



IDS REPORT 2025

IERS Directing Board Meeting

April 27, 2025

DORIS



Authors:

Petr Štěpánek	(VUGTK) IERS DB
Jérôme Saunier	(IGN) IERS DB
Guilhem Moreaux	(CLS)
Laurent Soudarin	(CLS)

Governing Board for 2025-2026

- New elected members (2025-2028)
 - Hugues Capdeville, CLS, France : Analysis Centers' representative
 - Anna Kelley, CDDIS, USA: Data Centers' representative
 - Maria Tsakiri, NTUA, Greece: Member at large
- New appointed members (2025-2028)
 - Mathis Blossfeld, DGFI-TUM, Germany: IERS representative
 - Cécile Manfredi, CNES, France: CNES System representative
- Working Group chairs (ex-officio)
 - Patrick Schreiner, GFZ, Germany (WG "Integrated Clock Correction Strategies for DORIS«)
 - Ningbo Wang, CAS, China (WG "NRT Ionospheric Applications")
- Other members
 - Guilhem Moreaux, France: Combination Center representative
 - Laura Sanchez, Germany: Member at large
 - Jérôme Saunier, France: IGN Network's Representative
 - Ernst Schrama, The Netherlands: IAG representative
 - Laurent Soudarin, France: Director of the Central Bureau
 - Petr Stepanek, Czech Republic: Analysis Coordinator
- **Guilhem Moreaux elected as the new Chair of the IDS GB for 2025-2028**
- **Frank Lemoine joins the Central Bureau**
- **Karine Le Bail is the IDS representative within the GGOS GB**

Publications

☐ Newsletter #11 (December 2024)

- Contribution of DORIS to Global Ionospheric Scintillation Mapping (M. Cherrier and P. Yaya, CLS)
- DORIS application for the gravity field (A. Löcher, University of Bonn)
- DORIS back in Rapa Nui (J. Saunier, IGN)
- The host agency in short: Hanga Roa (E. Santibáñez, PRS)
- IDS life & DORIS news

☐ Newsletter #12 (in preparation)

☐ IDS Activity Report 2024 - Call for contributions

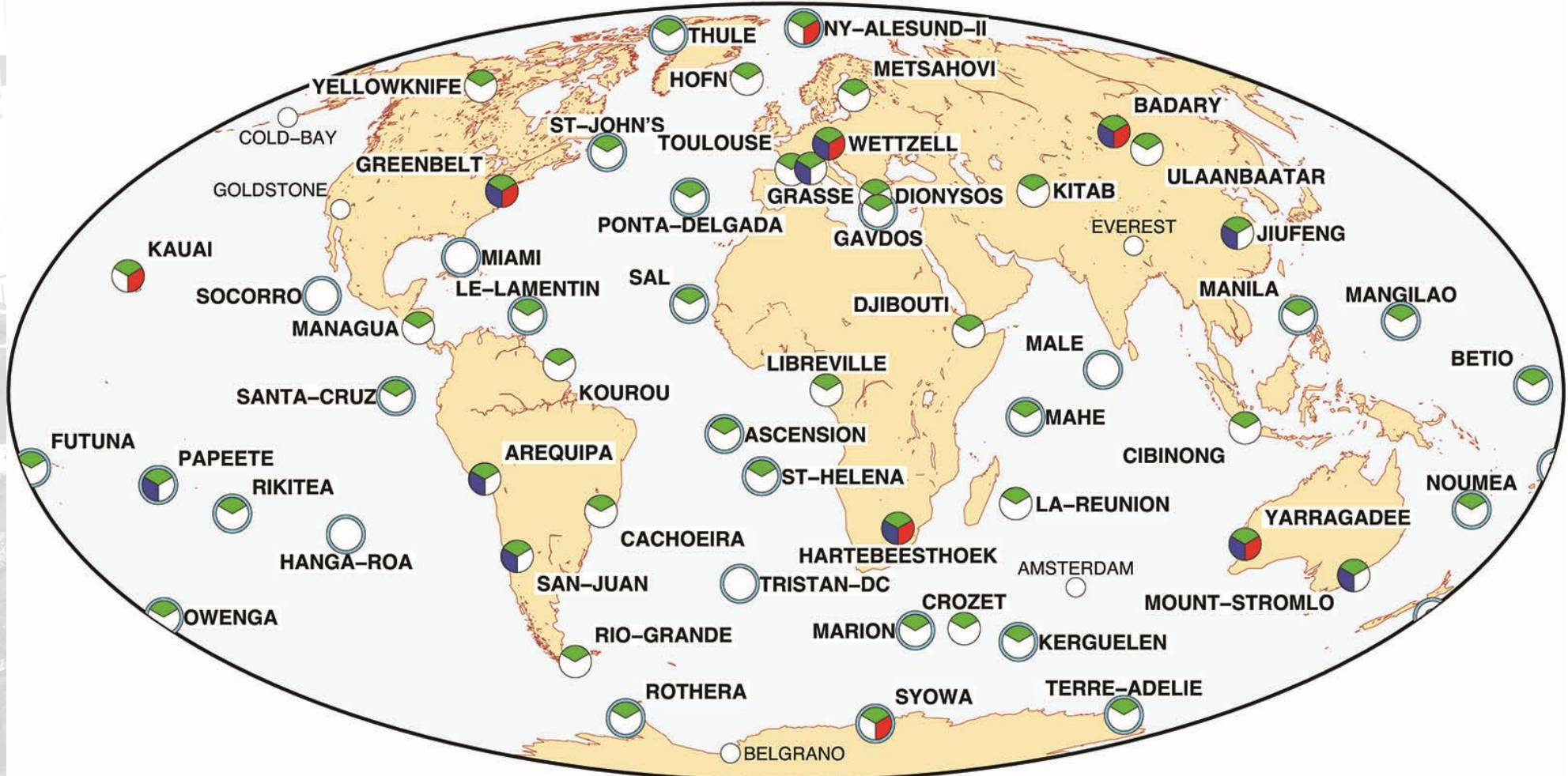
Events

- **IDS AWG meeting online, March 24 (presentations available at ids-doris.org)**
- **Genesis Science Workshop 2025, April 3-4, in Matera**
- **Next IDS AWG meeting in Athens, November 6-7**
- **Next DORIS mission: Sentinel-6B in November 2025**
then HY-2E and Sentinel-3C in 2026.

Current IDS Network

DORIS stations co-located with other IERS techniques and tide gauges

GNSS (IGS) SLR VLBI Tide gauge No active co-location



GMT 2025 Apr 22 11:24:59 This map was created by IGN-France

56 co-locations out of 61 DORIS sites

DORIS Network Operational Status

❑ Past Events

- Apr. 2024: Syowa (Antarctic): station relocation (400m) due to site refurbishment
- Jul. 2024: Malé (Maldives): antenna change + local tie survey
- Sep. 2024: **Ulaanbaatar (Mongolia): new station installation** (co-location with GNSS)
- Oct. 2024: Everest (Nepal): antenna move (20m) + equipment upgrade
- Apr. 2025: Le Lamentin (French Indies): station relocation (80m) + local tie survey

❑ Network Reliability

- **Good rate of stations in operation: 85%** (8 stations currently down)
- 74% (45/61) of the network stations equipped with the 4th generation beacon (deployment started from mid 2019)
- Gradual replacement of the Starec B antenna with Starec C: 30/61 stations equipped

❑ Planned Network Field Operations in 2025

- New station installation in Kanpur (India): co-location with GNSS “IITK”
- New station installation in Katherine (NT, Australia): co-location VLBI / GNSS
- Major renovation at Cachoeira (Brazil): antenna move + equipment upgrade
- Continuation of the 4th generation beacon deployment



IDS CC Main Recent Activities

→ ITRF2020-u2023 DORIS evaluation.

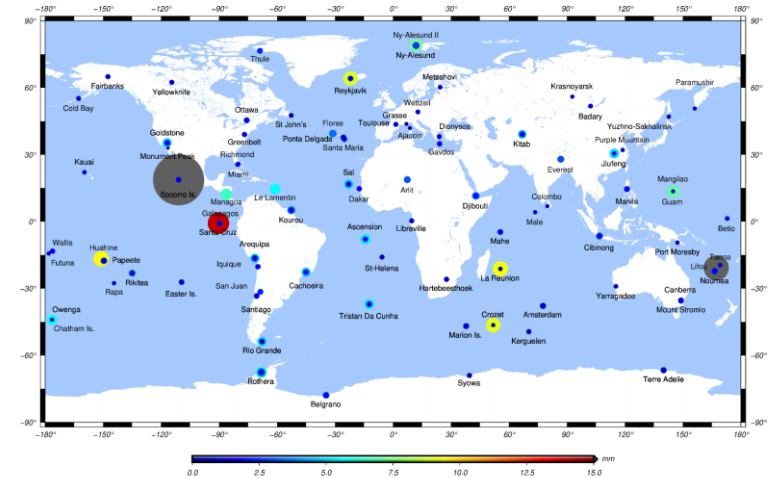
- Analysis of discontinuity differences wrt ITRF2020.
- Estimation and analysis of weekly station position differences wrt ITRF2020.
- Computation of DORIS tie residuals.
→ 30 slide report sent to the IDS ACs and IGN and shared with the members of the IAG-IERS JWG 1.2.4.

→ Contribution to the IERS TN on ITRF2020.

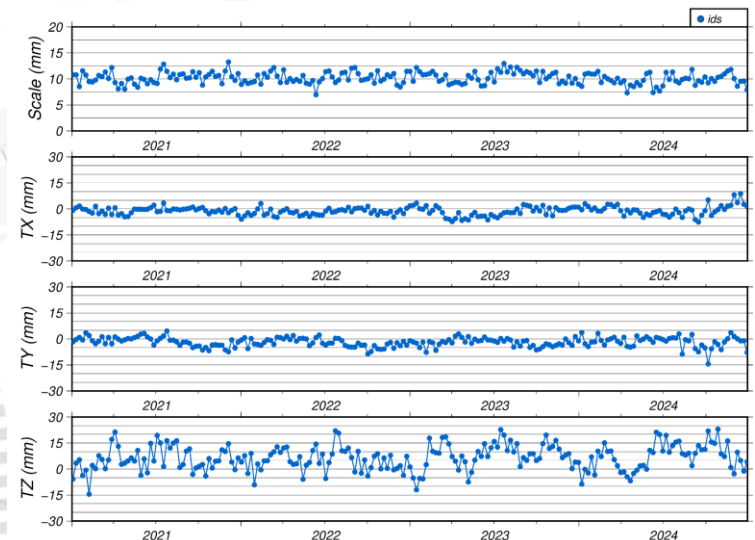
→ Realization of the DORIS contribution to ITRF2020-u2024.

- 5 ACs contributions (ESA, GOP, GRG, GSC and IGN).
- IDS 25: 2021.0-2025.0.
- Shows a stable scale (trend: -0.08mm/yr).

See G.2.2 (room K1) presentation on Monday @17:50.



RMS of weekly 3D position differences between ITRF2020-u2023 and ITRF2020 from 1993.0 to 2021.0.



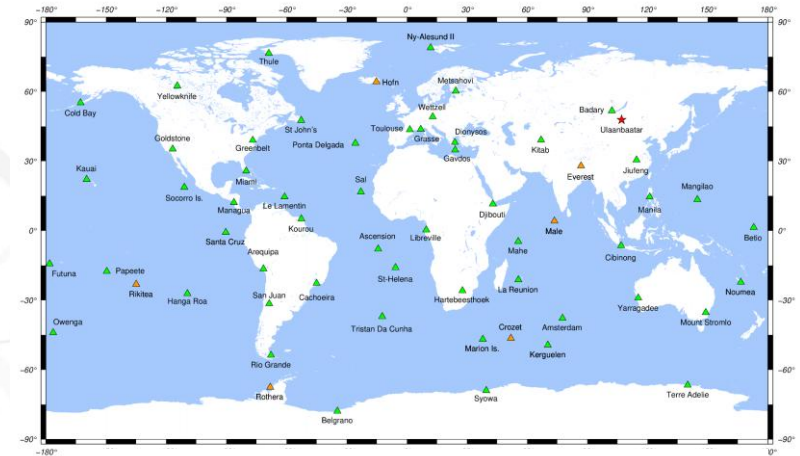
Scale and origin of IDS 25 wrt ITRF2020-u2023.



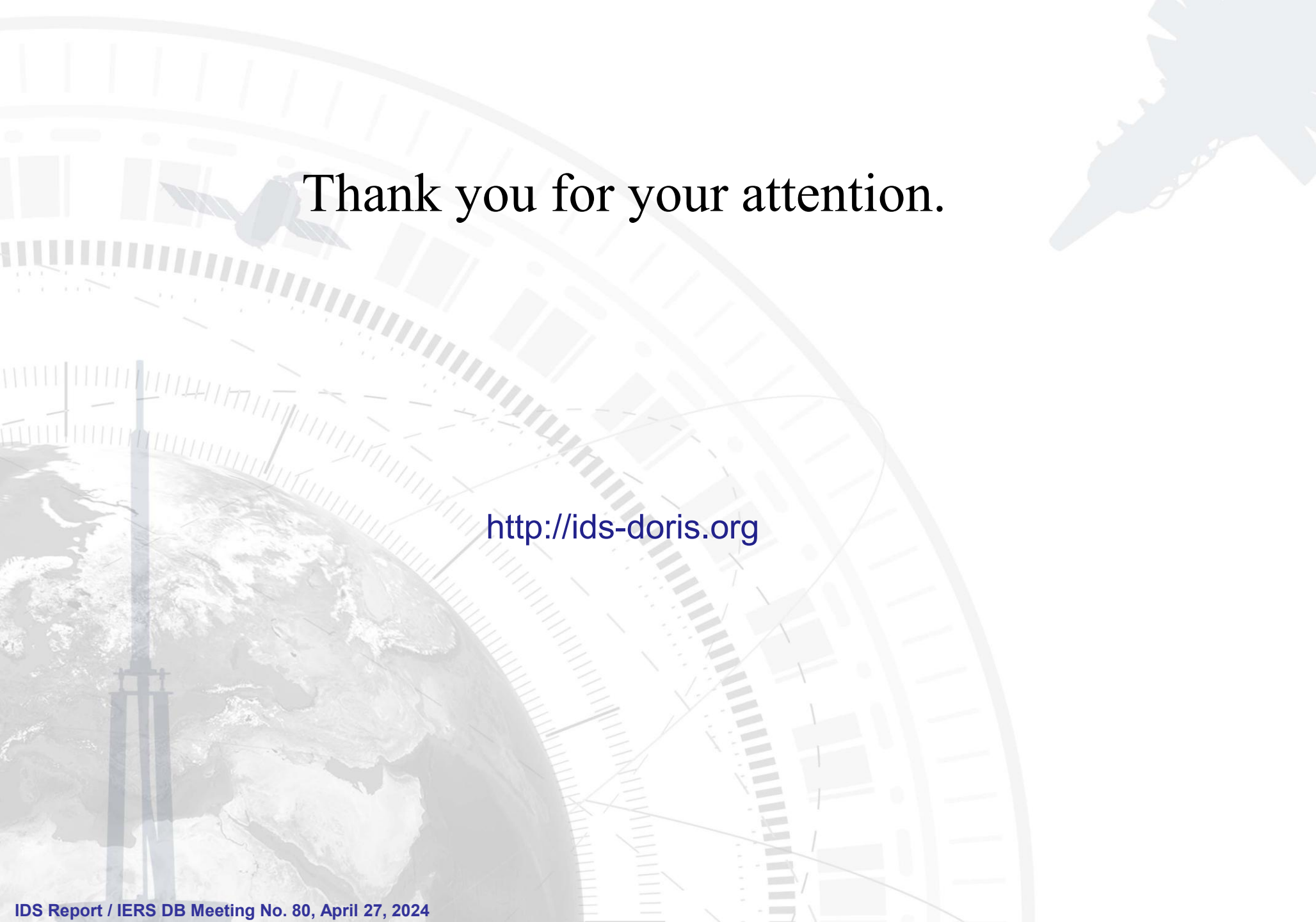
IDS CC Future Activities

→ Realization of DPOD2020 v4.0.

- Time span: 1993.0-2025.0
 - Aligned onto ITRF2020-u2023.
 - DORIS PSD corrections for Socorro (SODA) and Goldstone (GONC).
 - Includes estimation of annual, semi-annual, 118 and 59-day signals.
-
- Continued evaluation of single and multi-satellite solutions from GFZ to become the sixth IDS AC.
 - Tests for a combined LOD with two contributors (ESA and GOP).
 - DORIS evaluation of DTRF2020-u2023 and JTRF2020-u2023.



DPOD20 v4.0 DORIS Nground Network.

The background of the slide is a light gray composite image. It features a satellite in the upper left, a large clock face with tick marks and a dashed line winding around it, and a portion of a globe showing the Americas in the lower left. A stylized aircraft is visible in the upper right corner.

Thank you for your attention.

<http://ids-doris.org>