Geodesy section of the National Geophysical Committee of the Russian Academy of Sciences as a component of geodetic infrastructure

(Advisory)

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Brief history

The National Geophysical Committee of the Russian Academy of Sciences (RAS) was founded in 1954 for coordination of common efforts of international organisations to realize of the International Geophysical Year (IGY) announced to 1954. Corresponding organisations were created in other countries too. Committee formed the following sections: planetary geophysics, geomagnetism, polar lights, solar activity, cosmic rays, ionosphere, meteors, oceanology, glaciology, seismology, rockets and artificial Earth's satellites, latitudes and longitudes, gravimetry. The last sections were later transformed into the geodesy section. It occurred in 1971 during the XVth General Assembly of the International Union of Geodesy and Geophysics in Moscow (IUGG).

Chairmen of Geodesy Section

Soviet period

Professor, correspondent member of RAS Youri Boulanger. He was a leader of Russian gravimetry and recognised researcher all over the world. He was a President of the IAG during 1971-1975.

Post-Soviet period

Professor Mikhail Prilepin fellow of IAG 1991-1994. Famous researcher in the fields of radio-electronic measurements and geodetic geodynamics

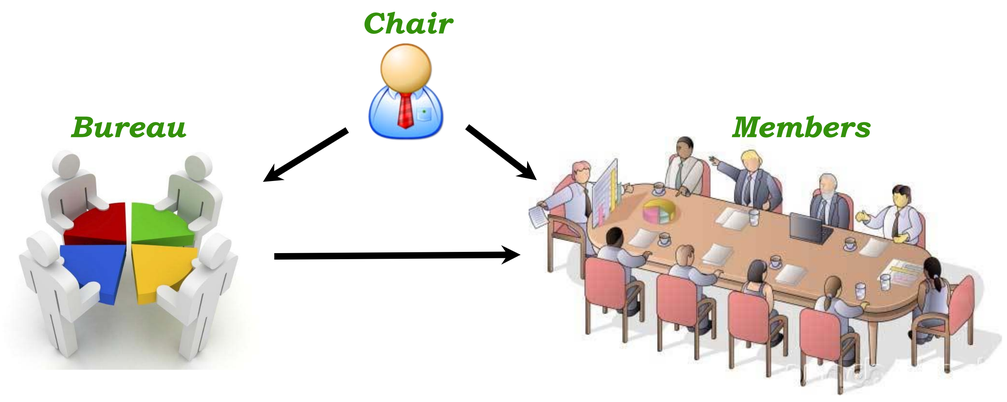
Nowadays

Professor, correspondent member of RAS Victor Savinykh. IAG National Delegate. Main activity in aerospace survey, remote sensing, geoinformatics.

General goals of the section

- To establish collaborative links with the International Association of Geodesy of the International Union of Geodesy and Geophysics, and other scientific and professional organisations
- International cooperation
- To take part in international projects
- Development of uniform approaches and standards at implementation for the international projects
- Geodesy promotion
- Informing the international society about the current state of geodesy in Russia
- Stimulate efforts to develop unit regional reference frame

Section structure



Members of Geodesy Section

Today there are fellows of IAG, chairmen and members of IAG commissions and sub-commissions between members of Geodesy Section of NGK RAS. Now it consists of 38 scientists from 17 institutes and organisations.

It is fitting to pay tribute to some leaders of the past here.

Institutes of Geodesy Section members

All Russian Research Institute of Metrology named after D.I.Mendeleev, St-Petersburg

Central Astronomical Observatory of RAS at Pulkovo, St-Petersburg

Central Research Institute of Geodesy, Aerial Survey and Cartography named after F.N.Krasovsky, Moscow

Designing, Surveying and Research Institute "Hydroproject" named after S.Y.Zhuk, Moscow

Far Eastern Federal University, Vladivostok

Geophysical center of RAS, Moscow

Institute of Applied Astronomy RAS, St-Petersburg

Institute of Astronomy of RAS , Moscow

Institute of Applied Mathematics of the Far Eastern Branch of Russian Academy of Sciences, Vladivostok

Moscow State University of Geodesy and Cartography, Moscow

Schmidt Institute of Physics of the Earth RAS, Moscow

Scientific Research Institute of Aero-Space Monitoring

Siberian State Geodetic Academy, Novosibirsk

Stainberg State Astronomical Institute, Moscow

State University of Land Use Planning, Moscow

Research and Production Center of Geological & Geophysical and Ecological-Geodynamical Research of Oil and Gas Fields, Atirau, Kazakhstan

Prof. Yu. Mescheriakov was the first president of the IAG Recent Crustal Movement Comission.

Prof. A. Izotov is a creator of the first Soviet reference ellipsoid in co-authors with F.Krasovsky.

Prof. L. Pellinen had developed the first Soviet global reference system.

Dr. M. Yurkina is the author of the theory of heights in the Earth's gravity field.

General directions of scientific research coordinated by Geodesy Section

Common and organization tasks of geodesy development in Russia

Theoretical Geodesy

Physical Geodesy

Space geodesy

State coordinate system realization, geodetic data, parameters and constants

Study and reduce of geodetic error sources

Study of Earth's gravity field

- Instrumental gravimetry
- Gravity reference frames
- Geophysical interpretation of gravity observation

Main terrestrial and marine geodetic works

Geodetic methods of geodynamics

- Global geodynamical phenomena
- Resent crustal movement
- Study of the Earth's interior and processes using geodetic and gravimetric data

Topographic survey

Aerial phototopography

Topographical and special maps

Selenodesy, planetodesy, Moon and planet mapping

Applied geodesy

Geodesy usage in search and exploiting of mineral deposits

Mathematical treatment of geodetic measurements

- Error theory, least square method, statistics in geodesy
- Adjustment of geodetic networks
- Programming, means and methods of data archiving and transferring

Geodetic instruments and its examination

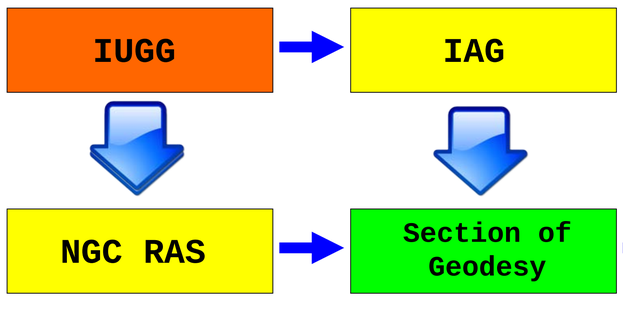
Major actions in the past:

Carrying out IUGG International Assembly at 1971. The Fifteenth General Assembly of the International Union of Geodesy and Geophysics was held in Moscow, USSR, August 2–14, 1971.

http://seismos-u.ifz.ru/1966-next.htm

National and international scientific meeting Organisation (VII CRCM Symposium, Tallinn, 1986)

Communication and cooperation



Internet site as the information tool (http://geodesy-ngc.gcras.ru/en/)