HISTORY OF METEOR RESEARCH IN ODESSA

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ABSTRACT. The short history of the development of meteor investigation was examind in Odessa Astronomical observatory.

Key words: history of meteor investigation.

As wrote well-known meteor researcher I.S.Astapovich, progress of meteor astronomy in Russia in XIX century "passed in an atmosphere of Bredihin works".

Thirteen-years old boy Fjodor Bredihin turn out in Odessa in 1845. He come from Kherson province Thesalonihi country-seat for study in "noble boarding-school" at Risheliev's college. This college, founded in 1817, have had an astronomical observatory, that was used in study purposes. When he get a general education, F.A.Bredihin become a college student in 1849. In 1851 he join the Moscow university, but don't break connections with Odessa in the future. In 1897 Bredihin lived in Odessa more than a year. He recommend A.K.Kononovich on director post of Odessa astronomical observatory at the university. Bredihin assist to foundation in Odessa the branch of Pulkovo's observatory. In that time meteor research works was made by Moscow, Kiev and Odessa observatory collaborations under the guidance and the task of F.A.Bredihin. In Odessa, in particular, Perceus meteor stream observations was made by A.R.Orbinski, A.S.Vasiliev, N.D.Tzvetinovich. In 1895 results of observations was published in Izvestiya of Academy of science.

Side by side with observations in Odessa observatory, since it foundation they keep the theoretical works of celestial-mechanic nature. There was studies of orbits, indignations at small Solar system bodies motion and it interconnection.

Since Russian world-knowledge amateur society (RWAS) foundation in 1914, meteor observation was made by amateurs, that in future become specialists and scientists in different parts of science. In Odessa, in 1-st Public observatory (former L.Kefaly private observatory, Sadovaya str.4) on the roof playground meteors was observed by both Odessa citizens - Z.N.Aksentjeva (USSR Academy of Sciences academician in future), N.A.Kurnosova, N.D.Kolomietz and visitors from Petrograd: N.N.Thytinskaya, O.V.Petropavlovskaya and other. In 1925 they discovered the Kassiopeid stream. In 1924 future "fire constructor" academician V.P.Glushko with assistant in night from 3 to 4 January marked 400 meteors from Kvadrantid stream. At that time V.P.Glushko was the chairman of the observation group of RWAS Odessa branch. Science leaders of the observation group was university students V.A.Maltzev (well-known meteorists in future) and G.A.Gamov ("hot universe" author in future). But soon they go to Petrograd because the university was closed.

Odessa university was reopened in 1934. To director post was invite F.A.Bredihin's disciple, USSR's Academy of Science member professor K.D.Pokrovski. K.D.Pokrovski Scientific work was the extension and continuation of F.A.Bredihin works. Meteor research and meteor stream connection with parental comets K.D.Pokrovski made the main in observatory work.

Science development in former Soviet Union proceeded in direct dependence from given financial means and under the conditions of unprecedented secretness and isolation from outward world. In connection with successful start of first artificial satellites there was given means to International Geophysical year (IGY) in 1957-1958. Scientific problems was formulated by member of government V.V.Fedynski, chairman of comet and meteor commission at USSR Academy of Science Astronomy council.

At that time, observatory worker E.N.Kramer, who begin meteor observations in the group under K.D.Pokrovski head in 1940, incarnate an idea of variable section obturator, that need for meteor heliocentered orbit calculations. This idea was developed by prof. V.P.Tsessevich, director of observatory. Model of device was made by E.N.Kramer and mechanician I.O.Timchenco. According to IGY program, there was built the corresponding stations in Majaki and Kryzanovka villages and in Botanical garden, equipped by meteor patrol, made on KINAP plant. During the IGY and International Quiet Sun year (IQSY) Odessa observatory becomes the main institution and E.N.Kramer - head of meteor department. Army radars were given for carry out meteor observations. This observations was soon break, but photographic observations was continued until 1991.

Observed data was worked up by department workers - R.B.Teplitzkaya, A.K.Markina, V.A.Vorobjova, N.N.Izraetskaya, O.A.Rudenko, E.P.Shirjaeva,

G.V.Danilenko-Roshina, V.I.Musij and others.

Result of research works was published by E.N.Kramer co-author with collaborations. In common with A.K.Markina was published data of meteor orbit elements, which was photographed in 1950- 1972. With Markina there was carried out the meteor flash statistics. With V.A.Vorobjova was made a research of meteor breaking in atmosphere. Most fruitful was cooperation between E.N.Kramer and I.S.Shestaka. They made the research of photographic meteors height statistic, bolid after-shining, and have print co-author monographs.

Because of system errors, which author mentioned in 60-s, meteor method of nondirect atmosphere parameters measuring have not give the expected results. That is why the research become to classical celestial-mechanic problem. Doctor degree thesis, which was defended in 1993 by I.S.Shestaka named "Origin, evolution and genetic ties of small bodies of Solar system and their combinations". In systematic sense, very useful was E.N.Kramer and I.S.Shestaka book "Photographic methods of meteor astronomy", published in 1989.

Follow the traditions of new obturator inventor, E.N.Kramer offered V.P.Orlov to realize small cut obturator construction for obtain meteor "instant exposure". This idea was shared with meteor photography observation manager P.B.Babadzhanov, who come to Odessa many times. In general, in result of photographic observations in Odessa and Dushanbe there was published some monographs and defended nearly 10 candidate and two doctor degree thesis. However, collaborator I.N.Kovshun, who was the first who defended the candidate degree thesis, get one vote less than it need to defense doctor degree thesis. There are exist references to the I.N.Kovshun works in scientific literature.

Unfortunately, in spite of spend means, bolid observation station network, that was create in 70's, didn't give the scientific results and was write off.

Note, that in 1960/61 study year in Odessa university, meteor astronomy lecture course was delivered by I.S.Astapovich. Specially for this course V.P.Tsessevich translates in Russian the E.Öpic's book "Physics of meteor flight in atmosphere".

Author of this essay, worked in 60-s in observatory, got near 20 meteor spectrums and worked up it with special laboratory created equipment. The works were made under I.S.Astapovich and V.P.Tsessevich head and was generalized in monography "Spectrums of short atmospheric light phenomena: meteors" (Fizmat literature, Moscow, 1994).

Going to the USA city of Portland, professor E.N.Kramer continues now to consult meteor department collaborations.

So, in spite of viewpoint collisions, the meteor science gets it progress in Odessa.

ECLIPSING STARS IN OPHIUCHUS

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ABSTRACT. In a previous contribution some amateur organizations have been described. Here is presented one example of the work performed. Possibilities of cooperation are discussed.

Key words: eclipsing variables, period of V 448 Oph cooperation of observers

In this poster is presented a work on stars in CMi, started 8 years ago. By now all eclipsing and most RR Lyr–type stars in that constellation have been observed, for many of them reliable forecasts can be calculated. Canis Minor is a winter constellation, a similar project for the summer was be started too. Ophiuchus