

## **Workshop Session 4: Network Operations and Site Upgrades - Summary**

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After the ILRS solicited presentations and posters from all the stations, there were a total of about 35 abstracts, 13 for the 7 speaking slots and the rest for posters. There were 14 posters shown. We had a lot of welcomed participation!

The oral presentations fell into roughly 3 groups:

- New station plans;
- ILRS procedures; and
- Other topics

**New station plans** were provided by Jake Griffiths on the Stafford system under development; Andre Kloth on the ESA SLR station (ELSR) to be built at Tennerife for SLR and debris; Andre Blinov on the new Mendeleev and Irkutsk stations and the plans for LLR and time transfer; and Takehiro Matsamoto on plans to replace the Tanegashima station.

A few trends:

- Use COTS parts, optical fiber rather than a coude path, and other techniques to create simple, compact, and economical systems.
- Use of ADS-B and IR cameras for aircraft avoidance (Tanegashima)
- Debris tracking is in the plans (ELRS)
- LLR and time transfer: ( Mendeleev and Irkutsk)

### **ILRS Procedures:**

Christian Schwatke presented information on using the new on-line editor to input and update the version 2 of the ILRS Site Log. This continues a trend at the ILRS and other services of having friendly on-line facilities to maintain documentation.

### **Other topics:**

Alexander Kelm's talk continued a presentation from an earlier session in which simulations were used to study the impact of a different distribution of SLR stations. This talk considered the impact of increasing the yield of all stations to at least 20% (good impact) and combining this with a different geographical distribution of stations (even better). This continues the trend over the years of station distribution and optimization studies.

Stanislaw Schillak studied the use of LARES with and without other geodetic satellites to determine station coordinates. This continues the related studies on integrating LARES into geodetic solutions presented in earlier sessions.