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KALMAR – "Kurile-Kamchatka and Aleutian Marginal Sea-Island Arc Systems: Geodynamic and Climate Interaction in Space and Time" – A project presentation

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KALMAR is a bilateral project that started in 2006. The project concentrates on the oceanographic-climatic and the geodynamic-volcanic-magmatic evolution of the Kurile-Kamchatka-Aleutian Arc system. The different scientific approaches within the project are comprised in five closely coupled German-Russian subprojects.

Our aim is to investigate the complex geosystem of the climate-affecting system "Kurile-Kamchatka-Aleutian arc" with its adjacent marine parts in the NW Pacific and the Bering Sea. Investigations focus on recent marine geosciences, the interrelation of asthenosphere, lithosphere, hydrosphere, and atmosphere. In a broad, but integrative scientific approach research concentrates on the effects of the geodynamic and oceanographic processes on matter distribution and cycles, water mass formation and circulation, climate, and natural hazards.

In the framework of KALMAR the interrelation between terrestrial and marine climatic records is investigated. Marine and land expeditions are carried out with different scientific and technical focuses. The terrestrial quaternary climatic and environmental development is studied in Kamchatka lake deposits in the first phase of the project. The oceanographic climatic record is investigated in the second phase. The additional investigation of volcanic ash layers will help to understand the eruptive

histories of the volcanoes, the study of widely distributed ash layers will support the integration of marine and terrestrial records.

KALMAR is funded by the German Federal Ministry of Education and Research and the Russian Ministry of Education and Science. The project closely cooperates with Russian universities and research institutes.

<http://kalmar.ifm-geomar.de>