

Sorokin talked about research methodology. First and foremost, there are highly precise aeromagnetic surveys which involve measuring the earth's magnetic field from aircraft. The scale of this work is extraordinary: five kilometers to one centimeter. The airplane which carries the measuring equipment makes repeated 5-kilometer tacks, (eventually) covering a huge area of 50,000 square kilometers. "We observe the earth's magnetic forces under a microscope," Sorokin jokes. A second method, the principal and most reliable one, is depth sounding. The wave from a seismic pulse penetrates into the earth's interior and is refracted at the boundaries between geologic strata. Finally, a third method is gravimetry, which is used to study the gravitational force field with great accuracy.

"We have a solid arsenal of techniques," says Mikhail Yurevich. "Various physical characteristics reveal geologic anomalies. The techniques complement each other and the whole set of them yields very reliable results."

All of this work on the drifting ice is part of the program of the Polar Expedition of the famous Leningrad scientific production association "Sevmorgeologiya", or "Sevmorgeo" for short.

A short digression. Starting with the SP-1 or, more accurately, starting from the Chelyuskinites' camp in the Chukchi Sea, Soviet people have learned to live and work on drifting ice. Since that time we have accumulated an enormous amount of experience doing productive work on the ice. Modern technology makes it possible to determine the location of an observer with great precision, whether he is on the land or in the air. We do not need theodolites, chronometers or astronomical almanacs. Satellites and devices an observer can hold in this hands solve this problem almost instantaneously. On the ice or in an aircraft, Sorokin's people can determine their coordinates with great accuracy.