

Signal Processing Working Group Meeting

San Fernando, Spain

Sunday 6th June 2004

Agenda

- **CoM Issues:**

- Request to stations to do variable energy experiments –
Response and future

- **Laser Array info on ILRS website - xyz of phase centers - update;**

- **Spacecraft Attitude algorithms - status.**

CoM issues (precise geodesy)

- Community (reasonable) expectation is that there exist accurate CoM values for LAGEOS for the main ILRS stations;
- SPWG members have looked at theoretical calculation of values, as functions of detector (MCP, (C)-SPAD), return energy level and particular satellite (Otsubo&Appleby, 2003).
- Message is that for LAGEOS, for **single-photon detectors at single photon return level**, we can model precise CoM correction value.
- For MCP systems, the CoM value is more problematic to compute. Good working-estimate is the ground-based value of 251mm.
- To quantify energy-level effects, SPWG asked ILRS stations to perform some high-low tests for LAGEOS, ENVISAT and AJISAI.
- Ongoing, but some results presented at LW14:
 - Maybe sub-mm level effects at YARR MCP on LAGEOS
 - mm-level effects in C-SPAD stations, if stray from single photons.

Laser Array info on ILRS website

- SPWG gathering info to make and maintain comprehensive collection of data: see current webpage (in collaboration with Mark Torrence)
- Recommend to MWG that all new missions wishing to have ILRS support make that info available via the mission request form.

[Documents](#)

- Spacecraft Attitude algorithms for active satellites – gathering reports to reference via ILRS website.