SOME PECULIARITIES OF HIGH-LATITUDE IONOSPHERE DURING SPRING EQUINOX

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The complex of traditional ground observations methods (a vertical sounding ionosonde and magnetometers) situated near Murmansk (polar latitudes) was supplemented with measurements of total electron content (TEC) by means of navigational satellite signals. The measurements of satellite Doppler signals were carried out at spaced points which were located in the auroral and subauroral zones. Availability of two independent Doppler measurements gives an opportunity to obtain TEC values which can be used for investigation of ionospheric structures and their dynamics in conditions of disturbances. Use of ground data permitted to interpret structural variations of latitudinal profiles of vertical electron content, in particular, a phenomenon of creation and change of ionospheric troughs. For the quiet magnetic and ionospheric period we have latitudinal profiles of vertical electron content without sharp gradients, but the substorms give very structural profiles. It can see visually development of the main ionospheric trough and its peculiarity: a narrow trough of ionization which corresponds the phenomenon of Sub-Auroral Ion Drift. An east and a west electrojets give different influence on the structures development of the ionosphere during a substorm.