Wet Zenith 1)elay Agreement of Less Than 6 mm 1 3etween GPS and WVR Measurements

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A comparison of tropospheric measurements from GPS receivers and Water Vapor Radiometers (WVRs) has demonstrated agreement at < 6 mm of zenith wet path delay. Data from 25 consecutive days during June and July, 1 996 were taken at Goldstone, California. The simultaneous usc of two GPS receivers (both Allen Osborne Turbo Rogues) and two WVRs (one]{-series and one J-series) allowed internal consistency tests. The two GPS receivers and the }1-series WVR were located within 50 m of each other, and 300 m from the J-series WVR. 1 3oth WVRs performed continuous tip curves, in order to derive wet zenith delay estimates every 3- 5 minutes. Total zenith delays were derived from the GI 'S data every 5 minutes. Accurate surface pressure measurements allowed the wet zenith delay to be derived from the GI 'S total zenith delay estimates.

The wet zenith delay ranged from 3 cm to 20 cm during the 25 day interval, with a mean of 10 cm. Initial comparisons have yielded a mean GI 'S- WVR wet May difference of 2 mm, with a standard deviation of 5.8 mm (measurements during cloudy weather were excluded from this comparison, as clouds degrade the accuracy of WVR wet delay estimates). The most recent results will be presented, along with details of the GPS and WV]{ data processing.

American Geophysical Union
Abstract Form

Reference # 0000
Session 0.00

1. 1 996 Fall Meeting

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(b) 1294, 3394,
(c)

6. N/A

7. 0% published elsewhere