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HISTORY OF UFO STATE RESEARCH IN THE USSR

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Abstract.

The State research program on a physical nature of paranormal atmospheric and space phenomena in the USSR: a history of creation and realization of the program, plus perspectives, and hypotheses for a physical nature of "UFOs".

In the mid-70s in the USSR, various public organizations involved "in studying the problems of UFO" became more active, and, as a result, the interest to this problem among the broadest layers of a public considerably increased. The arguing of a problem became a noticeable social phenomenon in the life of the country, especially among the scientific and technical intelligence. The so-called "lectures" (very popular at the time) by the ufologists of the country and numerous materials based on foreign publications (poured oil on the flames?) gave copious food for various kinds of gamble. The managing bodies of the country did not encourage discussions of the problem in mass media, but also did not prohibit the lectures in the institutes, and various companies, including military units. It should be noted that these lectures were rather popular and the lecture halls were always full.

The authors of these lectures (of greatest popularity were F. Zigel, the teacher of Moscow Aviation Institute, and V. Azhazha, the retired naval engineer) oriented the students on extraterrestrial origin of the UFO, although there were mentioned and not less extravagant hypotheses of underwater and even underground civilizations contacting with the mankind.

Actually, the research on the UFO problems in various public organizations at this period was reduced just to collecting of various information about strange phenomena. The collected data frequently had a rather doubtful origin; they were deformed to unrecognizability by repeated retransmission or were not simply checked. The authors of the "lectures" just postulated the strange phenomena with the activity of extraterrestrial civilizations, and the results from the analysis of the observed data or measurements at the places of UFO landing turned to be, softly speaking, incorrect. However, as at this time all over the world, including the USSR, a line of investigation studying the probability of the plurality of extraterrestrial civilizations (SETI- Search for Extraterrestrial Intelligence and CETI- Communication with Extraterrestrial Intelligence) has gained wide development, it was not difficult to create the public opinion on the importance of establishing the contacts with our "brothers".

In the course of time, there appeared the publications about the observation of extraordinary light and optical phenomena in various regions of the USSR. In the AS of the USSR, in the newspapers and journals, and in private collections there was gradually accumulated a rather significant quantity of the messages describing various strange things, and the requests to give a scientific or simply reasonable and logical explanation to this "phenomenon". The Department of Physics and Astronomy of AS organized a group of employees headed by V. Leshkovtsev, the scientific secretary of the Department, to work with the letters on these subjects. The task of the group was to file the obtained messages, to consult with the experts involved in various lines of research, to analyze the materials, and answer the letters.

It is natural, that such a primitive approach to the organization of the problem research could not bring good results. A comprehensive research of the problem necessarily needed the creation of a team of specialists of various specialization, the coordination of contacts between the Institutes of the AS, the Ministry of Education, Hydro-meteorology Committee and, certainly, the Ministry of Defense, since such a research should have been conducted in tight cooperation with the militaries.

A so-called Petrozavodsk phenomenon gave an impact to the deployment of such an organizational activity. On September 20, 1977, late at night, the inhabitants of north-west region of the country have observed (during several minutes) an extraordinary large-scale light phenomenon.

The description of this phenomenon based on the words of the eyewitnesses has appeared in the newspaper "IZVESTIA" on September 23 under the title "The Unidentified natural phenomenon".

"The Inhabitants of Petrozavodsk were the witnesses of an extraordinary natural phenomenon. On September 20, about four o'clock in the morning, in the dark sky there suddenly appeared a huge "star" with impulsive beams of light coming to the ground. This "star" slowly moved toward Petrozavodsk and, hanging over the town as a huge "jellyfish", illuminated all around with a set of thinnest radial beams, which gave an impression of a down-pour rain.

A bit later the irradiation stopped. The "jellyfish" wrapped into a bright half-disk and restored its motion toward the Onega Lake, the horizon of which was covered by grey clouds. Then a round gully of bright red color in the middle and white on each side was formed in the clouds. The observed phenomenon, under the testimonies of the eyewitnesses, proceeded 10-12 minutes.

Yu. Gromov, the director of Petrozavodsk hydrometeorology observatory, has told to the correspondent of TASS, that the workers of the hydrometeorology service of Kareliya observed no analogies in nature... "

The eyewitnesses of this colorful phenomenon were rather numerous, and among them were representatives of different professions: the workers of a brigade of first aid, on duty employees of militia, seamen and the dockers of Petrozavodsk lake port, military men, staff of the airport, and even the astronomer - fan. Thus, the fact of

observation by the inhabitants of Petrozavodsk of an extraordinary light phenomenon was indisputable and did not call doubts.

It was soon found out that at the same time a similar picture was observed in the sky in the regions rather removed from Petrozavodsk: the northwest region of the USSR and even Finland (Sadankul), where some photos of this phenomenon were made. It is clear, that the title of the phenomenon - "Petrozavodsk" - is of a rather conditional character.

It was impossible to disregard or simply to wave away from such an event, and in this connection, the local authorities have addressed the Presidium of the AS of USSR with the request to explain an origin of the observed phenomenon. At the same time, the AS and the newspapers have been flooded by the letters concerning this matter: what has taken place in the night sky above Petrozavodsk that September night? The same problem was posed in the official letters from the countries of northern Europe addressed to the President of the AS. In these letters there was expressed a concern, whether the observable effects come from any military-technical experiments, and present danger to the natural environment of this region.

Under the pressure of these circumstances, the President of the URSS Academy of Sciences, academician Anatoly Aleksandrov, signed a letter to the USSR government. Addressed to L. Smirnov, the Vice-president of the government and simultaneously the Chairman of Military-Industrial Commission (MIC), with a request to consider in the urgent order a possibility to start a complex research of paranormal phenomena, similar to the "Petrozavodsk" one. The research should broadly involve the organizations of the Ministry of Defense and war industry. Pursuant to the order adopted in that time, L. Smirnov, the Chairman of MIC, entrusted one of the assistants, academician A. Schukin, who was the Chairman of Scientific and Technical Council (STC) of MIC, to consider at the nearest meeting of STC the topics listed in the letter by the President of the AS of the USSR. Such a meeting was held in October 1977 in Kremlin under the presidency of general - Lieutenant B. A. Kijasov, one of the assistants of academician A. Schukin.

Opening the meeting, B. Kijasov briefly stated the contents of academician A. Aleksandrov's letter to MIC. The essence was stacked in one phrase: "The Academy of Sciences of USSR can neither ignore, or explain the paranormal phenomena similar to that observed in September, 1977 in Petrozavodsk, and, in this connection, the AS asks to organize a complex research of paranormal phenomena with the involvement of organizations of the Ministry of Defense and MIC." The MIS members speaking after B. Kijasov supported the proposal of the President of AS. They have noted, that the information on the observation of extraordinary phenomena comes to the organizations of the Ministry of Defense from the military men as well, and during such events sometimes were marked the cases of violation in the operation of the means of maintenance of the army forces.

The meeting resulted in the solution to recommend the MIC to include into the state plan for 1978 research works on defensive subjects a complex research program on a theme "Research of paranormal atmospheric and space phenomena, the reasons of their origin and influence on the operation of the military-means and condition of a personnel". The STC recommended (before the end of 1977) to send to Petrozavodsk a group of experts, including the militaries, so that just at the place to understand what actually happened in this region on September 20.

The recommendation of STC was adopted by the MIC under the Council of Ministers of the USSR, and at the nearest updating of the current five years' plan of research activities on defensive subjects has included into the plan for 1978 two topics on studying the paranormal phenomena:

- * "Setka MO" (Ministry of Defense) - "Research of paranormal atmospheric and space phenomena and their influence on the operation of military technical equipment and personnel";
- * "Setka AS" (Academy of Sciences) - "Research of a physical nature and mechanisms of paranormal atmospheric and space phenomena".

Thus, in 1978 in the USSR the state program of studying the “UFO” phenomenon started, and proceeded without interruption for 13 years down to 1990. The STC MIC meeting in October 1977, which played a so important role in the organization of this research program, was the first and last measure with a so high official level of the participants engaged in the problem.

Later still twice, in 1981 and 1986, the five years' plans of research activities on defensive subjects were approved which included the scientific-research-work on paranormal phenomena. It should be noted that after the stopping of the activity performed at the Department of Physics and Astronomy of the Academy of Sciences, the group of experts continued its work up to 1996. The task of the group was to analyze the materials coming from the eyewitnesses to the Academy of Sciences. Nowadays such messages are rare, and they pass expertise in Department.

After STC MIC meeting in October, 1977 the representatives of the State Machinery, including the members of STC MIC, started to display keen interest to the problem of “UFO” (paranormal phenomena), and some of them have personally participated in separate episodes of the researches. Nevertheless, the official recognizing of an urgency of studying of the paranormal phenomena was incomplete and has not become a well-known fact. In the official documents the use of an abbreviation "UFO" was not accepted, instead of it the term “paranormal phenomenon “was used. The use of a word combination "paranormal phenomena" was determined in the main by two reasons: the word combination "paranormal phenomenon" corresponds better to the nature of the observed effects than the one “unidentified flying object”, and was not connected with the fever around "aliens, arriving on flying saucers".

To decrease a public resonance from the certification of the activities on "UFO" the researches were classified. It was stipulated at least by three circumstances:

- * This program of activities formally entered the classified plan of activities on defensive subjects;
- * In the beginning of the activities there was assumed a high probability of a military-technical origin of the observed strange effects;

* A capability of a military use of some probable properties of the UFO, in case of a successful solution of the posed problems, - absence of a radar contrast, high maneuverability, etc.

In connection with the classified character of the activities on this problem the number of publications in press was rather limited, and it has been recommended that the publications on "UFO" should be directed for reviewing (do not confuse with censorship) in the AS of the USSR.

The decision of MIC actually created two centers of UFO research:

In the Ministry of Defense and in the Academy of Sciences of the USSR. The lines of research differed in the sources of the data. The MD worked with the data coming from various kinds of troops, and the AS conducted the research based on the messages assembled in scientific organizations, Hydrometeorology Committee, the newspapers and journals, etc. Certainly, there were differences in the purposes of the spent activity, and this is seen just from the titles of the topics. One of the main objectives of the military men was to find out possible influence of "UFO" on the operation of the military technical equipment and the personnel and, "if yes ", what is the mechanism of this influence and how far dangerous is it. The Academy of Sciences put as the main problem the study into the physical nature of the paranormal phenomena, i.e. modelling of the processes of development and vanishing of the unknown effects, their correlation with physical conditions in the environment and probable anthropogenic effect on nature. It is clear, that these research lines partially intersected and supplemented each other. It is also obvious, that only joint efforts in the research could result in fast and adequate solution of the posed problems.

The leading institution of the military part of the program of UFO research was one of the central military research institutes in the Moscow region. Its Chief, V. Balashov, a very qualified expert in the field of studying the effect of radiation and other striking factors on military technical equipment, was assigned scientific chief of this line of activities. To fulfil the research, a small group of military and civil experts (including four or five persons, depending of years) was formed at the MD head institute, and as

a matter of fact, the group has executed the main scope of work on collecting the messages about observations of "UFO", their processing and analysis, preparation of the account documents. Naturally, except the MD head institute, some other MD organizations from various kinds of the armed forces, the scientific institutions of war industrial (by a total number about 15) became the executors of the program. The formation of a structure of the program executors was made without enforcement, on the voluntary basis, and the participation of these organizations in particular activities on identification of "UFO" was also voluntary and, as a rule very limited.

Academician V. Migulin was the Director of the Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation of AS of the USSR (IZMIRAN). A radio physicist, a great expert in the field of the theory of oscillations, propagation of the radio waves and radiolocation- He was assigned Chief of an "academic" direction of research, and IZMIRAN was determined as the head institute in this field of activity. Like in the MD, a workgroup of 4-5 persons was formed for direct activity on the topic of research. The group was headed by Yulii Platov. The institutes of the AS, the institutions of Hydrometeorology Committee, and the Ministry of Education became the organization -executors. Their participation in the work varied from the collecting of the messages on the observations of "UFO" to the particular analysis of the material and development of physical models for various kinds of paranormal phenomena.

The budget financing of the research program included the salary of the experts occupied in these activities and the costs of business trips. All the money was coming from the budget of organizations - executors and there was no special financing of the research.

It should be noted that the program of the paranormal phenomena investigation was the most inexpensive one, if not the cheapest, among the scientific works on defensive subjects. The shortage of financing did not allow certain developments as well as to acquire additional specialized equipment to make special experiments, and, therefore some of the scheduled researches, in particular the ones concerning the

formation of large-scale plasma formations in atmosphere, were not carried out. The means shortage has somewhat affected the technique of the carried out research, which, was mostly limited to the analysis of the assembled material and development of physical models of the observed phenomena. Only in separate, most "interesting" cases, the research program participants visited the places of "UFO" observations, and special, "target" observations connected with the realization of technical experiments were organized.

In spite of the fact that to the moment of the beginning of the work a rather large archival material on the observations of "strange" phenomena has been assembled, only a small part of these messages has been subjected to a retrospective analysis. In the main, there were the most well documented descriptions of various mass observations of paranormal phenomena. As a whole, the emphasis was given to the analysis of the messages obtained during the work on the program and the results from the teleological observations.

The research program was based on three main principles:

- * A serious attitude to the problem, understanding of the circumstance that the observation of "paranormal phenomena" is an actual objective fact and, that the messages about the "UFO" observations come from the eyewitnesses who, for the most part, are sincerely wishing to understand the nature of the observed phenomena.
- * Rejection of the a priori solutions of the problem.
- * Orientation toward long-term and thorough investigation of a problem.

In spite of the fact that at the beginning of our activity we tried to avoid a prejudiced attitude to any hypothesis on the nature of "UFO", the theoretically possible versions of their origin had a somewhat priority character.

- * "UFO"s are the product of human activity, i.e. these phenomena are of anthropogenic origin;
- * "UFO"s are the product of natural processes taking place on the Earth, Earth atmosphere and in the near space -a hypothesis of a natural origin of paranormal phenomena;

* "UFO"s are the result of the activity of extraterrestrial civilizations.

The latter version, though the most intriguing and feverish, aroused no enthusiasm, however, it would be improper to eliminate its consideration.

The key role in the organization and fulfilment of the military part of the program played the document prepared by the MD leading executor of the program and authorized by the Chief of General Staff MD of the USSR in January 1980. This document, which reached all the troops in the form of the Directive of the General Staff, contained the instructions concerning all the main problems in the realization of the scientific-research program. Namely:

1. It determined one of the central military-research institutes of MD as the leading executor of the program, assigned it as a Centre for assembling, processing and analyzing of the information about "UFO" obtained by the militaries;
2. It determined the military research institutes to be responsible for the fulfilment of the program in all five arms and the order of their interaction with the central research institute responsible for the fulfilment of the program in the whole;
3. It determined the order of obtaining by the central research institute (the leading executor of the program) of the information from different units needed for the identification of "UFO", first the data on the launches of military air-space techniques;
4. It determined the rules of documenting the facts of the "UFO" detection by the army, determined the order of the message presentation depending on the urgency and importance of the information contained.

This directive has actually allowed the participants of the program of paranormal phenomena research to use all the great observation potential of the Soviet Army in the fulfilment of the program. Each military man, wherever he was, became (without knowing it) a potential participant of the program, since in case of observation of any inexplicable, exotic, extraordinary phenomenon he should report about it in a written form under determined order and present these materials to the heads. One can say that the noted directive for 13 years put the army into the on-duty regime of

observation of the paranormal phenomena in the places of the army dislocation, i.e. practically on the whole territory of the USSR, and this means, anyway, approximately 1/6 of the Earth territory. It is not likely that anybody could whenever organize such a large-scale research, and practically with no financing. There were two channels for the transmission of the information about observations of "UFO". The first, the routine one, was used when the observed phenomena did not result in any violations of the life-support system of the military unit. In case when during the development of paranormal phenomena in the place of observation there happened something extraordinary, for example the failures in the operation of technical equipment, the information on such events was directed to the heads in an urgent order, and was not passing all intermediate stages.

Similar procedure of collecting the observation material, although, if to be true, not at such a large scale, was organized also in the institutions connected with the Academy of Sciences. The main emphasis in the activity of "academic" institutions was made on the analysis of conditions of observation of the paranormal phenomena and their physical mechanisms. The experts in physics of atmosphere, physics of plasma, geophysics and geochemistry, mathematics and other fields of science took part in this activity. As a result, all the needed premises for collecting of rather full information about various paranormal phenomena, its proper analysis and development of an adequate model of the observed phenomena have been created.

During the work on the program (lasted 13 years), about 3000 messages reporting about extraordinary phenomena have been obtained. Practically all of them were analyzed and identified by a small group of researchers. The main part of the messages relates to the category of mass observations, i.e. when many independent eyewitnesses described one and the same phenomenon. On the average, one can speak about mass observation, when there are 7-10 messages about one and the same episode. In separate, most large-scale observations stipulated by weather conditions, time of the phenomenon development and many other reasons the number of the phenomenon descriptions reached 50 and more messages. Thus, overall, more than 400 events were registered and identified as extraordinary or paranormal. It is

interesting, that from the military units maintaining test polygons or located in immediate proximity from the polygons, the messages about "UFO" observations did not practically come. Obviously, this is connected with the fact that the effects accompanying military-technical tests and experiments are well known to the experts, but would puzzle the people who are unaware of this kind of human activity, and who will perceive these phenomena as an anomaly.

As mentioned above, a rather small number of phenomena registered as the paranormal ones is most probably connected with the fact that in the collecting procedure, the messages passed a rather qualified check, and for the most part the messages were "rejected".

Practically all the mass night observations of "UFO" were unambiguously identified as the effects accompanying the launches of the rockets or the tests of aerospace equipment. Such an identification included the determination of time coincidence between the observation of the phenomena and the realization of the corresponding tests, space correlation of a possible place of the phenomenon development and the operation region of the technical systems, and the correspondence of the observed phenomena to the operation regimes of the technical units. It should be noted that the effects accompanying the launches of the space rockets can be observed at a significant distance (thousands of kilometers and even in the other regions of the globe), and this is connected with various operation regimes of the rocket engines, and actuation of the propulsion systems of space vehicles for orbit correction.

The main mechanism of the development of this class of phenomena presents the scattering of solar light on gas-dust cloud formed by the combustion products of the rocket fuel. Thus the most favorable conditions of observation of such effects under twilight conditions, when the path of a rocket lies in the region lightening by the Sun, and the observer is on a "night" leg of the Earth. Depending on the altitude of the rocket flight, engine design, composition of a propellant component and other reasons, the configuration of a gas-dust cloud and its size can vary within very broad limits. It is enough to say, that in some cases the characteristic cross-sectional size of

the rocket trace can reach many hundreds of kilometers. It is no wonder, that a unique observed picture, a capability to observe the phenomenon on a vast territory, since these phenomena are developed at the altitudes more than hundred kilometers, and an absence of sound effects etc. call surprise and bewilderment in unprepared observer.

Among the most interesting recordings of "the rocket effects" one can note the above-mentioned famous "Petrozavodsk" phenomenon stipulated by the launch of an artificial Earth satellite "Kosmos 955 " from the space range in Plesetsk. (A number of additional effects accompanying this phenomenon was connected with a failure in launching a ballistic rocket. The launching of the rocket took place in the same region and almost at the same time).

The mass "dolphin-shaped" object in the night sky on June 14-15, 1980 observed on the vast territory of the European part of Russia was connected with the launch of satellite "Kosmos 1188" from Plesetsk. It is interesting, that this satellite in less than an hour "had left traces" in the other region of the globe, namely, South America. In Russia there has been observed a gas-dust track left by the sustained of the launcher, and in South America - a cloud connected with the engine run of the accelerating unit at putting the satellite into the working orbit. The phenomenon observed on May 15, 1981 was connected with the launch of "Meteor-2"; August 28, 1982 -the launch of "Molniya-1 "; July 3, 1984 - "Kosmos 1581" and many others. A number of cases of the phenomenon observation were not connected with the launches of satellites, but with ballistic missiles, both ground and sea based. By the way, such phenomena were rather regularly observed in other countries; these accompanied the test launches of rockets from submarines, in particular, on Canary Islands. Therefore, such "UFO"s have explicitly international character. It is clear, that these effects do not basically differ from "satellite" phenomena, but their identification is more labor consuming because of uncertainty of a launching position and exact times of the launch.

The second significant class of phenomena perceived by the eyewitnesses as "UFO" completely corresponds to the term "flying object ". To tell the truth, here one should make a small remark - these objects are not flying, but "floating" or "drifting" in the

atmosphere. The effects accompanying the launches of balloons may be related to this class of phenomena.

To study various atmospheric layers and to carry out regular meteorological observations spherical balloons are widely used all over the world. The modern ball - probe presents a rubber shell about two meters in diameter at the ground suspended with measuring instruments. Sometimes they can mount up to the altitude about 30 kilometers, where the diameter increases almost up to 10 meters. The launches of these ball-probes are made regularly, the distance of their flight usually does not exceed 10-15 kilometers from the start position, and therefore, as a rule, their observation does not call bewilderment. However, surprising things sometimes happen.

This episode has taken place on June 3, 1982 in the air-defense regiment, located near Chita in Transbaikalia. It started when at the air-defense state command post arrived an urgent report from the regiment that while patrolling the state boundary with China the fighter's pilot has detected, at an altitude about 17 km, an extraordinary sphere-shaped object, prepared to attack it, and at this time the object has unexpectedly disappeared. The report stated that the detected spherical object could not be a meteorological balloon, since such objects are well known to the personnel, and they are less in size, than the observed object and never mount up to such altitudes. In the region in which the airplane met an "UFO" there were no habitation objects on the ground except the frontier post and meteorological station, and it was decided to start the checking with the meteorological service. After talking by phone with the chief of the Meteo station, this was found out: firstly, the launch time of a balloon from this station practically coincides with the time of meeting an unknown object by the airplane; secondly, the shell of the launched balloon has turned to be very strong and it has mounted some kilometers higher than usually. The last altitude of a probe fixed by the telemetry made 16 kilometers.

A similar accident has taken place on September 13, 1982 in an air-defense regiment located on Chukot Peninsula. Again there is a meeting of an airplane with an unknown spherical object at an unusually high altitude in the region of Anadyr' bay

and an unexpected loss of the object. The difference from the previous case consisted in the fact that the meteorologists did not know what altitude has reached the launched balloon, as there was a failure in the telemetry operation. It is quite possible that both balloons with unusually strong shell belonged to one "defective" batch.

The described episodes show that even experienced pilots are not immune against the errors in the evaluation of the size of the observed objects, the distances to them and their identification with particular phenomena.

Bigger and high-altitude balloons, as compared to the weather balloons, are used in studying the higher atmospheric layers, and they can drift for a long time at altitudes more than 40 kilometers above various regions of the globe. The record of flight duration was established in 1970, and it exceeds four years, during which the high altitude balloon has made more than one hundred round-the-world trips at an altitude about 35 kilometers. Along with the classical sphere-shaped balloons (to be more correct drop-shaped balloons), the balloons having a rather surprising form are used. For example, in France, due a simple manufacture technique they have produced the shells, which look like a tetrahedron - a regular pyramid. Once a filming group in the Baltic observed a flight of such a balloon, which has called a real panic among the eyewitnesses. In a number of cases the shell of a cylindrical form or a double one are used that take at large altitudes the form of a "doll". The volume of pyramidal balloons can reach 150 000 cubic meters, and this corresponds to the characteristic size about 110 meters. The spherical balloons of the volume of 500 000 cubic meters and the diameter up to 150 meters are even more impressive. It is easily seen that even a balloon of the average size, being observed from a distance about 100 kilometers, is seen as an object of the size about 2 angular minutes (1/15 of diameter of full Moon).

The number of messages about such "UFO" is smaller than that concerning the effects of rocket launches, and makes 10-12%.

During the 13 years of fulfilment of the paranormal phenomena research's program, there were just a few cases when, instead of a rather routine retrospective or operative

analysis of the observation materials, it was necessary to make an urgent investigation of the circumstances connected with the observations of “UFO” and their probable interference into the activity of the military units. In all these cases, the message about the “UFO” observation reached the head executor not by the usual courier communication, but in an order stipulated by the sheet of the urgent reports, i.e. immediately and with the report to the military heads. One of the authors took part in the investigation of these events.

The first episode took place on October 5, 1983 in one of the rocket divisions located near the town of Khmelnytskyi in the Ukraine. From 18 o'clock until 22 o'clock this day many military men and the members of their families (by the total number of 50 persons became the witnesses of an unknown colorful light phenomenon. It looked as follows: in the north direction, high above the horizon, there occurred for some minutes, then disappeared and appeared again the bright flashing objects, which had the form of a balloon. Some of the eyewitnesses stated that they could see in these objects the dark window-like spots emitting the arc-shaped light beams that reached the ground. The described event, though being impressive enough, would not become a subject of an urgent report to Moscow, if it were not for one accompanying circumstance. The matter is that during the time of observation of this phenomenon in the sky, on the control panel of the command post of the division the monitor lighted up the header warning about the fault in the start-up system of the rockets. In tens of seconds, this header spontaneously stopped lighting, although some doubts in the proper operation of the equipment remained. In such a situation, the commander of the division has decided to report urgently to the command post of the General Staff about a short-term fault in the operation equipment at the command post of the division. The commander of the division associated this fault with the appearance of unknown flashing objects in the sky above the division arrangement.

The chief of the General Staff, having acquainted with the report, has ordered a special commission to be sent in an urgent order to the place of an accident. The commission should consist of the experts engaged in the research of paranormal phenomena. The commission started the work in the morning of October 6. In two

hours, it became clear what the military men could see in the evening on October 5. The inquiry of the eyewitnesses has allowed defining the direction (practically to the north from the division arrangement), in which the strange phenomena was observed. The first "serious" potential candidate for the "UFO "source has appeared to be an air polygon of the 26 army located in the Byelorussian Polesje approximately 400 kilometers from a place of observation. The inquiry to the command post of the Air Force has revealed the following: on this polygon, just at the time, when the "paranormal" light phenomena were observed, the activities have been conducted on the exercises of the hanging the lighting air bombs with a consequent bomb dropping by usual bombs. The lighting bombs were dropped from the airplanes at the altitude of about 10 km, and then they were "parachuted", providing the illumination of a large territory within 5-7 minutes. Just these light effects in the night sky above a Byelorussian aviation polygon have been observed by the military men of a rocket unit distanced by 400 km to the south. The improvement of operations on the statement of the lighting bombs was performed at this Byelorussian air polygon several times a year (during the previous and succeeding years), but only once - on October 5, 1982 - these effects could be observed at such a distance from the polygon. The horizon line for the observers passed above the polygon at an altitude more than 12000 meters, so the whole trajectory of the bomb motion and the related light phenomena happened to be "under horizon ". This circumstance has appeared to be very important and interesting, since this is an evidence of possible development in the atmosphere, under certain conditions (though it is a very rare case), of the super refraction effects.

It should be added, that the fault in the operation of the command post equipment had nothing to do with the observed phenomena, it just completely accidentally coincided in time. However, just this time coincidence was the main reason for an urgent investigation of the event.

The next episode covers a number of emergencies (in 1984-1987) with the airplanes located on air stations of Borisoglebsk air unit (Voronezh region). The characteristic feature of many the emergencies was the presence in the zones of emergency flights

of an unknown object shown by the radar stations and visually observed by some of the pilots from their cabins. The chief of Borisoglebsk military flight school, which suffered most of all from the emergencies, personally asked for the experts familiar with the problem of "UFO" to be included into the commissions on the investigation of the emergency reasons. So far, there is no consensus as to the role played in these emergencies by the mysterious objects observed in the zone of flight, and we shall interpret these events as unidentified.

We have reported only two most important reasons for the "UFO" occurrences: the flights of the balloons at high altitude and the launches of the rockets. Actually, these effects explain only the major part of the observed phenomena (more than 90 %). There is no doubt, that the offered models are is not the only possible ones, and we are far from the intention to put a sign of equality between the scheme of the development of the majority of the observed strange phenomena and all possible mechanisms. To make the picture complete one needs diversified hypotheses, and their variety should correlate with the variety of the observed phenomena.

The results of the carried out research have shown that the major part of the phenomena perceived by the eyewitnesses as something anomalous, have a real explanation. These phenomena are associated mainly either with the technical activity of the mankind widely developed during the recent decade, or with rare forms of natural phenomena. During the work on the program a large amount of data on the "UFO" has been collected and analyzed, the physical models have been developed for various phenomena.

To our mind, not just the identification of a greater part of the observed phenomena and even not the development of their physical models are the most important results of the research, though the extremely interesting results have been obtained. The most surprising is the fact that, in contrast to numerous descriptions of various kinds of contacts with the aliens, assembled by the ufologists, there has not been obtained, within the framework of the project which involved the great observational potential of the army and civil organizations, the following:

- * Any message about landing of the "UFO";
- * Any message about the contacts with the pilots of "UFO";
- * Any message about the abductions of the individuals by the "UFO".

Either this means that the territory of the USSR was, due to any reasons, "closed" for alien visitations during, at least, 13 years, or that the hypothesis of an extraterrestrial origin of "UFO" is inconsistent. Any serious investigator of the problems of UFO "should, at least, face this reality.

In the last years, many publications on the UFO problem repeatedly mentioned "KGB secret files", the "classified capture of UFO", etc. Presently there are many video films concerning this material. When one familiarizes with such material, there is nothing left as to make a helpless gesture: one can hardly imagine a greater absurdity. There is a good proverb in the English language. "Somebody is fooling somebody all right" and this illustrates well the relations between the authors and their readers.

The attitude to the problem of "UFO" can vary from the feverish tremor at the thought about possible contact with extraterrestrial civilization to the denial of the reality of observations. The outcome of the above work has shown that the truth, as often, is in the other place. Many people are the eyewitnesses of strange things, which cannot always be precisely identified with any natural or anthropogenic effect. However, this amount is very insignificant, and from this does not at all follow even a "hint" on probable interference of extraterrestrial forces into our life.

In conclusion, we give a citation from "R. Cowen, the investigator of "UFO". He speaks of possible results from the analysis of the messages from the eyewitnesses. "It is tempting to dismiss the charge made by UFO buffs that intelligence agencies have secret files on UFOs that they are reluctant to release. Most such material, when it is made available, contains no revelation on alien visitations. However, it undoubtedly does pay such agencies to sift through UFO reports for any light they can shed on Soviet space secrets. To the extent that this process involves classified techniques, intelligence agencies probably and properly are withholding UFO information.... Once again, a hardheaded UFO study has shown that this seemingly goofy subject

deserves serious reason of research. UFOs are as real and significant, as the secret space shots and other genuine mysteries that underlie reliable sightings".

In conclusion, the authors would like to express their gratitude to all the observers of the paranormal phenomena who stimulated the execution of the research program. We would also like to note the large personal role in organization of researches and scientific management of project academician V.V. Migulin, and General V.P. Balashov. The very useful and active work was made by Prof. N.V. Vetchinkin, PhDs S.A. Chernous, A.A. Plaksin, A.A. Abdulin and V.V. Rubtsov and the others collaborators. Unfortunately, we have not a possibility to number all them. We are also grateful to our foreign colleagues for stimulating and helpful contacts.