

**E114-002**

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## High-frequency oscillations of the vertical ion speed in the lower ionosphere at high latitudes

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An important aspect of the coupled thermosphere-ionosphere system at high latitudes is to know vertical motions in the lower thermosphere/ionosphere. While much is already known about the average characteristics of the system in this field, the subject has not yet been adequately investigated, in particular, the high-frequency oscillations. The Incoherent-Scatter (IS) radar is the best diagnostic instrument to measure the vertical motion in the lower ionosphere. We made statistical analysis by using data of the vertical ion speed measured with the EISCAT (European Incoherent Scatter) radar fixed to look in the vertical direction. The paper will present statistical results regarding dependency of the vertical ion-speed variance on the oscillation frequency and its height profile. Simulation will be made to understand effects of the electric-field oscillation on the vertical ion speed.