

Analyse of the ancillary results obtained from the DORIS data processing with the GINS/DYNAMO software

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In 2001, the LEGOS/CLS Analysis Centre for the International DORIS Service (IDS) has processed all the DORIS data available since January 1993 with a new computation modelling based on the ITRF-2000 coordinates and velocities as a priori values, and the GRIM5-C1 gravity model, among others. The data set analysed until now represents 25 years (1993/01 – 2001/12) of radial velocity measurements done between the permanent emitting ground stations and the on-board instruments on the SPOT-2, -3, -4, and Topex/Poseidon satellites. In addition to the geodetic parameters (station positions and velocities, Earth Orientation Parameters), dynamical (drag, solar pressure...) and propagation (tropospheric zenithal bias) parameters are estimated. We dispose also of several processing results (orbit residuals, number of data...) and ancillary data (meteorological observations). Time series of most of these coefficients and information were plotted. It concerns information per satellite or per station. We look also at solar events, orbit manoeuvres, beacon replacements... Our main objective is to point out correlations between these series and station coordinate time series in order to identify the origin of spurious values, steps or other anomalies that are observed in the latter. The second objective is to constitute a set of ancillary results that could be used by the other Analysis Centers for comparison and investigations. For example, we performed files per station providing per pass the estimated tropospheric zenithal delay and the meteorological parameters (pressure, moisture, temperature) measured by the captors installed on every DORIS sites.