

Operational IDS combinations in preparation for the next ITRF

J.J. Valette, CLS, Ramonville Saint-Agne, France

Z. Altamimi, LAREG/IGN, Marne-La-Vallée, France

F. Lemoine, NASA Goddard Space Flight Center Greenbelt, Maryland, USA

P. Yaya, CLS, Ramonville Saint-Agne, France

The International DORIS Service is in operation since 2003 and two Analysis Centers (AC), IGN and LEGOS/CLS provide solutions for the station network coordinates and EOPs on a routine basis. Thanks to regular AGW meetings, 2008 has been active in terms of evaluation of the solutions and profitable to the other AC's like Geodetic Observatory Pecny (GOP), Institute of Astronomy, Russian Academy of Sciences (INASAN) and Geoscience Australia (GA). The software have been improved and the modelling standards upgraded to reflect where possible the latest geophysical and measurement models. Recently, the European Space Operations Center (ESOC) ESOC also became as a new AC. Five AC's with distinct software packages (Gipsy, GINS, Bernese, Napeos) intend to participate to the IDS solution for the next ITRF. The paper presents the SINEX solutions combination procedures that have been implemented and the results obtained. The IGN/LAREG CATREF software is used for the combination. All procedure steps will be described. A preliminary preprocessing consists of validating each individual time series and verifying its internal coherency and possible discrepancies with respect to ITRF2005. A per week combination is then realized using a datum derived from ITRF2005 after selecting common stations. An iteration process rejects high residuals stations and applies variance factor weighting. The IDS weekly combined product will be discussed. Each individual time series solutions are also combined to provide a cumulative solution. The cumulative solutions themselves are combined again to deliver a position and velocity solution for all the DORIS stations network that is the objective for an IDS contribution to the next ITRF. We will present the status of all those products and the associated validation analysis. It may be both internal validation and external validation for example when using collocated sites to compare DORIS velocities with GPS or SLR absolute velocities.