

ポーカークラットMFレーダにより観測された60km以下の低高度エコーの季節変動

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Seasonal variations of low altitude echoes below 60 km observed by Poker Flat MF radar

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A new MF radar at Poker Flat has been operated since 16 October 1999. We have already reported measuring winds below 60 km and sometimes down to 50 km. Lowest altitude echoe was observed at 45 km in altitude in the daytime on 20 November 1998. The electron density profiles are observed together with the wind profiles. So the electron density profiles and wind profiles below 60 km are measured during these lower altitude echoes. We are interested in the cause of these lower altitude echoes below 50 km. The auroral particle precipitations causes intensified echoes reached to 60 km in the night time. The relation between geomagnetic activity index Kp and lowest altitude of echoes in a day is not well correlated. One of the possible explanations for these low altitude echoes is turbulent irregularities in the heights at which gravity waves breaking occur. We have investigated seasonal variations of lowest altitude of echoes available in a day by using one year data.