

Submission: T-2020-237-18

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Institution, organization or general address Polar Geophysical Institute, Murmansk
Theme -Theme 1: Design, Optimization and Implementation of the Observing System

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Poster title (brief) Infrastructure and research activity of Polar Geophysical Institute in Arctic

Abstract - text box

The Federal State Budget Scientific Organization "Polar Geophysical Institute" (PGI) was founded on 1960 in Murmansk to study physical processes in the high latitude region. Scientific and applied activity of the PGI includes the development and transfer to users of technical innovations for high-latitude geo- and radio-physical observations, monitoring of geomagnetic variations over a wide frequency range, regular observations of aurora, monitoring of cosmic rays, monitoring of the Arctic atmosphere and other tasks in high-latitude physics, which is due to the location of the Institute. Research program of PGI includes: investigation of the actual problems of auroral optics and precision optical measurements in the high latitudes; investigation of modern problems of radiophysics and acoustics, including the basic aspects of radiophysical communication methods, radar and diagnostics, the study of nonlinear phenomena; investigation of modern problems of plasma physics, including the physics of astrophysical plasma (solar wind) and low-temperature (ionospheric) plasma; investigation of modern problems of nuclear physics, including astrophysical and cosmological aspects (physics of cosmic rays); the study of outer space, planets, the Sun and solar-terrestrial relationships.

Experimental infrastructure of PGI contains of 5 sites in Kola Peninsula in Russia (Lovozero observatory, Verhnetulomsky range, Loparskaia observatory, Tumanny range, Apatity range), Barentsburg observatory in Spitsbergen, additional observational points in over regions of Russia (Kem', Petrozavodsk, Rostov), <http://pgi.ru/kagin/eng/>.

The institute has wide international cooperation with infrastructure of Scandinavian institutes and with scientists from many countries (Finland, Norway, France, UK, USA, Japan, China, etc.), participate in ground-based support of many former and current space missions (CLUSTER, THEMIS, RBSP, ARASE, etc.)

The main applied research of PGI are aimed to study the influence of space weather factors to human infrastructure in Arctic (such as EUROGIC project); the active radiophysical experiments (EISCAT, Fenix); the influence of cosmic rays on climate in the Arctic.

PGI has been hosting the Annual Apatity Seminar "Physics of Auroral Phenomena" during more than 40 years. Mostly it is attended by Russian participants, but guests from other countries also come. About this conference: <http://pgia.ru/Seminar/> . About other conferences in PGI:

<http://pgia.ru/lang/en/conf> .

The poster presents the infrastructure and future plans of research activity of Polar Geophysical Institute in Arctic.