# [ATM-05] Mean winds and tidal variabilities in the mesopause region above King Sejong Station(62.1°S, 58.5°W), Antarctica

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The meteor radar at King Sejong Station have provided wind profiles in the mesopause region (80-100 km) since its installation in March 2007. Winds are determined from meteor trail evolution every hour from 80 to 100 km with 2 km height resolution. Monthly mean winds are mostly westward below 90 km during Austral summer months (November, December), while eastward winds appeared dominant between 80 and 100 km during winter (July, August), In addition to the mean wind fields, tidal variation, especially semi-diurnal tides are apparent in the measured wind profiles. A simple Fourier analysis of the measured winds shows various tidal components (diurnal, semidiurnal and others) and planetary waves that have period longer than a day. The monthly means of tidal parameters such as amplitudes and phases are obtained using a curve fitting method. We plan to investigate variation of tidal parameters with seasons that could be related to interaction between tides and gravity wave from lower atmosphere since the interaction might cause the variability of tidal amplitudes and energies. The obtained tidal characteristics over the KSS are expected to be very unique when compared with other Antarctic sites, because gravity waves in the lower atmosphere are very active near the Antarctic peninsula,