



Strong geomagnetic storms and changes in the winter lower atmosphere

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Changes in tropospheric fields and the Polar Night Jet, occurring in association with strong geomagnetic storms ($A_p \geq 60$, $Dst \leq -100$ nT) in the winter periods (January-March) of years (1989-2002), were analyzed. It turned out that, after the geomagnetic storm onset, the decrease of atmospheric pressure in the surroundings of Greenland's southwest shore was observed. This decrease propagated eastwards in the following days. Consequently, the deepening of Island low and the strengthening of zonal flow over the North Atlantic was observed. If during a part of winter period multiple storm onset takes place, as in February 1992, the Polar Night Jet will strengthen, the deepening of Island low becomes stable for several days, and the pressure distribution will be typical for NAO+.