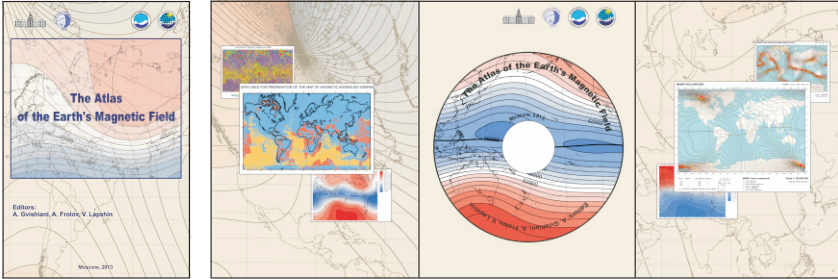


- The Atlas of the Earth's Magnetic Field (ISBN 978-5-904509-13-2);



- Innovative lectures based on spherical displays and GIS technology for research, education and enlightenment.



The All-Russia Science Festival 2013.  
A. Odintsova, A. Rybkina,  
A. Shibayeva, O. Pyatygina



### Our Partners:

The universities and research institutes of Russia, Austria, Germany, France, USA, Ukraine, such as: the International Institute for Applied Systems Analysis (Austria), the Paris Institute of Physics of the Earth, large manufacturing domestic and foreign companies: Schlumberger Inc., Microsoft Corporation, "Mekhanobr-Tekhnika", "Mondi Syktyvkar" etc.

### GC RAS participates in:

The programs of the Ministry of Education and Science of the Russian Federation, the Federal Service for Hydrometeorology and Environmental Monitoring, the State Corporation for Atomic Energy "Rosatom", the Presidium and Earth Sciences Department of RAS.

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*On the cover the functioning INTERMAGNET observatories and observatories under construction for the year 2015 on the territory of the Russian Federation are marked.*



## Geophysical Center of the Russian Academy of Sciences

**since 1954**

<http://gcras.ru>







**Alexey Gvishiani**

Director of the Geophysical Center of RAS (GC RAS),  
Doctor of Sciences (Physics and Mathematics),  
Academician, Professor

**The Geophysical Center today:**

Highly qualified and young team of scientists of international class: two members of the Russian Academy of Sciences, 12 Doctors of Sciences and 16 Candidates of Sciences (PhD). More than one third of employees is younger than 35. The Center has at its disposal a high-speed Internet access node (2 Gbit/Sec), two powerful multiprocessor computer clusters, professional videoconferencing system, digital demonstration complex with a spherical display, equipment for studying the geodynamics of the Earth's crust, mobile complex for carrying out magnetic survey in low and high latitudes, magnetic observatories, original software products protected by copyright.

GC RAS participates in the technological platform "Technologies of Ecological Development", coordinated by the Russian Geographical Society. GC RAS is the constant participant of the All-Russia Science Festival.



Team of GC RAS

**GC RAS structure includes:**



Geomagnetic survey on the Yamal Peninsula. A. Soloviev, R. Sidorov

- Laboratory of Geophysical Data Storage and Dissemination Technologies, including WDCs for Solar-Terrestrial Physics and Solid Earth Physics, regular members of World Data System of the International Council for Science. The laboratory regularly publishes electronic edition "Herald of the Department of Earth Sciences RAS" and "Russian Journal of Earth Sciences";
- Laboratory of Geoinformatics and Geomagnetic Studies and the Inter-regional Geomagnetic Data Center of the Russian-Ukrainian INTERMAGNET segment. Geomagnetic data is transmitted from observatories and stations located in Russia and Ukraine;
- Laboratory of Geodynamics includes a geodynamic polygon in the vicinity of the nuclear facilities of the Krasnoyarsky Krai;
- Sector of Innovation Projects develops innovative technologies in the area of geographic information visualization and organizes international conferences and workshops on GC RAS research;
- Joint Scientific-Educational Center "Geophysical Processes and Geoinformatics" of GC RAS and the Moscow State University of Geodesy and Cartography;
- Joint Scientific-Educational Center "Geodynamics and Geocology of Mineral Resources: Modeling, Prediction and Monitoring" of GC RAS and the National University of Science and Technology "MISIS";
- Branch of the RAS Library for Natural Sciences.



Video stand of the Geomagnetic Data Center. A. Soloviev, A. Rybkina, A. Odintsova

**Main Activities:**

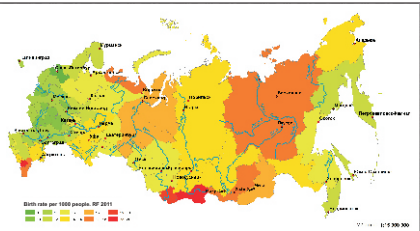
- Fundamental research in geophysics and geoinformatics, artificial intelligence methods, system analysis, intellectual geoinformation systems and their geological/geophysical and medical/ecological applications;
- Carrying out field-based geophysical surveys, including magnetic and geodetic surveys;
- Study of the Earth's magnetic field, deployment of the Russian system of magnetic observatories of the highest international quality standards;
- Study of modern crustal movements and simulation of the stress-strain state for the purposes of geoecology, geodynamics and natural risk assessment;
- Creation of new methods of geophysical data and knowledge visualization on the basis of spherical displays and development of advanced learning technologies;
- Development of new methods of electronic publications.

**Our Products:**

- Medical/ecological GIS for assessment and prediction of medical and ecological conditions of territories of the Russian Federation;



Mortality per 1000 people. RF 2011



Birth rate per 1000 people. RF 2011

- Intellectual and analytical GIS for a comprehensive analysis of multi-purpose geo-referenced information for the territory of the Russian Federation (<http://gis.gcras.ru>);
- Monitoring technology of modern crustal movements on the basis of GPS / GLONASS satellite systems at nuclear facilities (FSUE "Radon"; Kalinin, Novovoronezh, Rostov NPPs; FSUE "GHK" etc.);