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Atmospheric Pressure Changes in the Arctic from Historical Times to the Present

During the ACRE Workshop we would like to present the current state of our work on reconstructing a record of the atmospheric pressure in the Arctic during the early-instrumental period. As is well known, extant meteorological data for this period are very limited. The first meteorological stations in the Arctic were generally established in the second half of the 19th century and almost all of them were located in the coastal parts of Greenland. In order to get at least a rough idea of pressure conditions in the Arctic in the study period, data from different land and marine expeditions were collected. The state of our current database will be presented. For the preliminary data analysis, more than 80 pressure series of monthly means have been used. Although the area and time periods covered by the data are variable, it is still possible to describe the general character of the pressure conditions. However, with reference to the early-instrumental period as a whole, it is for the First International Polar Year 1882/1883 that we have both the best data quality and also the best coverage for the whole Arctic. Therefore, we plan to present in detail the results of our investigations for this period in particular.