foundation, addressed an open letter to President B.N. Yeltsin, with the appeal not to sink the Mir orbital complex, but to transfer it to a higher orbit, which would allow waiting for "better times" for Russia, when it would be possible to extend the active life of the station.

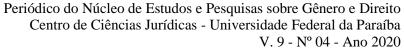
Russian adherents of the station's flooding justified their position by the fact that the cost of operating the Mir was 220-240 million dollars a year, the Russian budget did not provide for such money. "The historical paradox is that in the first decades after the heavy Second World War, the Soviet Union annually invested much more funds for the development of rocket and space technology than Russia today," said I.V. Meshcheryakov [14, p. 114]. The once powerful military space power in the process of so-called "reforms" underwent such an economic default, against which spending on space science and technology seems an unacceptable luxury.

Now we can understand what happened through the analysis of the geopolitical balance in the international

The forecast of events is arena. highlighted by a document posted on the Internet, "The View of the US Space Command for 2020" [10]. document was adopted in March 1998. 19 military and civilian organizations participated in the development and drafting of this plan, including DARRA, NORAD, NRO, BOING, NASA, COMSAT LABS and others.

The document concretizes those directives based on which, as a new target, the need to consider outer space as such a natural environment that acts for the US armed forces as an area of responsibility, indicating the emergence of operational necessity.

The document says "Space has become a national economic sector that needs to be protected," in connection with this, it is planned to realize the global goal "... ensuring the United States and its allies free access to space and full-scale actions in it, while prohibiting the enemy from solving such problems". The main directions of the development of cosmonautics in the 21st century are outlined, such as "... concentration of efforts to reduce the cost of putting payloads into space" (here one would have to not rush to close Energies-Buran), "optimize the payload



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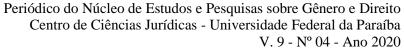


configuration" (assuming multifunctionality, maintainability and modularity), "... development of a common platform to interface all of our satellites" (meaning a universal orbital complex, as a platform for repair and prevention), "... verification of new technologies and procedures to reduce the cost of integrating the payload on the carrier." The last direction corresponds to the adequate task of accelerating the process of introducing new technologies through preliminary adaptation with the participation of the operator at the orbital station.

In other words, the foregoing suggests that the development of cosmonautics of the 21st century in the technical and technological direction is identical in our country and in the USA. It differs by its goal setting: our goals are to serve man in the interest of increasing the economic power of the country, improving the quality of life of people, preserving the Earth as a living environment, protecting it from the unreasonable attitude to it and the natural Cosmo planetary cycles of development of the solar system and the universe. Their goals are associated with the buildup of the military power of the state, with undivided possession of outer space as a new tool in the armed struggle for victory on the path of world domination [4].

Finally, a question arises to the authors of the Russian "Concept of National Security" published in the press and approved by Presidential Decree of December 17, 1997 No 1300 (as amended by the President of the Russian Federation of January 10, 2000. No. 24) [3], where a list of threats to the Russian state and its peoples is given, the ways to counter and overcome these threats are indicated. The question remained unspoken about the real threat associated with the loss of priorities in the field of cosmonautics achievements, depriving the country of the status of a Great Space Power, and finally, the role astronautics and its equipment in countering the threat of a colossal in scale and significance information war.

From the angle of interethnic and intercultural contradictions escalated in the world, the thought of one of the prominent representatives of Russian cosmism V.N. Muravyov sounds fresh and relevant, "Blind nature has no future. On the day when it becomes rational, all time will become the future and the future will thereby merge with the past in the eternal present ..." [16].



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Historical memory is needed. IN. Klyuchevsky emphasized that every resident of Russia should be a bit historian in order not to be a slave to circumstances, but to be a citizen [11]. It would be a mistake to interrupt the consistent connection of times in its beneficial activity. In ancient Russia, there was a myth about St. Yuri, about his "unlocking" heaven and earth; people believed in miraculous wings that could carry away to free transcendental heights, into the boundless distance ... Maybe since that time, after a thousand or more years, Yuri Gagarin was the first of people to go up into space. Moreover, maybe not by accident, some people call him a saint, like the author of the leading American journal on cosmonautics "Air and Space" [9]. The birth of a pioneering hero on Russian soil that "day, with April grace", its origin, flight, and the very death of the hero are permeated with mystery and dualism. Cosmism, the desire for space travel is in our blood, in our tribal consciousness and everyday life, it is an organic property of the Russian people as a spiritual and ethical community, as a nation.

References

Bodyakin V.I. Russia and space //
Russian idea. Slavic cosmism and the
Mir station. –Kaluga: State Unitary
Enterprise "OBLIZDAT", 2000. Pp.140-143
Chertok B.E. Rockets and people. M.:

Engineering - 1999. - Pp.350-352

Decree of the President of the Russian Federation of 10.01.2000 N 24 "On the Concept of National Security of the Russian Federation" [Electronic resource].

https://legalacts.ru/doc/ukaz-prezidenta-rf-ot-10012000-n-24/ (reference date: 01.11.2020).

Directive of the President of the USA PDD-49 dated 09.19.1996 "National Space Policy", specified and developed in the directive of the Secretary of Defense No. 3 100 of July 9, 1999.

Fedorov N.F. Works. - M.: Thought, 1982.-711 p.

Foreign Affrais, 1999, July-August, p.23 Ibid, 1999, July, p.4

Gennady Padalka: the next 20 years for space will be epoch-making. [Electronic resource].

https://ria.ru/20191230/1562942542.ht ml. (Reference date: 11.01.2020).

Hegel G.V. Aesthetics in 4 Vol., Vol. 3. M., Art, 1968



Space Club.

Periódico do Núcleo de Estudos e Pesquisas sobre Gênero e Direito Centro de Ciências Jurídicas - Universidade Federal da Paraíba V. 9 - Nº 04 - Ano 2020

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Varshavsky V.I., Pospelov D.A. The

orchestra plays without a conductor. M.,

873

"Holy Yuri" article in the Journal of Air and Space, Washington, 1999, Janury, p.77

Khozin G.S. Washington's Space Strategy for the 21st Century // USA and Canada: Economics, Politics, and Culture. - No. 6 (368) - 2000. –P.1 Klyuchevsky V.O. Aphorisms. Historical portraits and studies. Diaries. - M.: "Thought", 1993. - 416 p. Moscow

Leontiev K. N. Byzantism and Slavism.

–M.: Academic Project, 2017. – 504p.

Marinin I.A. Cosmonautics News.
Volume 9 - No. 9 (200) –1999. - P.1.

Meshcheryakov I.V. Cosmonautics and security // Russian idea. Slavic cosmism and the Mir station. –Kaluga: State Unitary Enterprise "OBLIZDAT", 2000. - Pp.111-112.

Morning of the space age. - M., 1961. - Pp.511, 515.

Muravyov V.N. Mastering the time. - M.: Rosspan, 1998. - Pp.299-300.

Science and values. Novosibirsk, Science, 1987

Space and man. Russian cosmonautics at a new stage. Series: Proceedings of the Moscow Space Club. - Issue 5, M., 1999. - Pp.33-34.

Tsiolkovsky K.E. Cosmic philosophy. Collection. - M.: IDLi, 2004.—496p.

Science, .1984.

Vernadsky V.I. Biosphere and noosphere. M.: Iris-press, 2012.576 p

Simamora, R. E., Saragih, S., & Hasratuddin (2019). Improving

Improving Mathematical Students' Problem **Ability** Self-Efficacy Solving and through Guided Discovery Learning in Local Culture Context. International Electronic Journal of **Mathematics** Education, 14(1), 61-72.

https://doi.org/10.12973/iejme/3966