Analysis of Terrestrial Reference Frame results from the IDS Analysis Campaign

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The IDS Central Bureau HAS initiated a DORIS Analysis Campaign in November 2001. It concerns set of stations coordinates derived from Spot and Topex/Poseidon satellites. Six Analysis Centers have answered. Although June 2001 was proposed as a test period, most of them have provided a global solution and series of weekly/monthly solutions over several years of data.

The analysis is performed using the CATREF software developed by IGN for ITRF determination. The results of the campaign are presented. We try to check the level of consistency of results obtained using the different software packages (GIPSY, ZOOM, GINS, ...) and to identify and analyze possible systematic discrepancies. We also study the definition of time series with sets of station coordinates as an IDS product and to initiate the process of combining DORIS results into unified IDS products.

At that stage of IDS analyses implementation some points are discussed. One is that three more Analysis Centers are just including DORIS measurements in their software but still suffer from a lack of technical information. Another issue is the availability of Jason, Envisat and Spot5 satellites with a new DORIS instrument generation onboard. The expected station positioning improvement will be outlined. Finally, the follow-on of this preliminary work is the implementation of a regular process of product validation. This topic should be debated taking into account all offers of contribution and the coordination with other emergent IDS products analysis (EOP, geocenter,...) all closely involved in the Terrestrial Reference Frame determination.