Calibration and validation of DORIS orbits for Jason-1

J. C. Ries

Center for Space Research, The University of Texas at Austin

The multiple tracking systems operating on Jason-1 (DORIS, SLR and GPS) provide an unparalleled opportunity to compare the contribution of the various tracking types to the orbit accuracy, and to verify the accuracy and consistency of the various orbits through external orbit validation. In addition to the higher quality two-channel DORIS receiver and more advanced Blackjack GPS receiver, the Jason-1 laser reflector array is much more suitable for high precision calibration work. The altimeter data also provides an additional, and completely independent, assessment of the orbit accuracy. We will compare orbits determined from various combinations of DORIS, SLR and GPS data from CNES, JPL, CSR, and ASA, and offer some interpretations and evaluations of these initial Jason-1 POD efforts.