

A Study of Spatial Water Vapor Distributions by Using One-Way Residuals Obtained from GIPSY

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We aim to find out water vapor distributions by using propagation delays along each signal path from a GPS satellite to a receiver. Then, we took notice of One-Way residuals, which were obtained from the analysis with GIPSY-OASIS II. Time series of "original residuals" (i.e. outputs obtained directly from GPS data analysis) shown rather characteristics of dependences on elevation angles of GPS satellites than spatial ones of vapors. We removed these dependences from original residuals for the observation data, which was carried out over 12 days in the rainy season in Yamagawa. In the observation period, there were four passages of a cold and a Baiu front. The residuals which calculated by such a method shown differences in spatial distributions as relative values in two cases of them.