

FORMOSAT-3/COSMIC Measurement of Neutral Atmosphere

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Abstract

Six FORMOSAT-3 satellites were launched into space on April 14, 2006. The six satellites form a constellation to receive signals transmitted by the GPS satellites. The bending of GPS signals transecting the Earth's atmosphere is used to determine the atmosphere's variable profiles. This paper will introduce the constellation of six FORMOSAT-3 satellites, the performance of 4 GPS antennas of six satellites.

Recently, the six FORMOSAT-3 satellites could observe above 3000 RO events, and around 2000 events could be retrieved to atmospheric vertical profiles (Refraction, pressure, temperature, water vapor). There is still 1500 RO events can't not be retrieved to final profiles, NSPO and science team of NCU keep working hard to get better quality RO data and improve retrieval method to get more atmospheric vertical profiles. This paper will introduce current status and data Quality of RO, distribution and lowest altitude statistic of RO vertical profiles.