

The local change of water vapor distribution in Miyake island

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Miyake Island is an active volcano and the eruptions have been repeated with intervals of about 20 years. The last eruption was in 1983. Therefore GPS measurements in the island have been performed continuously at 18 stations and repeatedly in the dense network to discuss the crustal movement. Although Miyake Island is a small island such as 8x8 km, the top of the volcanic is 800m above the sea level. As local water vapor is not distributed uniformly over the island, GPS measurement errors show large. In the GPS measurements in 1998 1999, in which we also made the meteorological observation at the GPS sites, it was raining locally and cap clouds were observed above the top. We discuss the space-time distribution of water vapor with a mesoscale analyzing the GPS measurements.