

Detection of various SLR systematic errors for mm accuracy

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This is one of the collaboration researches conducted during Otsubo's stay at Herstmonceux, May-August 2016.



Multi-Satellite Bias Analysis Report v2

for Worldwide Satellite Laser Ranging Stations
being updated every 6 hours!

Latest Analysis Report: >> [from 12h UTC, 27 Sep 2016 to 12h UTC, 11 Oct 2016](#) (updated 14:14 UTC, 11 Oct 2016)

Stations with high productivity

sat	orbit fit		1st site(ID)	# pass/# NP	2nd site(ID)	# pass/# NP	3rd site(ID)	# pass/# NP
	WRMS in mm	# pass/# NP						
Lageos-1	10	425 / 3468	Yarragadee (7090)	48/461	Zimmerwald (7810)	37/399	Changchun (7237)	37/211
Lageos-2	11	312 / 2631	Yarragadee (7090)	34/393	Changchun (7237)	32/177	Zimmerwald (7810)	27/336
Etalon-1	15	73 / 429	Yarragadee (7090)	11/63	Zimmerwald (7810)	8/91	Changchun (7237)	7/25
Etalon-2	14	50 / 273	Yarragadee (7090)	13/70	Matera (7941)	10/94	Herstmonceux (7840)	7/34
Ajisai	27	460 / 5605	Yarragadee (7090)	61/926	Zimmerwald (7810)	47/581	Changchun (7237)	44/252
Lares	13	330 / 3494	Changchun (7237)	43/246	Zimmerwald (7810)	37/537	Yarragadee (7090)	36/399
Starlette	27	329 / 3326	Yarragadee (7090)	50/667	Changchun (7237)	37/216	Zimmerwald (7810)	31/356
Stella	26	191 / 1520	Yarragadee (7090)	31/361	Changchun (7237)	25/117	Zimmerwald (7810)	20/177

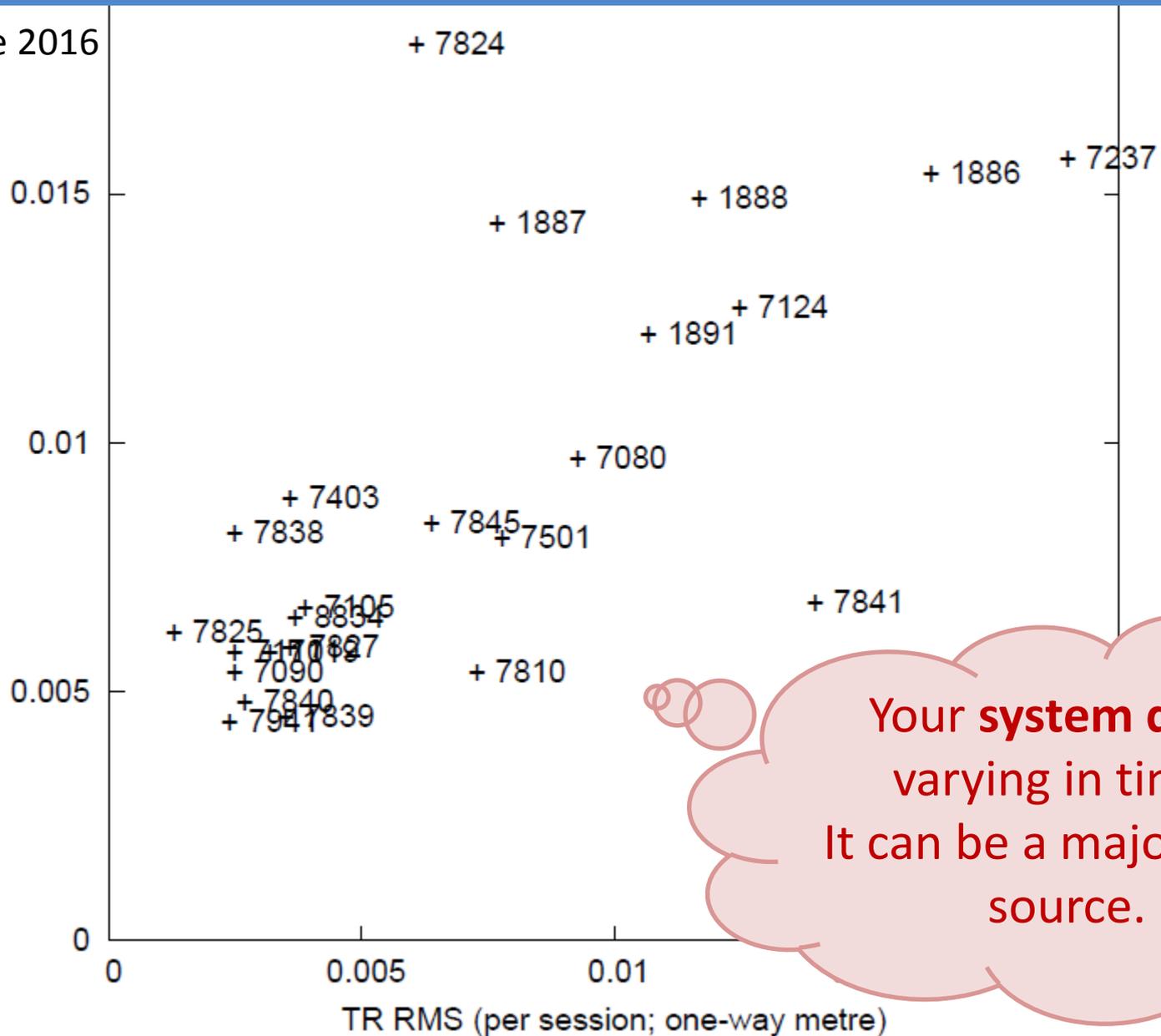
and more satellites (GNSS and LEO) are included in the reports!!

Alert messages sent during the past 12 months:
10 from HIT-U, 5 from DGFI
archived at <http://rapidservicemail.dgfi.tum.de/>

Suspect your calibration!

July 2015- June 2016

Post-fit LAGEOS 1+2 RMS (per NP; one-way metre)



Your **system delay** varying in time?
It can be a major error source.

A huge variety charts on station performance are available at:

- **Clinic Session**
- **ILRS NESC Forum** <http://sgf.rgo.ac.uk/forumNESC>

by which the following issues could be thought as your homework:

- **Pass coverage**
- **Intensity dependence, Full-rate tail clipping**
- **Day/Night difference**
- **Validity & stability of system delay**
- **(and more)**

Try to detect & remove any systematic biases.

Pay attention to long-term stability (not much to single-shot RMS during a single NP or pass).