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Operational geodetic products determination and combination for Galileo

Pierre Sakic, Benjamin Männel, Thomas Nischan, and the GGSP Consortium Team
Deutsches GeoForschungsZentrum GFZ, Space Geodesy Section, Potsdam, Germany

The Galileo Geodetic Service Provider (GGSP) is a consortium of five European institutes (AIUB, BKG, ESOC, GFZ, IGN) providing the geodetic framework of the Galileo project. It produces the Galileo Terrestrial Reference Frame (GTRF), along with geodetic products for operational validation (including orbits, clocks offsets, Earth orientation parameters, atmospheric delays).

GFZ is involved in the GGSP consortium as a Processing Facility (PF1), and produces on a daily/weekly basis rapid/final geodetic products based on a ground network of Galileo Sensor Stations (GSS), Galileo Experimental Sensor Stations (GESS) and IGS/MGEX stations for both the Galileo and GPS constellations. GFZ is also in charge of the orbits & clocks combination of the three GGSP Processing Facilities since spring 2011 (GPS week 1657).

We expose here the architecture of PF1 orbits & clocks determination based on EPOS software, and GGSP orbits & clocks combination. We also present products quality, tested using PFs & IGS comparisons and SLR validation.