

# ITRF2020: The International Laser Ranging Service (ILRS) Contribution



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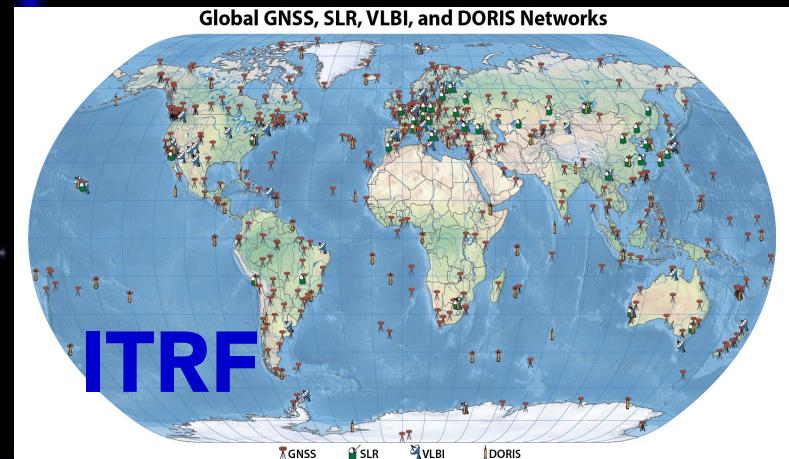
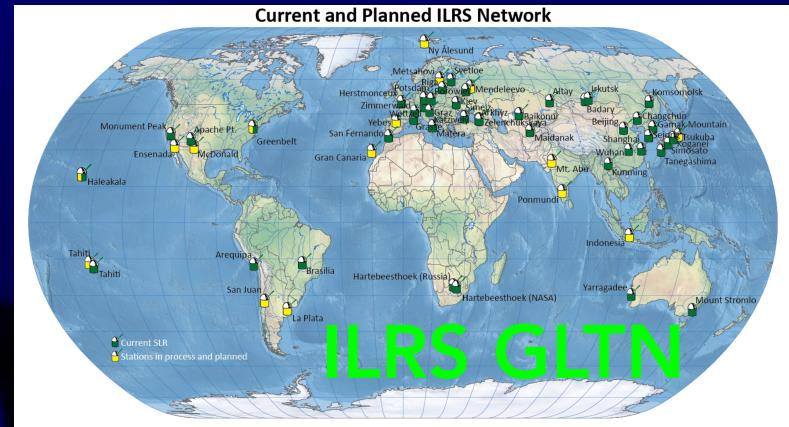
**V. Luceri, A. Basoni, D. Sarrocco**

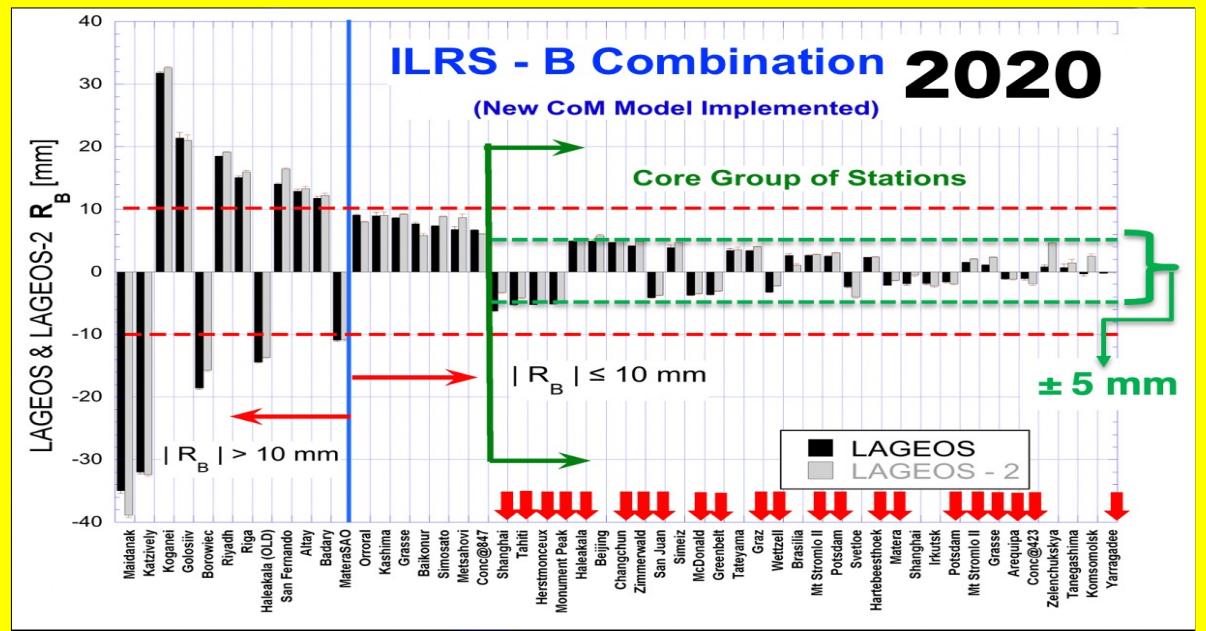
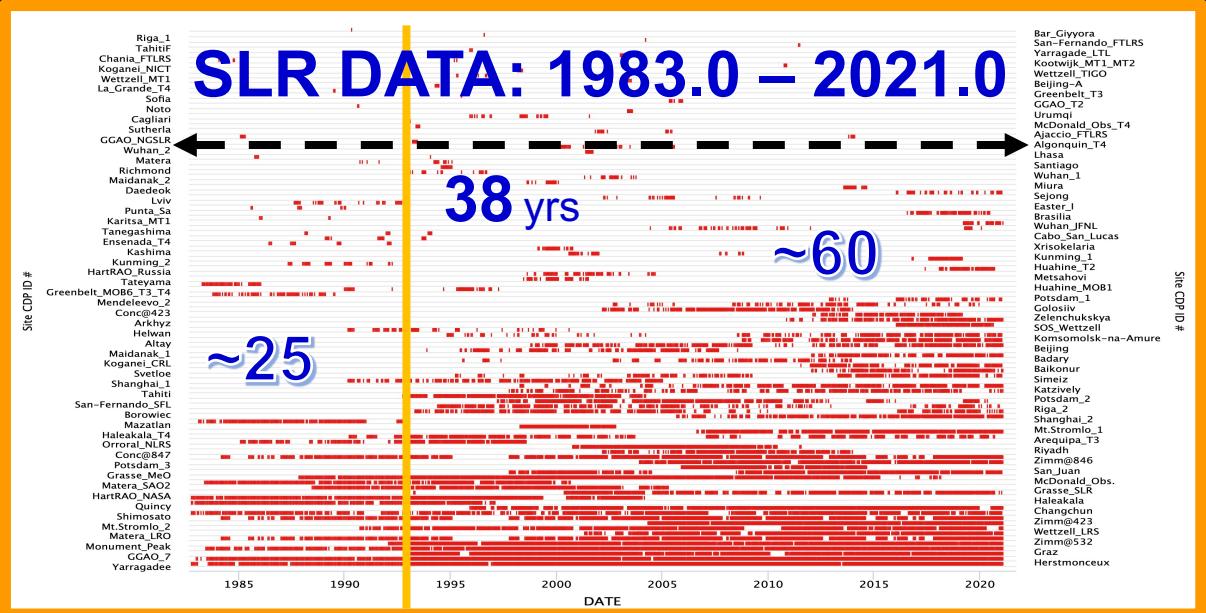
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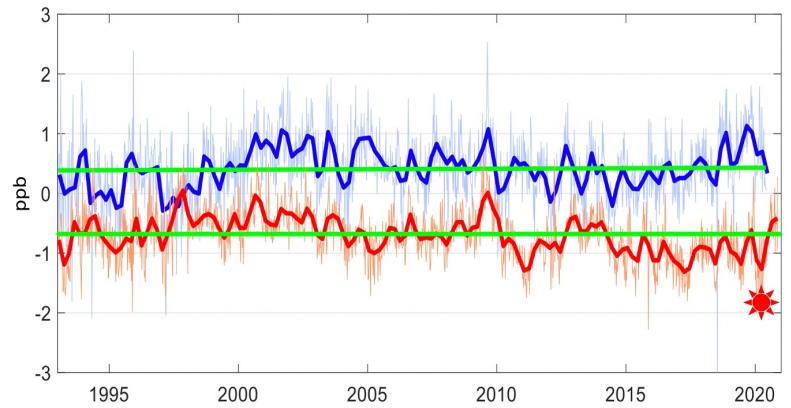
Agenzia Spaziale Italiana, CGS - Matera





## Revised SLR scale as a result of the SSEM PP 2020 reanalysis:

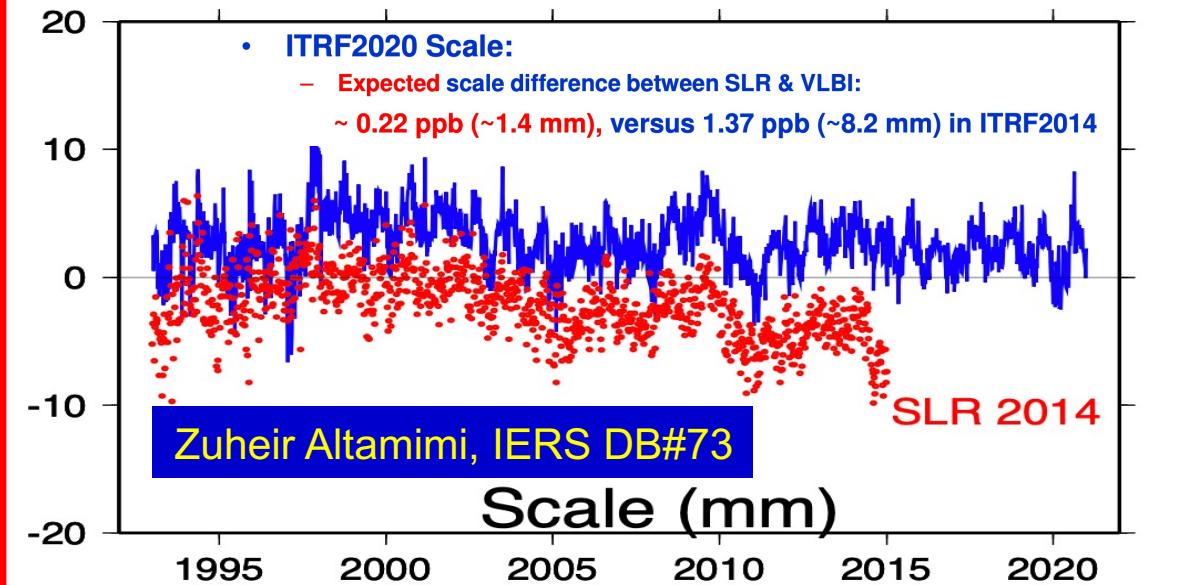
- Upper curve:
  - SLR scale from SSEM
  - Mean: +0.4 ppb



- Lower curve:
  - SLR scale in ITRF2014
  - Mean: -0.7 ppb

- Mean difference:
  - $\text{SLR}_{\text{NEW-OLD}} \approx 1.10 \text{ ppb}$
  - $\text{VLBI} - \text{SLR} \approx 0.28 \pm 0.10 \text{ ppb}$

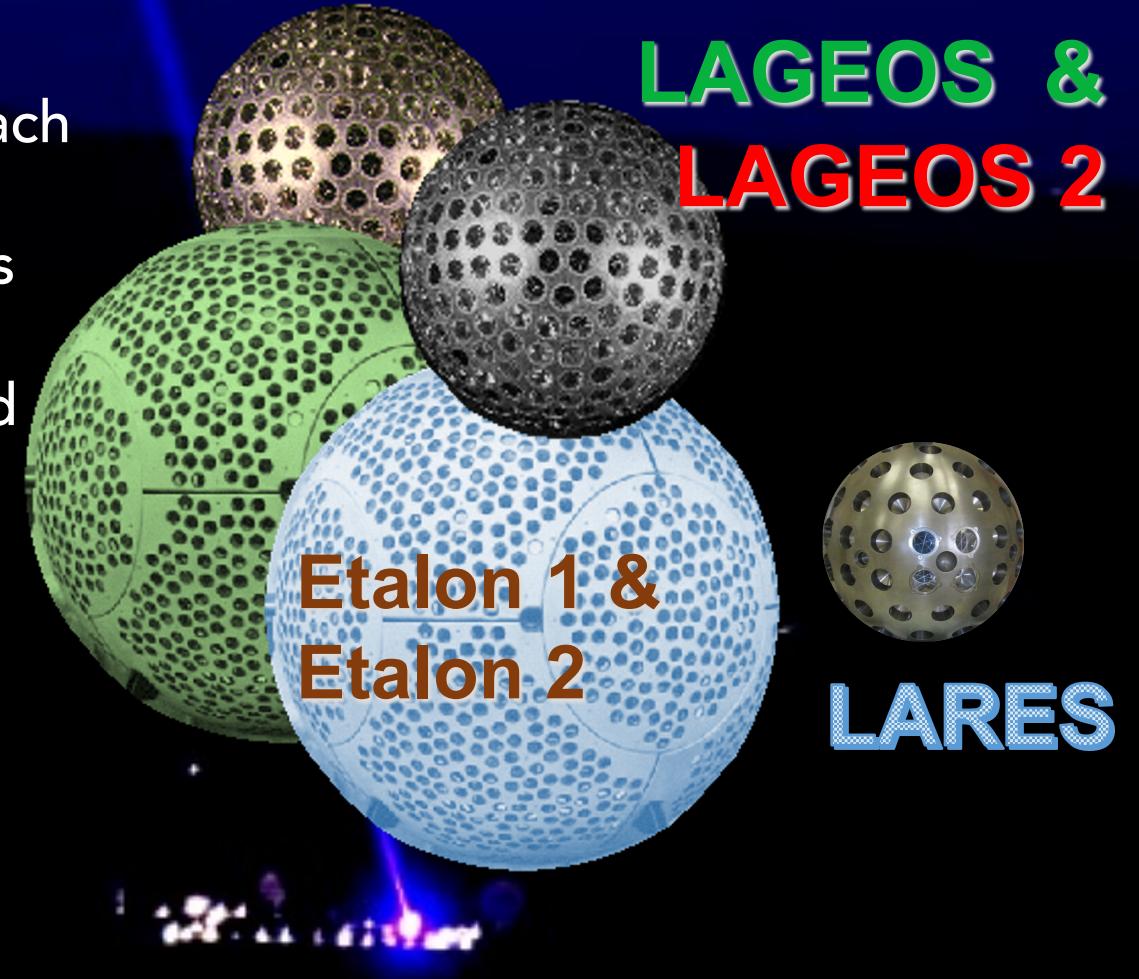
★ ITRF2014 SLR series extended beyond 2014 using the weekly ILRS ASC product.



# Based on the ITRF2020P results, the new ILRS contribution limits the systematic scale difference VLBI - SLR to $\approx 0.22$ ppb ( $\sim 1.4$ mm) ☀

☀ Zuheir Altamimi, IERS DB#73

- The ILRS ASC established a new analysis approach for its contribution to ITRF2020;
- It will be implemented in the operational series after adoption of ITRF2020;
- The complete SLR series for the **38-year** period **1983 – 2021** was submitted to ITRS in early November 2021;
- Based on the initial ITRF2020P combination ITRS has corroborated the ILRS results on the scale difference between SLR & VLBI.



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