



The Quality of Precise GPS Orbits Predictions for 'GPS-Meteorology'

J. Dousa (1)

(1) Geodetic Observatory Pecny, RIGTC (jan.dousa@pecny.cz)

The overall accuracy of the precise IGS ultra-rapid orbit product is usually presented by means of weighted rms. We present here more detailed evaluation with respect to each individual satellite and for each hour of 0-24h interval prediction. The aim is to evaluate the individual satellite orbit quality and assigned accuracy code separately, to show the dependency of the orbit accuracy with respect to the prediction interval and finally to show the evolution of the individual orbit quality in time.

From such evaluation we could detect the limitation for the precise orbit predictions using current models and to assess the appropriate prediction interval when given orbit accuracy is expected for specific application. Finally, we have studied the requirements for the precise orbits for the GPS-meteorology application, which aims to estimate the troposphere zenith path delays in near real-time from GPS to support the numerical weather forecasting.