DORIS weekly station position time series. Status before ITRF2008 analysis

X. Collilieux, Z. Altamimi

For the first time of its history, the latest to date realization of the International Terrestrial Reference System, the ITRF2005, has been generated from station position time series of the four main space geodetic techniques: the Global Positioning System (GPS), the Very Long Baseline Interferometry (VLBI), the Satellite Laser Ranging (SLR), and the Doppler Orbit determination and Radiopositioning Integrated by Satellite (DORIS). From the time of that release, more than 2 years of additional observations have been processed by the International technique services using new analysis strategies.

DORIS analysis center (ACs) currently produce station position time series on a weekly basis, at the same sampling rate than SLR and GPS products. A common period of data of more than 12 years is now available. We suggest here to evaluate DORIS station position time series using GPS, VLBI and SLR station position time series. The emphasize will be addressed in term of station non linear motion in order to study more specifically the signatures of possible systematic errors and the ability of the DORIS technique to measure non secular crustal motions. Issues related to scale variations and modeling impact on station position time series will be also investigated.