

**ILRS QCB Meeting**  
**May 13, 2024**  
**9:00 – 11:00 AM EST**

Next QCB Meeting: July 15, 2024, 9:00-11 AM EDT (13:00 UTC)

Van Husson, Mike Pearlman, Randy Ricklefs, Tom Oldham, José Rodriguez, Alexandre Belli, Magdalena Kuzmicz-Clesiak, Matthew Wilkinson, Frank Lemoine, Stefan Riepl, Julie Horvath, Peter Dunn, Claudia Carabajal.

**Agenda**

- Station Quarantine Procedure – Frank
- ILRS Survey and Station Plan – Matt/Claudia/Mike
- Missions SLR Tracking Report Template – Jose+
- Missions updates: Mike/Claudia
  - . IRNSS, ADRAS-J, any other updates.
  - . Galileo Campaign
- Update on Stanford Counters – Graham (left for next meeting)
  - . What action is practical?
- Input from Van:
  - . The LE Filter Continued (15 to 20 minutes)
  - . Using VMF Data to Model Tropospheric Errors in Legacy SLR Data (10 to 15 minutes)
  - . 7090 YARL and 7110 MONL LAGEOS Tracking Statistics (10 to 15 minutes)
  - . How should we address non-uniform pre-processing at the stations?
- Input from Justine (not at the meeting, will be discussed next meeting)
  - . Do we want to maintain FR files; How do we keep track of FR - NP voids?
  - . Notification of FR or NP voids?
- Update on the COM models for the Geodetic Satellites – Frank/Jose (will be discussed at next meeting)

Agenda, Notes, and materials from the QCB meetings here:  
<https://ilrs.gsfc.nasa.gov/science/qcb/qcbActivities/index.html>

**Meeting Notes**

**Station Quarantine Procedure (Frank)**

Frank has assembled the latest update of the Station Quarantine Procedure (see attached). Changes were primarily including a few more details on the procedures, some quantification on data quality, and the provision of some flexibility by the ASC and the CB to accommodate issues of timing, station geographic location, weather, etc.

Please review the attached document and send any suggested additional changes to Frank Lemoine by May 31.

### **ILRS Survey and Station Plan (Matt/Claudia/Mike)**

Many of the stations in the ILRS network are demonstrating weak or nil performance. Matt has led an effort to develop an ILRS Survey and Station Plan Questionnaire to go to 10 such stations to see if we can start a conversation between the stations and a review team to try to identify the issues that are inhibiting performance and what steps might be taken to improve performance. The review team will consist of some members of the CB and of the Networks and Engineering SC. We are asking these stations to fill out and return the questionnaire to the CB and the review team will engage the stations to understand the issues and give some guidance. We would expect to refresh this report every one or two years to evaluate progress.

The questionnaires have been sent out and we are expecting responses to Claudia by early June. We have a number of volunteers already for the committee. If you feel an overwhelming urge to participate, don't hesitate to contact Mike Pearlman at [mpearlman@cfa.harvard.edu](mailto:mpearlman@cfa.harvard.edu).

We will keep folks informed.

### **ILRS Tracking Mission Report (Jose, etc.)**

The ILRS is currently tracking over 160 satellites to support science and applications. To make best use of our SLR Network Resources, we need to understand how our current tracking data are being used, and if it is satisfying the needs of the users. Our sponsors also want to know what good work is being supported by the network. In this phase, we will focus on the active LEO satellites.

We have prepared a Mission SLR Tracking Report template (see attached) for the missions being tracked to complete. We are starting with the LEO satellites with active systems aboard; we have identified about 20 such stations and we have asked them to return the templates by June 15<sup>th</sup>, 2024.

We will also organize a team of members of the CB and the Missions Standing Committee to review the incoming reports, iterate with the missions as necessary, and have them archived on the ILRS website for use in ILRS reports.

Again, if you would like to participate, please contact Mike Pearlman at [mpearlman@cfa.harvard.edu](mailto:mpearlman@cfa.harvard.edu).

**Missions updates** (Mike/Claudia – See slides)

## **IRNSS**

Our colleagues in India have asked us to resume tracking of 5 IRNSS satellites including the current target #1 IRNSS1J, and #2 IRNSS1i, #3 IRNSS1c, and #4 IRNSS1F to be put in the priority list and IRNSS1B to be put in the pool. Claudia will work with ILRS Webmaster to implement this. No progress announced on the Indian SLR program.

## **ADRAS-J**

Tracking on ADRAS-J is not required.

## **Galileo Campaign**

Tracking to support the Galileo for Science is now limited to the 2 satellites in elliptical orbit Galileo 201 and 202. Weekly reports from Periton are still being posted; we anticipate request for additional satellite tracking as time goes on.

## **Updates From Van Husson**

- . 7090 YARL and 7110 MONL LAGEOS Tracking Statistics (10 to 15 minutes)
- . The LE Filter Continued (15 to 20 minutes)
- . Using VMF Data to Model Tropospheric Errors in Legacy SLR Data (10 to 15 minutes) This item will be discuss at the next meeting. Van would like Mathis to be present.
- . How should we address non-uniform pre-preprocessing at the stations?

## **Input from Justine (not at the meeting, will be discussed at the next meeting)**

Do we want to maintain FR files; How do we keep track of FR - NP voids? Notification of FR or NP voids?

**Update on the COM models for the Geodetic Satellites – Frank/Jose** (will be discussed at the next meeting)

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**Table 1. History Log Voids by Station (2024.05.06)**

<b>Station Location</b>	<b>CDP #</b>	<b>Time Gap(s)*</b>				<b>Last entry</b>
Kiev	1824	000120-080302	080402-110515			141410
Komsomolsk	1868	NO DATA				
Simeiz	1873	NO DATA				
Mendeleevo	1874	NO DATA				
Altay	1879	NO DATA				
Riga	1884					240429
Arkhyz	1886	NO DATA				
Baikonur	1887	NO DATA				
Svetloe	1888	NO DATA				
Zelenchukskaya	1889	NO DATA				
Badary	1890	NO DATA				
Irkutsk	1891	NO DATA				
Katzively	1893	NO DATA				
Yarragadee	7090					240212
Greenbelt	7105					240418
Monument_Peak	7110					231109
Haleakala	7119					240304
Tahiti	7124	020825-080414	130321-191022			230520
Changchun	7237	950101-970802	020714-051002	180410-210106		240128
Beijing	7249	881101-940301	940301-981116	981116-211013		230425
Tsukuba	7306					231108
Sejong	7394	NO DATA				
Wuhan	7396	NO DATA				
Arequipa	7403	920718-951023	951023-981130	981130-010523		200629
San Juan, Argentina	7406	NO DATA				
Brasilia	7407	NO DATA				
Hartebeesthoek_HARL	7501	020409-081105				230711
Hartebeesthoek_HRTL	7503	NO DATA				
Izana	7701					230406
Zimmerwald_532	7810	030905-060203	080715-100901			231019
Borowiec	7811	030329-071227	080205-131218			211005
Kunming	7819					240306
Shanghai_2	7821	140222-170315	170720-190811			231113
San_Fernando	7824	900703-930222 210518	971216-010124	090302-110601	180801-	231121
Mount_Stromlo_2	7825					210901
Wetzell_SOSW	7827	140501-160511	160511-190528	200424-230607		240119
Simosato	7838	900701-950810 181212	950810-991007	991019-040701	080401-	211209
Graz	7839	150504-190311				240117
Herstmonceux	7840					230427
Potsdam_3	7841	040906-081026	081026-110501	170303-200303		240305
Grasse_MEO	7845	010601-200818				231012
Matera_MLRO	7941	140902-171204 980720-001012	171206-210629	090324-131021		231228
Wetzell	8834	190604	001012-090324	090324-131021	170407-	210115

\* Assuming at least 2 year data gap