

## Summary Session 1

### Strategies and Priorities for Laser Ranging

- Russian Network
  - SLR Experiments using GLONASS technology demonstrated that time transfer over long distances could be achieved to 0.1 ns;
  - New “Tochka” stations being deployed with two SLR Systems (one may already be existing) to provide more data and more comprehensive coverage, including day and night time tracking; single-electron operation; comprehensive calibration, and automation;
  - Suggest other station consider the two-SLR configuration to help relieve the tracking load;
- Current Network Situation
  - The SLR network currently tracks 90+ satellites from LEO to synchronous altitudes;
  - Incoming/stored data include all of the satellites tracked from any CPF’s provide;
  - Data volume and data distribution varies greatly from station to station;
  - Results depend on weather, local technology, level of support, etc, but probably also tracking procedure/priorities/on site tools, etc
  - Can we expand data yield on satellites that are most important, without leaving anybody behind?

We want to share some of the comments that were made:

- Well trained crew and sufficient station support;
- Minimum and even maximum data requirement for each missions being tracking;
- Good real time displays;
- Efficient satellite interleaving procedures;

- Improved prediction accuracy to reduce acquisition timelines;
- Examine bias problems with the stations;
- Better feedback from the stations on Issues, problem and successes;
- Real time tracking coordination among stations (EUROSTAT?);
- Be aware of external conditions; track to your strength;
- Plan the shift to take advantage of the satellite visibility timing;
- Motivate or reward difficult tracking or interleaving with new metrics or recognition
- Trade-off between easy targets and difficult targets (where to I get more credit?)
- Go kilohertz
- Encourage more feedback from data users;
- Work on your weaknesses
- Questions
  - Who is using the data for what application;
  - Is it better to concentrate on fewer satellites? Would we get more data on those satellites? What does the customer want?
  - Is one segment per GNSS pass of any value?
- Simulations under development at AIUB by Florian Andritsch may help us to study some of the trade offs and options above; promising results that compare well in terms of residuals for existing observations.
- Simulation Studies at HU by Toshi Otsubo to better quantify the benefit of placing a new SLR station at high latitude Southern Hemisphere site;