

Network Performance and Results

Chairs: Cinzia Luceri and Mark Torrence

This workshop session was a forum for the assessment of network data production, quality, and ILRS products.

R. Noomen discussed the regular quality control assessments performed by several ILRS analysis centers. He showed range bias estimates for LAGEOS-1 and -2 improved in consistency from 2004 through 2006 from 30 to 20 mm level. Other analysis centers contributions to regular and rapid data quality analyses will help the overall assessment of the results as there are, as of this writing, only two AC contributing to this effort. T. Otsubo showed that characterization of possible intensity-dependence station effects should be considered to achieve mm level data accuracy and calibrations may show possible correlations with seasonal loading effects. M. Torrence showed examples of plots of station's data as a function of local time and range measurement.

J. Luck reported on upgrades to the WPLTN sites and reported the data yield from southern hemisphere tracking sites has increased to 40% of the total data available data with the quality generally comparable with the data from the northern hemisphere. Luck also commented that all stations should pay close attention to their system delay and calibrations. P. Gibbs gave a report on mm level bias due to measurement characteristics of the Stanford counter in the data from Herstmonceux, with the suggestion that all Stanford counters should be characterized. F. Pierron showed results of the FTLRS occupations at the Ajaccio site, achieving stable position estimation from multi-satellite data analyses using the Eigen-Grace03s gravity model for the two occupations (2002 and 2005).

E. Pavlis discussed the global SLR network and the origin and scale of the TRF in the GGOS era and an SLR-based evaluation and validation studies of candidate ITRF2005 products. G. Bianco presented an assessment of the ILRS-A standard product. This routine production process is stable and reliable and those ILRS standard products allow monitoring of site coordinates and EOPs. Additionally, the geocenter motion, geometrically derived from the weekly solutions, could be included among the future ILRS standard products. R. Govind showed results of a simulation to evaluate the contribution of an additional SLR station in northern Australia to the Earth center-of-mass determination.

The session concluded with a light-hearted presentation by P. Shelus on "Evolution of SLR/LLR in Response to Mission Needs." From the summary slide: "As scientific experiments become more complicated, greater pressures are placed upon operational logistics in order to perform necessary operations, and yet retain personnel safety and instrumental integrity. Thorny logistical problems have been solved by a combination of computer power, internet communications, orbital dynamics and precisely defined inter-relationships among several reference frames."

There were several posters presented for this session. C. Noll described the laser ranging archive available at the ILRS data centers and plans for future enhancements. J. Luck showed the result of a Minico system delay for the Mt. Stromlo site. C. Moore presented a summary of the observations of GIOVE-A taken from Mt Stromlo SLR Station, the identified patterns that have impacts on tracking productivity and the use of GIOVE-A data for an empirical analysis of link budget requirements for potential gain in tracking GIOVE-A, Galileo and similar satellites. T. Otsubo showed plots of intensity-dependent effects for all stations. M. Torrence displayed plots of data as function of local time and range for all stations.