Arctic permafrost dynamic under global climate change

Contact: kriozem@online.ru

Objectives. Evaluation of climate change impact on the permafrost thermal regime and development of cryogenic processes.

Brief rationale. Contemporary climate warming in the Arctic has started later and with minor intensity than in the subarctic regions. So it could be supposed that low temperature arctic permafrost in XXI century will prove to be comparatively stable. That means that extra expenditures for preventing intolerable deformations of constructions will not be needed.

Expected results. Forecast of expected changes in permafrost-climatic conditions and on this base the revealing of the cryolithozone dynamic and constructions’ stability.

Main Types of Research Activities. Ongoing observations on the permafrost stations with long term measurement series; analysis and systematization of monitoring data on arctic permafrost; estimating and forecasting the climate and permafrost dynamic.

Timing, Location and Resources of Field Work. During warm seasons 2007- 2008 the complex of regular observation is planned on the geocryological stations in Russia (Bolvansky cape, Marre-Sale, Tiksi, Chokurdah) and Alaska. The air transport and the measurement field equipment are needed.