

Ionospheric observations in Russia during IHY

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The Sun-Earth Council of the Russian Academy of Sciences (RAS) headed by acad. G. Zherebtsov has developed the proposal of Russian participation in the International Heliophysical Year (IHY-2007). We present the part of the proposal related to the ionospheric observations in Russia during the IHY. A main body of Russian Research Institutes, including Institute of Solar-Terrestrial Physics (ISTP), Polar Geophysical Institute (PGI), Institute for Cosmophysical Research and Aeronomy (IKFIA), Arctic and Antarctic Research Institute (AARI), Institute for Dynamics of Geospheres (IDG), Radiophysical Research Institute (NIRFI), Institute of Terrestrial Magnetism, Ionosphere, and Radiowave Propagation (IZMIRAN), Institute for Cosmophysical Research and Radiowave Propagation (IKIR), Institute of Applied Geophysics (IAG), will take part in the IHY. They will be involved in the coordinated observations, with data from the incoherent scatter radar (ISR) at Irkutsk, the partial reflection radar at Kola peninsula, the scanning photometers and all-sky cameras, the satellite radio tomography system, the global GPS network, bi-static HF Doppler scatterers, the network of ionosondes for vertical and oblique sounding of the ionosphere, riometers, and geomagnetic field variations. The scientific focus during the IHY is the following: (i) the response of the polar, auroral, subauroral, and mid-latitude ionosphere at latitudes from 52 to 78 degrees N in the European and Asian sectors at longitudes from 30 to 170 degrees E on the events coming from the Sun; (ii) the dynamics of the large-scale ionospheric structures at high latitudes; (iii) the magnetosphere-ionosphere coupling; (iiii) ionospheric irregularities; (iiiii) the radio wave propagation in the ionosphere.