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The first reliable Norwegian climatological time series

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Jens Esmark (1763 – 1839) was a Danish-Norwegian professor of mineralogy who contributed to many of the initial discoveries and conceptual analyses of glaciers, specifically the concept that glaciers had covered larger areas in the past.
Professor Jens Esmark started meteorological observations in 1816 at his home in Oslo. As a student at the Copenhagen University he befriended the Swedish instrument maker. He used barometers for measuring the heights of mountain tops, snow lines and vegetation zones in Norway, and his discovery of Ice Ages (published in 1824) is one of the most revolutionary advances made in Earth sciences.
From 1 January 1816 to 25 January 1839, Esmark at his house in Øvre Voldgate in the morning, early afternoon and late evening recorded air temperature with state-of-the-art thermometers. He also noted air pressure, cloud cover, precipitation and wind directions, and experimented with rain gauges and hygrometers.
Esmark's temperature observations (1816-1838) are tested for inhomogeneities. Three significant shifts were detected, but nevertheless the quality of Esmark's measurements seems to be better than for the other contemporary Norwegian time series. Professor Christopher Hansteen continued the observation after Esmark. Esmark's observations could be compared with the corrected ones of Hansteen

The presentation will take care of the quality of his time series from Oslo. It is also very interesting if the climate has changed since that period. 1816 was still in the period of Little Ice Age. Is it possible to see traces of it in the time series?
Several volcanic eruptions affected global climate in the first years of Esmark's period of observation, the Tambora eruption in Asia in 1815 being the largest in terms of sulfur mass ejected and general impact. It has given rise to the paradigm for 1816: "the year without a summer". Esmark's observations show, however, that the summer of 1816, though cold, was not extraordinarily cold in Oslo.
A homogeneous climatic time series shows variations in climate without being disturbed by other factors involved, like changes in the environment, observational procedures or instrument calibration.