

Ten-year processing of GEONET with precise point positioning strategy

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Continuous daily coordinate estimates from GPS network are now considered as the primal data for a crustal deformation monitoring. There are mainly two approaches to estimate coordinate from GPS; (1) a network processing using double differenced phase observation and (2) precise point positioning (PPP) using precise and accurate satellite clock and orbit data. Since the quality of satellite orbit and clock has been improved thanks to a global coverage of IGS (International GNSS Service) stations and improvement of processing technique, accuracy and precision of coordinate estimates using PPP is now close to those based on the network processing.

We processed whole GEONET stations (currently about 1,300 stations) for more than 10 years using PPP strategy of GIPSY-OASIS software developed by JPL, and compared with operational processing results from GSI, where both processing use final satellite products. Also, we estimated GEONET dataset with a PPP strategy of our RTNet software. We will discuss on the difference of the coordinates.