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Multi-technique combination of space geodesy observations

Myriam Zoulida (1), Arnaud Pollet (1), David Coulot (1,2), and Richard Biancale (3)

(1) IGN-LAREG, France (myriam.zoulida@ign.fr), (2) IMCCE, Paris, France, (3) Observatoire Midi-Pyrénées, GET, Toulouse, France

Over the last few years studying combination at the observation level (COL) of the different space geodesy techniques yielded that some common parameters can be taken advantage of.
Some of these parameters, such as Zenithal Tropospheric Delays (ZTD), are available on co-location sites, where more than one technique is present. Local ties (LT) are provided for these sites, and act as intra-technique links and allow resulting terrestrial reference frames (TRF) to be homogeneous, but their use can be problematic.
Similar co-locations can be found on multi-technique satellites, where more than one technique receiver is featured, but the challenge of using these space ties (ST) relies in the accurate knowledge or estimation of their values.
In this study, results from a multi-technique combination including the Jason-2 satellite and its effect on the GNSS orbit determination are presented, as well as results on station positions' determination. Comparing resulting orbits with official solutions provides an assessment of the effect on the orbit calculation by introducing orbiting stations' observations.