



SLR Tracking of GNSS Satellites: Interaction with GGOS Working Group PLATO

Meeting of the ILRS Study Group “LARGE”

Vienna, April 28, 2014

GGOS Working Group PLATO

- PLATO = „Performance Simulations & Architectural Trade-Offs“
- Since 2013
- Chaired by Daniela Thaller and Richard Gross
- Meeting during EGU: Thursday, May 1st, 17:30 – 19:00, Room R9
- Goal:
 - How to meet the requirement for the TRF of 1mm and 0.1mm/y
 - Studies related to network issues, targets (satellites), co-locations (on ground, in space)
 - Best-possible analysis of existing data
 - Simulations for future improvements

Studies with available SLR tracking data

Impact of:

- Additional satellites (e.g., 6 sat of ILRS roster vs. 24 sat)
- Errors in satellite antenna offsets (MW)
- Errors in laser reflector array offsets
- Un-calibrated range biases
- Orbit modelling issues (partly possible only with simulations)

Simulations required

- Amount of tracking data:
 - Per station
 - Per satellite pass
 - Per satellite AND per station
- Optimal distribution of tracking data:
 - Over satellite pass
 - Which satellites?
 - Global station distribution
- Additional stations: Where and how many?
- Impact of data quality
- Impact of orbit modelling issues

Thank you for your attention!

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