

Institute of Geophysics, Polish Academy of Sciences

Institute of Geophysics, Polish Academy of Sciences was established in 1952. At the beginning, the research carried out at the Institute was limited to selected problems from the field of seismology, physics of the Earth's interior, and geomagnetism, being gradually expanded to include other domains: physics of the atmosphere, ionosphere and magnetosphere, oceanology, planetary geodesy and hydrology. A remarkable increase of the scope of research was associated with the International Geophysical Year 1957/1958. Geophysical projects abroad were then incorporated; Polish polar stations and equatorial stations in Vietnam were established. The Institute has been strongly engaged in geophysical observations, mainly seismological and geomagnetic, at a number of stations and observatories. The main experimental unit is the Central Geophysical Observatory at Belsk, though seismology is not present there – instead there exists the Main Maurycy Pius Rudzki Observatory at Ojców that is devoted exclusively to seismology. The Institute gained also a leading position in mining seismology. Another, equally important domain of activity of the Institute was the extensive theoretical research, notably in the field of earthquake physics. The results, published in leading geophysical journals and comprehensive monographs, gained international acknowledgement. In 1973-1978 some departments separated from the Institute to form the Institute of Oceanology and the main part of the Space Research Center of the Polish Academy of Sciences.

Institute conducts research in the following main areas: study of deep structures of the Earth's crust and upper mantle by means of deep seismic soundings; research on mining-induced seismicity, local earthquakes and seismic hazards; study of deep basement and the search for earthquake precursors using natural variations of the Earth magnetic field; paleomagnetism and study of magnetic properties of rocks; geophysical models and analysis of physical laws governing processes in tectonically active areas; geophysical investigations in polar regions; analysis of transformations of water resources induced by anthropogenic factors, water flows and reservoirs, rational control of water systems; study of ozone, atmospheric electricity, solar radiation and mezo - and macro-scale processes in the atmosphere; construction of original instruments for the needs of seismology and geomagnetism. Authorized to confer the academic degrees of doctor and doctor habilitatus of Earth and physical sciences in geophysics.

Institute of Geophysics is an Institute of the Polish Academy of Sciences, belonging to the Academy's Department 7 – Earth Sciences. The Institute is funded mainly from the state budget, namely by the Ministry of Scientific Research and Information Technology. Expertise and services to third parties are another source of financing, however they are of marginal size.

The Institute is divided into several departments and autonomous laboratories. The whole Institute staff numbers about 160. The Department of Seismology numbers 27 people. 3 people datacenter staff, 4 people bulletin section, 1 senior scientist, 9 observatory staff (in observatories outside the Institute) and 4 part-time caretakers at automatic stations. The remaining 5 staff is scientific personnel not dealing with the issues of the seismological network, entrusted with research topics such as mining seismicity or crust and mantle structure.

The seismological network consists of 8 stations of which 5 form a backbone of the network. SUW, KWP, WAR, GKP, KSP stations are centrally recorded and centrally processed at the Institute's data center. The first two stations of these have modem dialup connections enacted every hour, the latter three are on line.

The sixth station OJC is the Main Maurycy Pius Rudzki Observatory and performs on-site observations of its own. OJC data is transmitted on line to the Warsaw datacenter but not analyzed there.

The seventh station RAC records and processes data on site. The station has a permanent internet connection but equipment is not broadband as at the former 6 stations, therefore data is processed separately. If necessary, RAC digital data is available by internet on demand, otherwise it flows in on CDs recorded at the station.

The eight station NIE is a short period station without data connection. Its data is being processed offline and observatory OJC possessing sufficient staff has been charged with this task.

Data of the Institute of Geophysics is public available if it has been obtained from normal Institute's funds. This applies to seismological and magnetic observatory data, although automatic data request manager tools are rather an exception than a rule. The free data distribution policy does not apply to data obtained from special projects such as e.g. the Deep Seismic Sounding Celebration-2000 profile that was funded from national and international and partially commercial sources. It also does not apply to the data of the Department of Polar Research, which is being run off a special governmental project which is separate from the Institute's statute funding.

Seismic station list:

Code	Lat (N)	Lon (E)	Elev	Seism.	Digitizer	Smp frq	Connect	slink	format
SUW	54.0125	23.1808	152 m	STS-2	Quant.	20	modem	yes	mseed
KWP	49.6314	22.7075	448 m	STS-2	Quant.	20	modem	yes	mseed
WAR	52.2417	21.0236	110 m	STS-2	MK6	20	internet	yes	mseed
GKP	53.2697	17.2367	115 m	STS-2	MK6	20/100	internet	yes	mseed
KSP	50.8428	16.2931	353 m	STS-2	MK6	20/100	internet	yes	mseed
OJC	50.2196	19.7984	391 m	STS-2	MK6	20/100	internet	yes*)	mseed
RAC	50.0833	18.1942	209 m	Kirnos	MK5	20/100	internet	no	mseed
NIE**)	49.4189	20.3131	649 m	SM-3	MK6	20/100	flash mem	no	mseed

*) data manually added to NAS resources are not seedlink data.

***) Modernization of NIE effective September, 2005, MK5 station and mss format prior to that.

Map of stations:

