

**International Workshop “Artificial Intelligence in the Earth’s Magnetic Field Study.  
INTERMAGNET Russian Segment”,  
26-28 January 2011,  
Uglich, Yaroslavl region, Russia**

Geomagnetic field study is one of the fundamental problems of geophysics. The Earth’s magnetic field is the most important source of information about the inner structure of the Earth and its evolutionary processes. The most accurate and rapid data on the geomagnetic field are provided by INTERMAGNET (International Real-time Magnetic Observatory Network), which has been operating now for more than 20 years (<http://www.intermagnet.org/>). The main objectives of the network, which consists of more than 110 observatories all over the world, are observations, acquisition, accumulation, storage, dissemination, analysis and correction of magnetograms with minimum time delay. Huge volumes of recorded geomagnetic data lead to the necessity of fundamentally new methods of processing it. Such methods include pattern recognition and geoinformatics.

The international Workshop “Artificial Intelligence in the Earth’s Magnetic Field Study. INTERMAGNET Russian Segment” was co-organized by EDNES on 26-28 January 2011 in Uglich, Yaroslavl region, Russia. The main goal of the Workshop was to exchange knowledge and experience in the application of modern geomagnetic instruments, deployment of magnetic observatories as well as technical/scientific processing of magnetograms. The specific objective was to discuss plans for further INTERMAGNET development in Russia.

The Workshop brought together leading scientists and specialists in geomagnetism and magnetic observations from Canada, France, Germany, Hungary, Russia, USA and Ukraine. Expert magnetologists expressed their opinions regarding deployment of future geomagnetic observatories in Russia. Manufacturers and suppliers of geomagnetic and modern computer equipment took part in the exhibition organized within the framework of the Workshop. At the Workshop there was a meeting of the institutions of the Russian Academy of Sciences (RAS) overseeing the work of the Russian observatories of INTERMAGNET standard. On the underpinning of several institutions, the installation of new INTERMAGNET observatories was planned. As a result of this meeting the following important steps for cooperation in creating and developing the INTERMAGNET Russian Segment were taken:

1. An agreement for joint work on the project of the INTERMAGNET Russian Segment deployment was concluded;

2. A decision to establish a Working group within the National Geophysical Committee of the Russian Federation for creation of the INTERMAGNET Russian Segment was taken;

3. An agreement to establish a national geomagnetic node, based at the Geophysical Center of RAS, for collecting and processing geomagnetic data from the INTERMAGNET Russian Segment with the perspective of becoming the Seventh INTERMAGNET GIN (Geomagnetic Information Node) was reached;

4. The deployment of an experimental training temporary INTERMAGNET observatory, based at the magnetic station “Moscow” of IZMIRAN (Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radio Propagation of RAS) in Troitsk, Moscow Region, was initiated;

5. Leading geomagnetism scientists formulated specific recommendations on the deployment of new INTERMAGNET observatories in Russia.

Detailed information on the Workshop and the results obtained are available on the Web-site <http://uglich2011.gcras.ru/>.



From left to right: Corr.-member of RAS Alexei Gvishiani, Director of Geophysical Center of RAS;  
Prof. Mioara Manda, IAGA Secretary General; Workshop audience

### **List of young scientists and women**

A. Soloviev (1979)  
R.Sidorov (1987)  
A. Grudnev (1979)  
R. Krasnoperov (1985)

### **Women**

Prof. Mioara Manda  
O.Pyatygina ( 1989)  
A. Shibaeva (1989)  
N.Titskaya (1988)