THE HISTORY OF ORLOV'S SESSIONS

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The Orlov's session in St. Petersburg is fifth such session [1]. The history of these meetings (Orlov's session or conference) began in 1980 the year of the century of the birth of Aleksander Orlov (1880–1954). The 100 anniversary of A. Orlov was mention at the Main Astronomical Observatory of the Ukrainian Academy of Sciences (Kiev) which was founded by A. Orlov in 1944.

The Orlov's conference obtained the international status. The decision was taken to hold such conferences once on six year (this is period of variation of the polar motion) in the cities which were connected with Orlov's scientific activities.

First Orlov's conference "The study of the Earth as a planet by methods of astronomy, geodesy and geophysics" took place on September 29 – October 3, 1980 in Kiev. In Kiev A. Orlov founded the Main Astronomical Observatory and was its Director in 1944–1948, 1951–1952.

The second Orlov conference took place in Poltava, September 29 – October 3, 1986. In Poltava A. Orlov founder the Poltava Gravimetria Observatory in 1926 and he was its director in 1926–1934, 1938–1944.

The 3rd Orlov's conference was held in Odessa (September 7–12, 1992). At the Odessa Astronomical Observatory A. Orlov worked in 1912–1924, and he was its director from 1912. A. Orlov was a professor of the Novorossiisk University in Odessa.

The 4th Orlov's conference was held in Paris as Orlov's session of JOURNEES–98. In Paris A. Orlov worked on probation in Sorbonne and College de France in 1903–1904.

The 5th Orlov's conference also as session is held in St.Petersburg. In St.Petersburg A. Orlov entered the physical and mathematical faculty of the St.Petersburg University in 1898 and he graduated it in 1902. In 1903–1905 A. Orlov send abroad to prepare for professorship. In 1905 he published the first scientific paper "On the determination of correlations to the elements of planetary and cometary orbits". In 1907–1908 A. Orlov worked at the Pulkovo Astronomical Observatory – he observed with zenith-telescope. These observations of latitude variations and their analysis by A. Orlov were very precise for that time. This work put start his research of the polar motion.

In 1915 Orlov defended his Doctor Thesis "Results of the Yur'ev, Tomsk and Potsdam Observations of Luni-Solar Deformations of the Earth" in the St.Petersburg University.

Then main theme of Orlov's wide investigations became the polar motion and analysis the latitude variations. Especially attentions Orlov spared to analysis latitude variations in Pulkovo, which were distinguished by high accuracy.

As mark E. P. Fedorov disciple of Orlov's cause that practically all Orlov's works are noted for novelty and original treatment of astronomical, seismological and geophysical problems topical at that time. They provoked lively discussions and above all they stimulated new theoretical and

experimental investigations including creation of new stations for the observations of latitude variations and terrestrial tides. The ideas proposed by Orlov were further elaborated by his pupils N. Stoyko, J. Vitkovsky, Z. Aksent'eva, N. Popov, E. Fedorov, et al. A. Orlov was founder Ukrainian geodynamics school [2].

E. Fedorov wrote in 1980:

"At the end of the last century a new stage in the study of the Earth began – the planet is regarded as a complex dynamical system that responds to external as well as internal actions. It has became apparent that the observed latitude variations and tidel deformations of the Earth offer a means of determining general mechanical properties of our planet and testing internal structure models. A. Orlov was among those scientists who were the first to realize this possibility".

A. Orlov was founder the Soviet Latitude Service. In 1932 A. Orlov proposed the organization of the Soviet latitude service and also the project of International Latitude Service on parallel $49°36'$. Last project called for the organization of two stations in Blagoveshchensk (USSR) and Winnipeg (Canada) on the Poltava parallel.

In 1941 A. Orlov went to the Far East to organize the Far-East latitude station. Subsequently the Blagoveshchensk Latitude Station organized by his son Boris A. Orlov (1906–1963).

Owing to Orlov's idea the Borovitc latitude station was built in Poland on the parallel of Irkutsk latitude station.

Some methods of study of the polar motion have Orlovs name: method of determination of the mean latitude and method determination the mean pole epoch. By Orlov method were determined the polar coordinates from 1846 to 1969. A. Orlov suggested the original method of the determination of the polar motion from the latitude variations only on one observatory.

The definition for the mean latitude given by A. Orlov was widely discussed and several expression (filters) were proposed for the calculation of the mean latitude. The Orlov's methods widely used in the work of the Soviet Latitude Service (1952–1961) and BIH (1968–1988).

As noted E. Fedorov, A. Orlov in 1953 wrote that the study polar motion over 15–20 years was improved and will have more perfect direction that at present.

In 1958 the book "Latitude Service" by A. Orlov and in 1961 "Selected Works of A. Orlov" in 3 volumes were published.

Lunar crater and asteroid 2627 have name A. Orlov.

In Main Astronomical Observatory of National Academy of Sciences the ideas by Orlov are further elaborated by the pupils his scientific school in the department of Space Geodynamics which was founded by Yaroslav Yatskiv. New methods for the determination of the parameters of Earth rotation (laser ranging, VLBI observations, radio observations of the navigation satellites GPS, GLONASS, etc.) and their analysis were elaborated. Programme complex KIEV-GEODYNAMIKA and STEELBREEZ were created and Department became one of the centres in the International Earth Rotation Service. The satellite ranging station in Kiev was modernized and the work is in progress on creating a fundamental network of stations for observations of the navigation satellites GPS and GLONASS. The investigations of the Department are concerned with a wide range of fundamental and applied problems in astrometry and global geodynamics from the theory of the Earth rotation to the creation of coordinate systems for the Earth and space.

REFERENCES

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