

Polar lower thermospheric wind dynamics based on EISCAT 8-day wind data obtained in November 2003.

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From November 11 to 19, 2003, the EISCAT UHF radar (so-called KST radar) and EISCAT Svalvard radar (ESR) were operated continuously with a Common Program two (CP2) mode which allows us to derive wind velocity vectors in the lower thermosphere (90-120 km). This campaign was made under collaborations of four countries such as Japan, Norway, Sweden and Germany. We conducted an EISCAT special program (SP) run for 66 hours with the KST radar and ESR followed by Common Program 2 to make 8-day window data set. Although the KST EISCAT radar has been under operation for about 20 years, this is the second 8-day long-run campaign followed by the 1999 July campaign. Aims of this campaign are as follows: (1) To investigate latitudinal variation of mean wind, and tidal winds. (2) To examine if quasi-2 day wave exists in the lower thermosphere in this time of year. (3) To investigate day-to-day variations of the semidiurnal wind amplitude. By using the data sets, we have derived mean winds as well as amplitudes and phase of quasi-2 day wave, diurnal tidal wind and semidiurnal tidal wind in Tromsø (69.6 degree N) and Longyearbyen (78.1 degree N). We will present the results and discuss latitudinal variations of mean and tidal winds.