

TIMED Doppler Interferometer (TIDI) Neutral Wind Multi-Year Tidal Analysis and Comparison with TIMEGCM Results

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Mesosphere and lower thermosphere neutral wind data from the TIMED Doppler Interferometer (TIDI) were analyzed to study the tidal variations over four years (2002-2005). Migrating diurnal and semidiurnal tide amplitudes and phases are extracted from the TIDI data. We will examine the seasonal variations, latitudinal and altitudinal distribution of the tides. The TIDI observational results are compared with TIMEGCM run for the same time period. The model results allow us to examine the effectiveness of tidal retrieval method by comparing the true tidal parameters with that obtained from TIDI sampling points. The model results also allow us to study various forcing terms. The possible effects by gravity waves and QBO on tidal waves will be examined.