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Planetary waves during a moderate geomagnetic storm

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Nightly averaged measurements of the ozone mixing ratio profile obtained from Troll station (72˚1'S, 2˚32'E) in Antarctica have been used to investigate the presence and vertical profile of the 2-day planetary wave in stratosphere and mesosphere (40 to 80 km) during a moderate geomagnetic storm in July 2009. Nightly averaged mesospheric temperature derived from the hydroxyl nightglow at Rothera station (67˚34'S, 68˚08'W) are used to extend the wave identification up to 87 km. The variations of planetary waves with the changes in ozone mixing ratio and temperature are discussed, and the phase and amplitude variation of the 2-day wave before, during and after the moderate geomagnetic storm will be presented.