

極域超高層における大気潮汐波の振る舞い(14) - 比較解析 -

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Studies on the behavior of atmospheric tide in the polar upper atmosphere(14) -A comparative study-

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Our meteor radars in Svalbard and Tromso have been in continuous operation since March 2001 and November 2003, respectively, and have significantly contributed to elucidate the climatology of wind and waves at polar mesosphere and lower thermosphere regions. In this study, comprehensive analyses in terms of global scale or bipolar viewpoint by collaborating radars are essential in resolving planetary-scale waves and tides and also smaller-scale gravity waves. Comparison of wind fields observed by radars of the same or different echoing mechanisms in close proximity are also relevant to this study. Here the topics to be included are a direct comparison of wind values and its variance between neighboring Tromso and Kiruna meteor radars, a global comparison of tides on campaign basis for Canadian and Scandinavian regions by meteor and MF radars, a bipolar comparison with recent coordinated Antarctic radar network analysis, and possibly further comparisons of local wind field by Tromso MF and meteor radars in cellularized regions, by EISCAT and colocating SOUSY MST and meteor radars for PMSE period.

Below is shown the amplitude and phase of northward tidal wind component for the whole run of Tromso meteor radar. Coauthors of the present work are T. Aso, M. Tsutsumi, C. Hall and Y. Ogawa, N. Mitchell, J. Roettger, C. Meek.

