Franck Reinquin, Alexandre Couhert, Sean Bruinsma

Ranging error determination using geodetic satellites in support of altimeter mission precise orbit determination

A pilot project is under way at ILRS, which aims at assessing systematic errors in laser observations. Mean range biases are assessed for all stations on the 2005-2008 time period for Lageos1/2 observations. Several analysis centres have contributed, and a preliminary report was issued, showing a nice consistency between ACs. This presentation shows results of a similar study using the low orbit Starlette/Stella satellites. The two sets of results are compared. In a second part, range biases are computed for a selection of laser stations using observations on Lageos 1/2, Starlette, Stella and one altimeter satellite (Jason-2). SLR data is essential to validate and quantify the orbit precision of the altimeter satellites, which requires a comprehensive list of range error corrections to be made available by ILRS. In some situations the high- and low-orbit geodetic satellites range biases are well in agreement, sometimes not. How they all compare with the altimeter mean residuals is also presented.