



## **Analysis of mesopause wave activity using meteor radar wind and temperature measurements**

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Since August 2004 a meteor radar is operated at Collm Observatory (51.3°N, 13°E). This system measures mesopause region wind at 80-100 km and temperature at 90 km. The continues time series is analysed using a standard Fourier transform. In the analysis we especially focus on long period oscillations from 2-day to 16-day waves as well as tides. These spectra show the quasi 2-day wave during summer months. During winter, the spectra are dominated by a family of secondary waves around the diurnal tide. Cross-spectral analysis of meridional and zonal wind with temperature enables us to detect periods of the these secondary waves. The results indicate nonlinear coupling of the solar tides and long-period oscillations.