Geophysical Research Abstracts, Vol. 5, 07015, 2003
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THE STRATOSPHERIC QBO SIGNAL IN THE NCEP REANALYSIS, 1948-2001

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The spatiotemporal evolution of the zonal wind in the stratosphere is analyzed based on the use of the NCEP reanalysis dataset (1948-2001). MTM-SVD, a frequency-domain analysis method, is applied to isolate significant spatially-coherent variability with narrowband, oscillatory character. A quasibiennial oscillation is detected as the most intense coherent signal in the whole mid and high stratosphere, being the signal less intense in the lower levels, closer to the troposphere. There is a clear downward propagation of the signal with time over low latitudes, from 10 to 100 hPa, that is not evident over mid and high latitudes. A different behavior of the signal is detected over the Northern and the Southern Hemisphere. In the NH an anomaly in the zonal wind field, in phase with the equatorial signal, is detected to run around the whole hemisphere at 60ž, and two regions in subtropical latitudes show wind anomalies with their sing opposed to that of the equator. In the SH no signal is detected in extratropical areas.