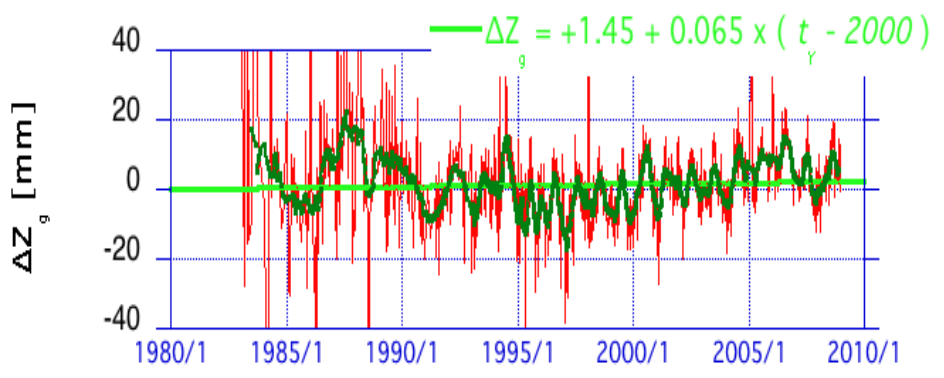
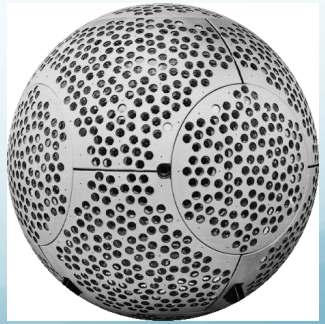
Workshop Summary
Session 1 - Science

Chairs: Graham Appleby and Pippo Bianco





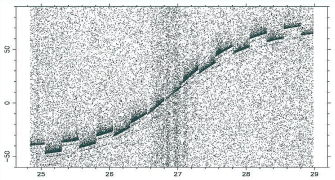
Outline

- Seven papers were presented in the two hour session;
- Covered an interesting range of topics:
- including fundamental physics, reference frames and crustal motions;
- non-gravitational forces and cal/val;
- the LR technique as an important element in the Global Geodetic Observing System

Science Session

- The **LARETS** geodetic & relativity satellite, Ciufolini *et al*;
  - With LAGEOS 1&2, to improve Lense-Thirring estimates
  - to be launched end 2011 at 1500 km height
- **Benefits of SLR** in epoch reference frames, Bloβeld, *et al*;
  - Looking at fitting periodic terms to site coordinates;
  - to remove un-modeled loading/geocentre effects
  - as well as solving for **X** and **X**dot at epoch
  - Comparison with VLBI results

Science Session



- **Non-gravitational** forces on LAGEOS 1&2, Deleflie;
  - Long-arc (65d) revealing Y & Y-S effects and showing interesting signatures in solar radiation terms
- **Crustal movement** in S America, Yin Zhigiang
  - Post Chilean earthquake anomalous motion of Conception and San Juan SLR sites
  - Comparison with GPS results
- **Calibration** of TanDEM-X baselines via SLR, Koenig;
  - Mm-level inter-sat distances required for 2-m DEM
  - Interleave tracking delivering ‘only’ 3mm
  - Need to improve

Science Session

- Constraining **spacetime torsion** with LLR, MRR, LAGEOS, etc., Dell'Agnello.
  - Many interesting experiments planned, needing LR
  - Geodetic precession at 20"cy^{-1} for Mercury, 2"cy^{-1} Lunar
- **Global Geodetic Observing System**, Pearlman.
  - Comprehensive overview, established as a GEO Task
  - Key to linking all the Services and generating timely and accurate products