

Session 1 wrap up

Contribution to Global Geodetic Observing System – A 2020 Perspective

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21st International Workshop on Laser Ranging
Canberra, Australia, 2018-11-07

Session 1 wrap up

- just before: keynote talk by T. Herring
- 8 presentations + 2 posters
- broad variety of presentation topics
- content covers SLR contributions to GGOS, inter-technique comparisons, future developments, and local ground surveys
- first oral block was focused on **SLR in the context of the Global Geodetic Observing System (GGOS)**
- second oral block was focused on **SLR synergies with other geodetic space techniques and local ground surveys**

START TIME	END TIME	PAPER TITLE	PRESENTING AUTHOR
08:30	08:45	Welcome and housekeeping	David Ball
08:45	09:30	Contributions of SLR for the next decade	Thomas Herring
09:30	09:45	GGOS and essential geodetic variables	Richard Gross
09:45	10:00	The role of laser ranging for the Global Geodetic Observing System GGOS	Mathis Bloßfeld
10:00	10:30	MORNING TEA	
10:30	10:45	The synergy of Satellite Laser Ranging (SLR) and DORIS as space geodesy techniques	Frank Lemoine
10:45	11:00	SLR tracking of GNSS constellations - Many synergies to be explored	Daniela Thaller
11:00	11:15	ILRS: Current status and future plans	Carey Noll
11:15	11:30	Recent progress of VGOS and its role on GGOS	Takahiro Wakasugi
11:30	11:45	Extension of the SLR tracking network and its potential for the realization of Terrestrial Reference Frames	Alexander Kehm
11:45	12:00	The role of ground Surveys in GGOS and recent advances in ground survey techniques	Gary Johnston

POSTER NUMBER	PAPER TITLE	PRESENTING AUTHOR
A1	NASA CDDIS: Important changes to user access	Carey Noll
A2	New horizons for Latin American SLR network	Pablo Raul Yanyachi

SLR in the context of GGOS

- **Three main categories of noise** dominate space geodetic measurements
 - Instrumental noise → measurement noise due to technical issues (laser, reflector, etc.)
 - Environmental noise → orbit perturbations, etc.
 - “Earth” noise → mostly geophysical signals
- GGOS BPS committee is in charge to define **essential geodetic variables (EGVs)**; example: pole coordinates
- **DOIs for geodetic data** would be beneficial for all (users and data providers)
- GGOS aims the **integration of gravimetry and geometry**
- **SLR is a tool to realize GGOS** since parameter interactions can be studied (multi-satellite multi-parameter solution → multi-technique multi-parameter solution)
- Unification/extension of **SLR activities in South America** (4 SLR stations available)

SLR synergies with other geodetic space techniques and local ground surveys

- SLR significantly contributes to **identify/calibrate/overcome** systematics in other geodetic space techniques
- **Space ties** should be used to strengthen the connection between the techniques
- Current trends within the ILRS: lower energy (SLR systems), higher repetition rates, shorter NP intervals for **100+ SLR-tracked satellites** in 2018
- **“Mixed mode” observations** of VGOS/legacy network → continuity is ensured
- TRF improvements up to 20% and EOP improvements up to 5% can be achieved by **improving the network** (8 additional/planned stations simulated)
- **Improved alignment** of local ground surveys to the ITRF is necessary
- In future, anonymous FTP access to CDDIS **no longer possible!**