



The early March 2016 Sudden Stratospheric Warming observed in data recorded by a ground-based high-latitude instrument cluster

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This data-based presentation shows tropospheric, stratospheric, mesospheric, and lower thermospheric observations related to the atmospheric dynamics and temperature before, during, and after the early March 2016 Sudden Stratospheric Warming (SSW). These observations are done by analyzing recordings at a Scandinavian cluster of high-latitude ground-based stations which comprises Doppler lidar (Andenes, Norway), meteor radar (Andenes, Norway; Kiruna, Sweden; Trondheim, Norway), infrasound (Bardufoss, Norway), and MST radar (Andenes, Norway; Kiruna, Sweden) instrumentation.

In addition, we display the related stratospheric winds and temperatures given by re-analysis products. These indicate the availability of stratospheric infrasound ducts as function of time and backazimuth direction between oceanic microbarom sources and the infrasound station - hence supporting the observation of the SSW in the infrasound data.

The stratospheric-related and the mesospheric-related observations all show clear indications of a rapid change in atmospheric dynamics around March 6, 2016.