Investigation of Westward Propagating Equatorial Waves

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Planetary wave propagation is being investigated using temperature profiles from FORMOSAT-3/COSMIC GPS RO data. During April to June 2008, in the altitude 28 - 39 km, westward propagating waves are observed in the equatorial atmosphere while the generally observed waves are eastward propagating Kelvin waves. The period of these westward waves are about 16 - 20 days and the phase speeds are about 1820 km/day at 28 km. The periods become shorter and the phase speeds become faster as the altitude increased. The periods are about 10 - 13 days and the phase speeds are about 2350 - 3080 km/day at 36 km. These interesting observations will be discussed with more details from a global perspective of the dynamics in the lower stratosphere.