

International Siberian Shelf Study (ISSS) Expedition 2020 was organized by Pacific Oceanological Institute (POI) FEBRAS, in collaboration with Institute of Oceanology (IO) RAS and Stockholm University (SU)



Sixty nine researchers (11 nations) from POI FEBRAS, IO RAS, Moscow State University, SkolTech, Moscow Institute of Physics and Technology, Institute of Applied Physics RAS, Tomsk Polytechnic University, Institute of Ecology/Higher School of Economics, GEOKHI RAS, Tomsk State University, Northern (Arctic) Federal University, Biotechnology/Institute of Microbiology RAS were joined onboard RV Academician M. Keldysh (40 days cruise AMK 82)



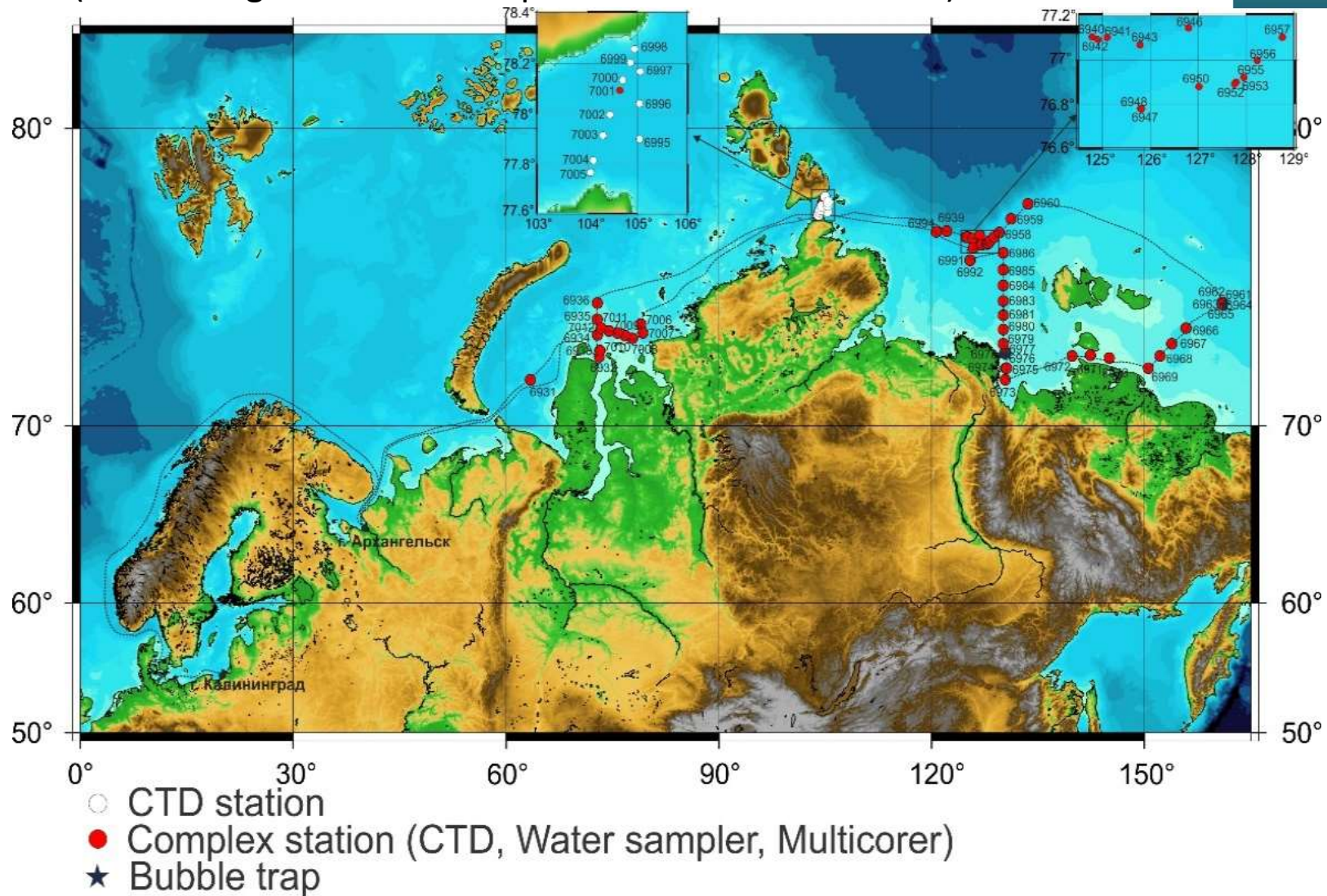
The International Siberian Shelf Study 2020 ISSS-2020 onboard r/v Akad. Keldysh





Overarching research goal:

to study and understand physical, biogeochemical, geophysical, and geological consequences of permafrost degradation in the Siberian Arctic land-shelf system (RT Archangelsk-Kara Sea-Laptev Sea-East Siberian Sea)





Accomplishment of AMK 82 cruise (26 September-4 November 2020)

- **5834** miles were steamed with continuous measurements of CH₄ and CO₂ concentrations in the air and surface water (more than 12,000,000 measurements validated vs NOAA gas standards);
- **82** complex oceanological stations;
- **6** geophysical micropolygons in the methane seepage areas;
- **96** multicorers and 6 sediment corers (up to 8.2 meters);
- **2** bottom seismic stations were recovered and 7 new installed;
- Three level microplastic sampling was done in the Kara, Laptev, and East Siberian seas;
- Gas bubbles were sampled near the bottom at three locations

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