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Russian Arctic in the PEEX Observational System

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Pan-Eurasian EXperiment (PEEX; www.atm.helsinki.fi/peex) initiative is an international, multi-disciplinary, multi-scale programme focused on solving interlinked global challenges influencing societies in the regions of the Northern Eurasia and China. In particular, PEEX is aimed to establish an in-situ observation network covering environments from the Arctic coastal regions, tundra to boreal forests, from pristine to urban megacities. It is based on existing stations activities and establishing new stations. The first step taken towards a comprehensive observation network included an overview of measurement capacity of exiting stations.
Although more than 200 stations are presented in the PEEX regions of interest, but so far only about 60 Russian stations have metadata information available (peexdata.atm.helsinki.fi - under request). The station metadata enables to categorize stations in a systematic manner and to connect them to international observation networks, such as WMO-GAWP Program, China Ecosystem Network, and perform standardization of data formats. Moreover, PEEX published the stations catalogue introducing the measurements and contact information of the Russian stations - PEEX collaboration network (www.atm.helsinki.fi/peex/index.php/peex-russia-in-situ-stations-e-catalogue). The catalogue aim is to promote research collaboration and stations as partners of the collaboration network and to give wider visibility to the stations activities.
As INTAROS contribution, the updated metadata were obtained from 11 measurements stations located within the Russian Arctic territories. Metadata include basic information, physico-geographical and infrastructure description of the sites and details on atmosphere and ecosystem (soils–forest–lakes–urban–peatland–tundra) measurements. Measurements at these sites represent more local conditions of immediate surrounding environment and datasets are available under request. As a "show case" of the PEEX Observational System capabilities, the detailed analysis results for selected Russian station (Marre-Sale) is presented. These include inter-annual, month-to-month and diurnal cycle variabilities of meteorological and ecosystem parameters, which are underlying climatic and environmental changes observed in the Arctic regions of Russia.