



Recent improvements in DORIS geodetic time series in view of ITRF2008

M.L. Gobinddass (1,2), P. Willis (2,3), O. de Viron (2), and M. Diament (2)

(1) Institut Géographique National, LAREG, Marne-la-Vallée, France (gobinddass@ipgp.jussieu.fr), (2) Institut de Physique du Globe de Paris, Paris, France, (3) Institut Géographique National, Direction Technique, Saint-Mandé, France (willis@ipgp.jussieu.fr)

DORIS is one of the 4 fundamental techniques participating to the realization of the ITRF solutions. Recently several improvements were realized in terms of models (use of GGM03 gravity field, use of GMF mapping function), as well as in terms of estimation strategies (fixing daily solar radiation pressure coefficient but estimating more frequently atmospheric drag empirical coefficients). This led to the complete recomputation of all DORIS data (1993.0 – 2009.0), generating time series of 3-D station coordinates, polar motion parameters, geocenter variations, and terrestrial reference frame scale factor. This solution will be used by the International DORIS Service with several other solutions as input for the next ITRF2008. The goal of this presentation is to show the impact of each of these improvements on the derived geodetic results, in terms of precision, accuracy but also to demonstrate a significant increase of spurious signal at 118 days and 1 year period. Finally, plans for future improvements will also be discussed.