DORIS DAYS 2025

November, 3 and 5

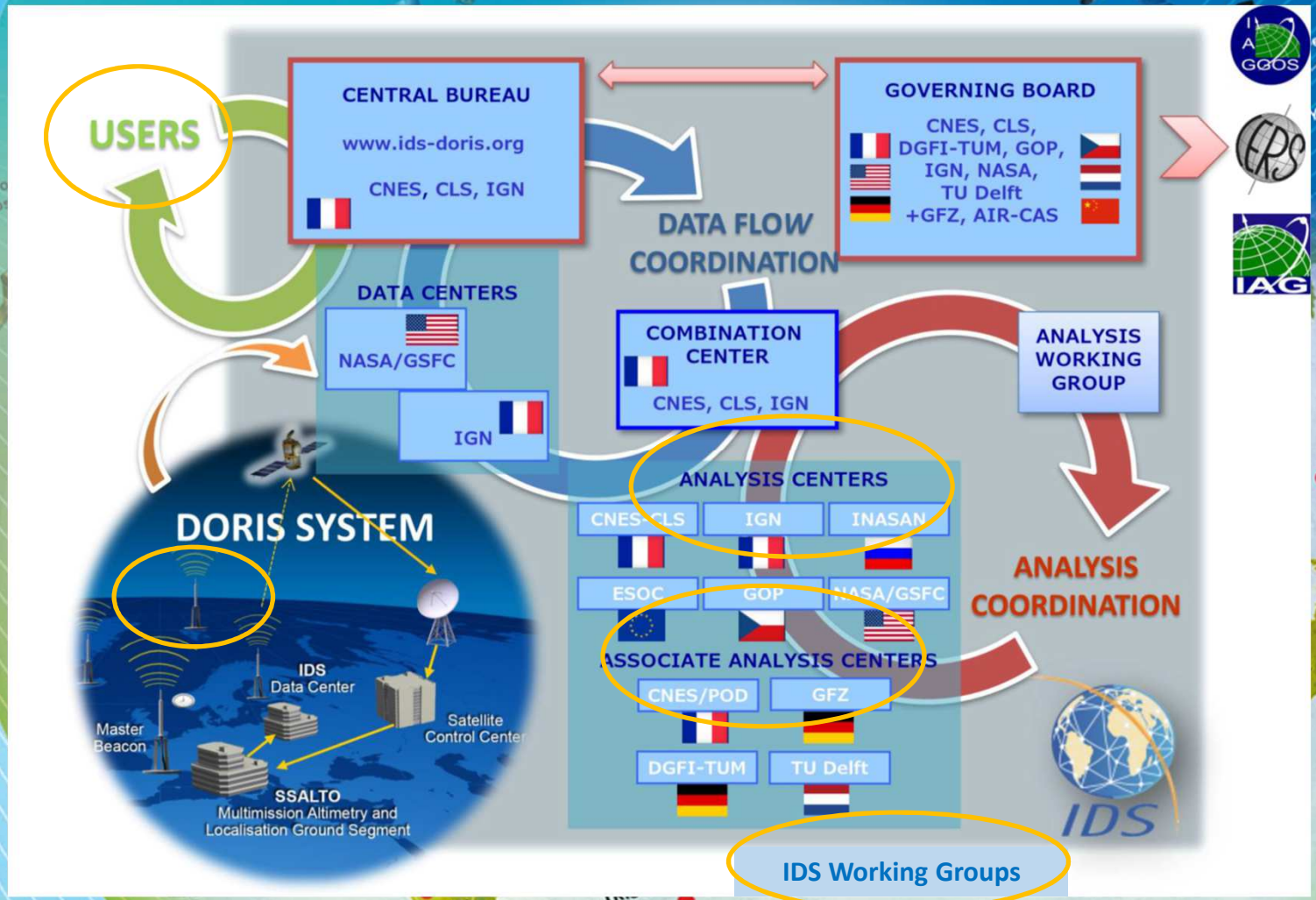
How to become involved in the DORIS and IDS community?

Cecile Manfredi (CNES)

November 3

Day 1 – Presentation 5

Introduction



Use DORIS data

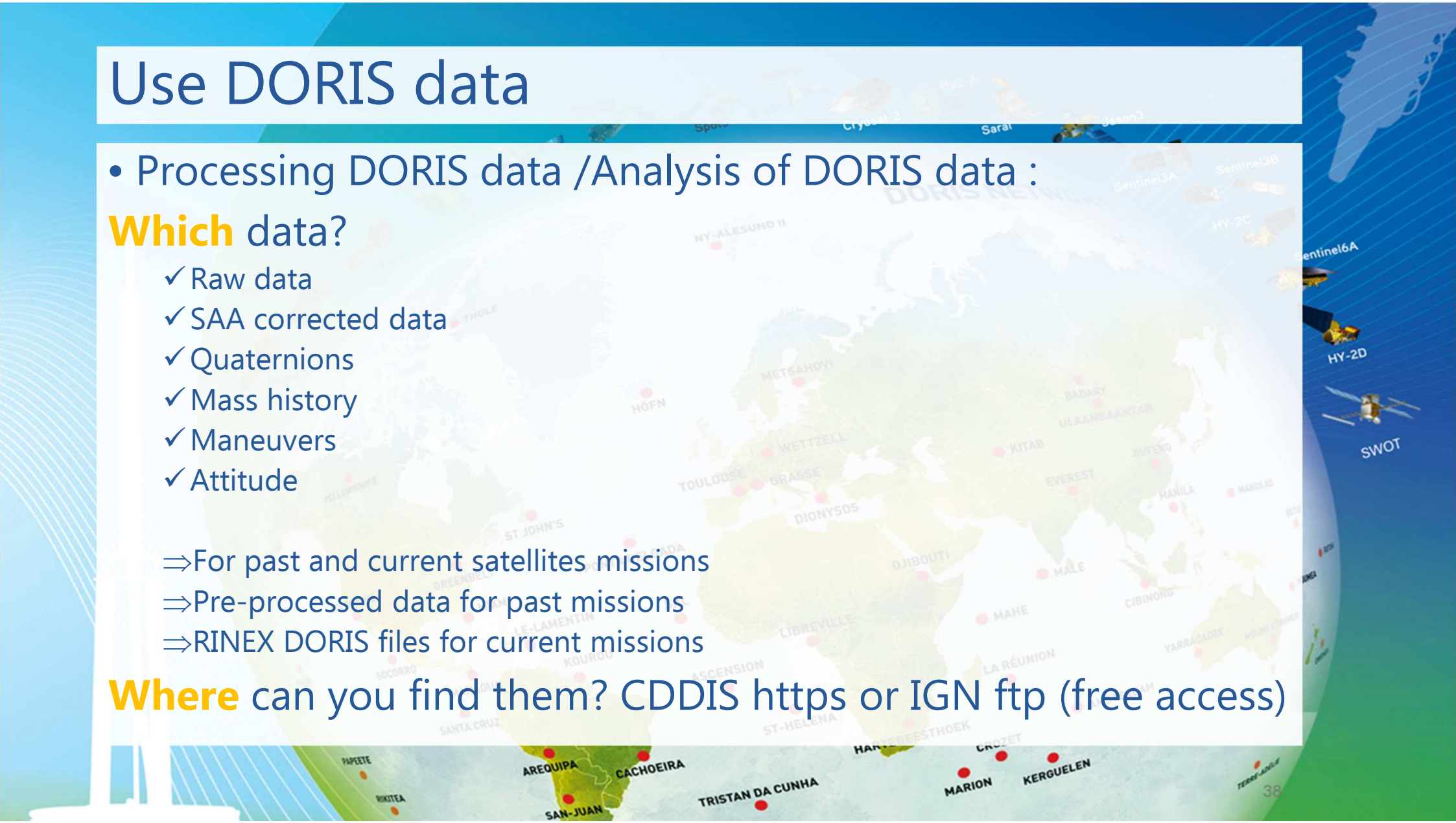
- Processing DORIS data /Analysis of DORIS data :

Which data?

- ✓Raw data
- ✓SAA corrected data
- ✓Quaternions
- ✓Mass history
- ✓Maneuvers
- ✓Attitude

⇒For past and current satellites missions
⇒Pre-processed data for past missions
⇒RINEX DORIS files for current missions

Where can you find them? CDDIS https or IGN ftp (free access)



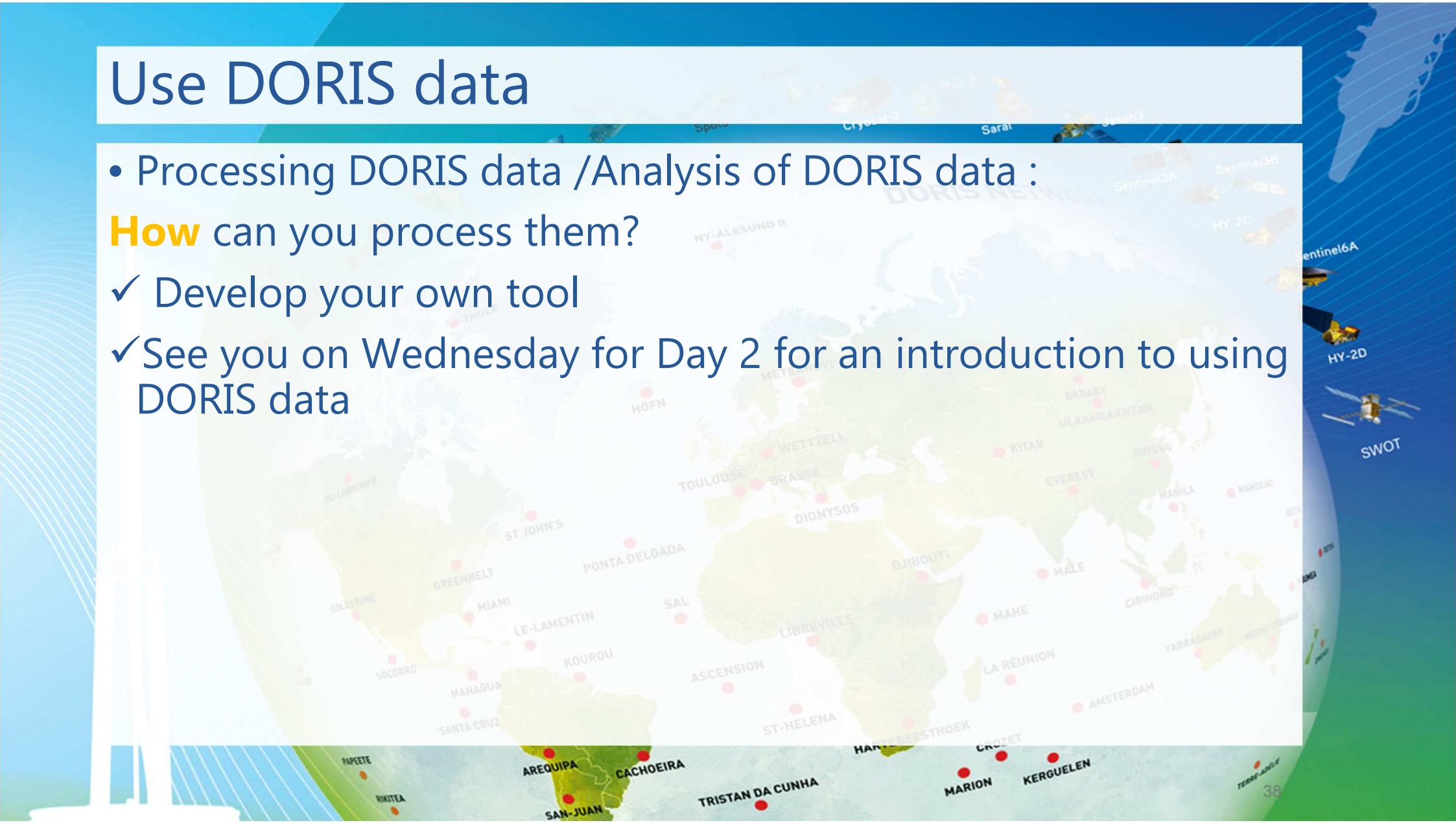
Use DORIS data

- Processing DORIS data /Analysis of DORIS data :

How can you process them?

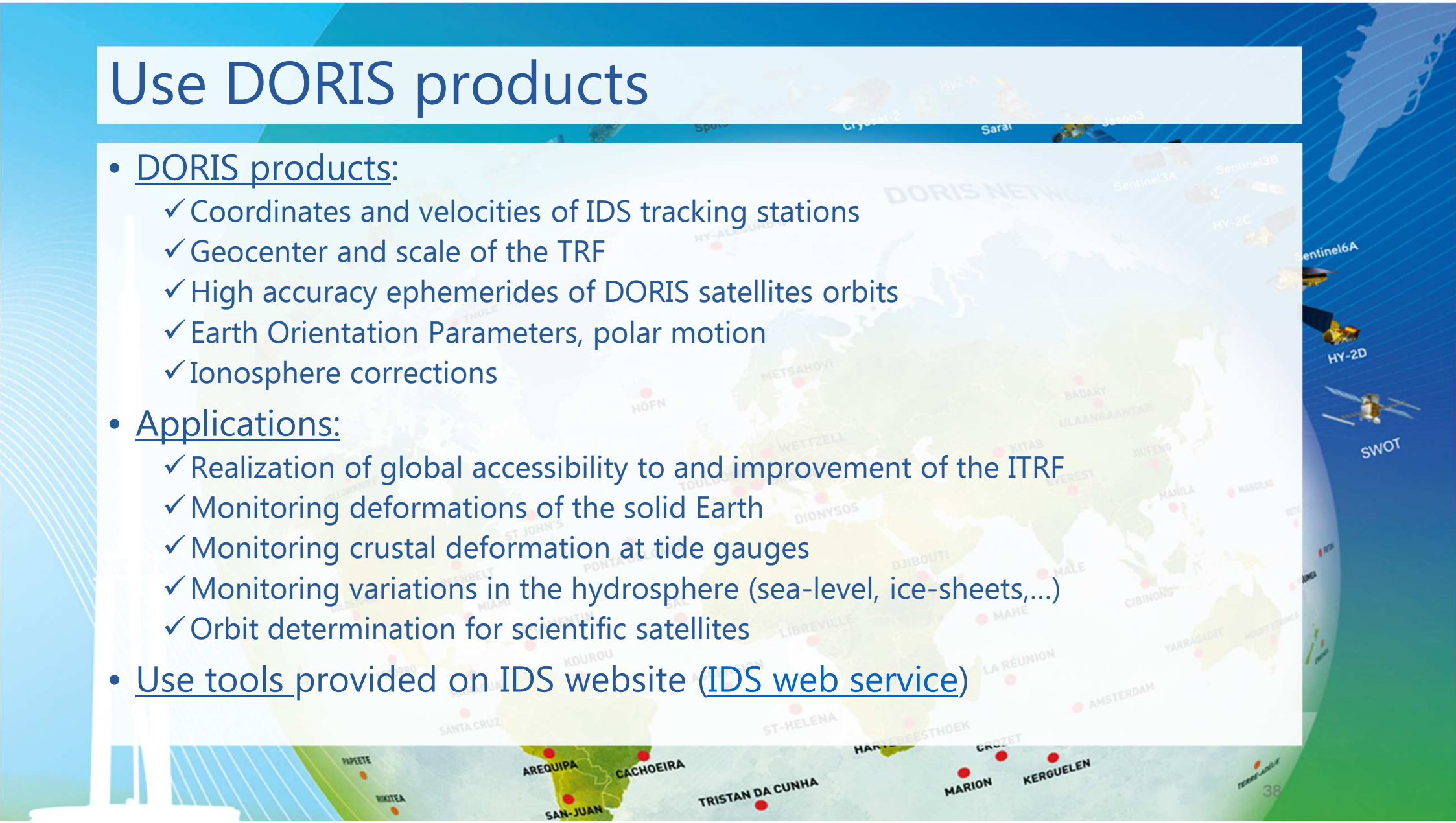
✓ Develop your own tool

✓See you on Wednesday for Day 2 for an introduction to using DORIS data



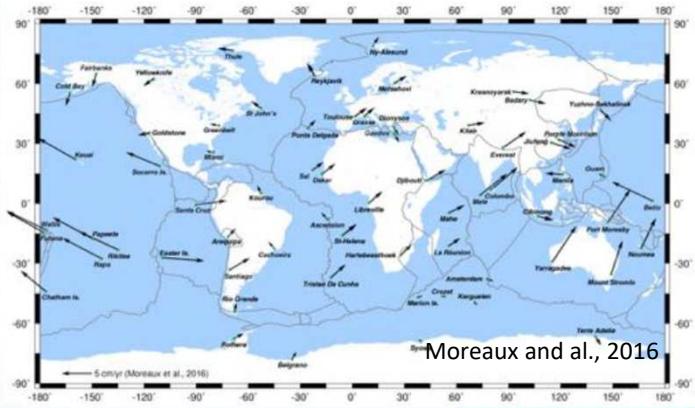
Use DORIS products

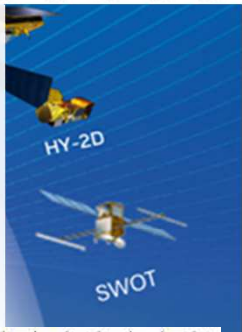
- DORIS products:
  - ✓ Coordinates and velocities of IDS tracking stations
  - ✓ Geocenter and scale of the TRF
  - ✓ High accuracy ephemerides of DORIS satellites orbits
  - ✓ Earth Orientation Parameters, polar motion
  - ✓ Ionosphere corrections
- Applications:
  - ✓ Realization of global accessibility to and improvement of the ITRF
  - ✓ Monitoring deformations of the solid Earth
  - ✓ Monitoring crustal deformation at tide gauges
  - ✓ Monitoring variations in the hydrosphere (sea-level, ice-sheets,…)
  - ✓ Orbit determination for scientific satellites
- Use tools provided on IDS website (IDS web service)

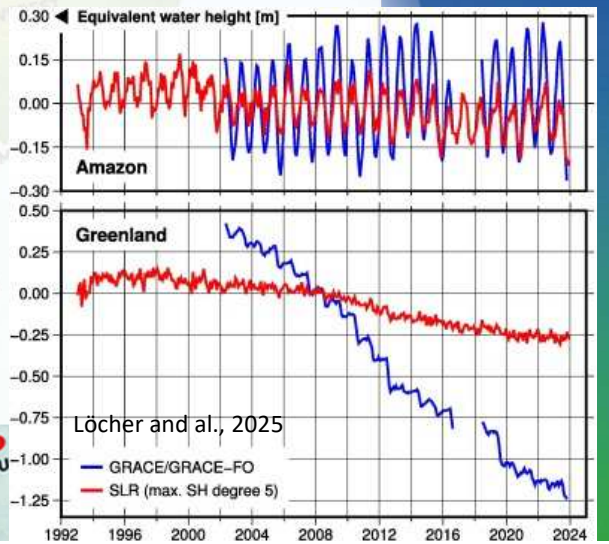


What DORIS can observe?

- Tectonic plate parameters
- **Horizontal and vertical velocities of DORIS stations**
- Glacial Isostatic Adjustment
- Earthquakes, present day ice melt of nearby glaciers, volcanic activity, subsidence
- Contribution to the realization of the ITRF
- Geocenter motion and scale of the TRF
- Earth Pole coordinates and estimation of LOD
- Precise orbits for altimeter missions contributing to determination of the Mean Sea Level
- Contour of the SAA at the altitude of Spot and Jason
- Vertical Total Electron Content of the Earth's ionosphere
- Detection of scintillations
- Thermosphere perturbations during severe geomagnetic conditions
- Long time series of tropospheric delays and precipitable water
- **Gravity field time series**







Share your experience and your expertise on DORIS

- Article in scientific journals

- **Attend an IDS meeting**
  - IDS Analysis Working Group meetings

  Twice per year

  Focused on analysis issues with data or products

  Attendees: mostly from ACs, AACs, but all are welcome
  - IDS Workshop

  Bi-annual meeting associated with Ocean SurfaceTopography Science Team Meeting (OSTST)

  Next meeting : 2 days in a week of June 22-26, 2026, Wiesbaden, Germany

Share your experience and your expertise on DORIS

- **Join an IDS Working Group**

What is a WG?

IDS Working Groups provide expertise on particular topics related to the IDS components and on development of particular IDS product(s) or service(s) relying on the IDS infrastructure.

- Currently active IDS Working Groups:
  - *NRT Ionospheric Applications*
    Chair: Ningbo Wang (AIR/CAS, China)
  - *Integrated Clock Correction Strategies for DORIS*
    Chair: Patrick Schreiner (GFZ, Germany)
- Proposed IDS Working Group:
  - *Troposphere applications (Organization on-going for 2026)*
    Proposed chair : Samuel Nahmani (IGN)
  - *Other ideas?*

Become an IDS Analysis Center or an IDS Associate Analysis Center

Role of an:

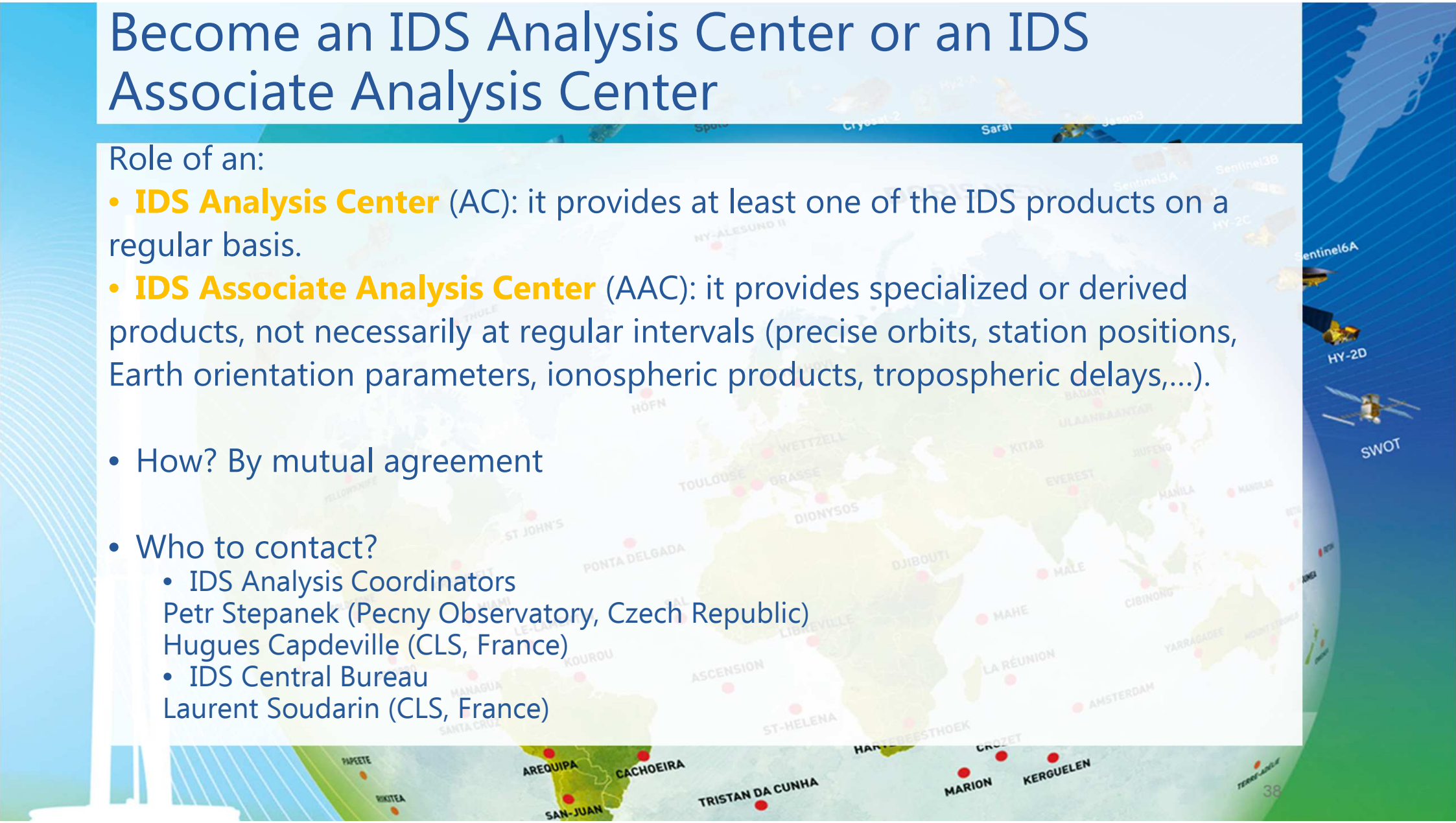
- **IDS Analysis Center** (AC): it provides at least one of the IDS products on a regular basis.
- **IDS Associate Analysis Center** (AAC): it provides specialized or derived products, not necessarily at regular intervals (precise orbits, station positions, Earth orientation parameters, ionospheric products, tropospheric delays,…).

- How? By mutual agreement

- Who to contact?
  - IDS Analysis Coordinators

  Petr Stepanek (Pecny Observatory, Czech Republic)
  Hugues Capdeville (CLS, France)
  - IDS Central Bureau

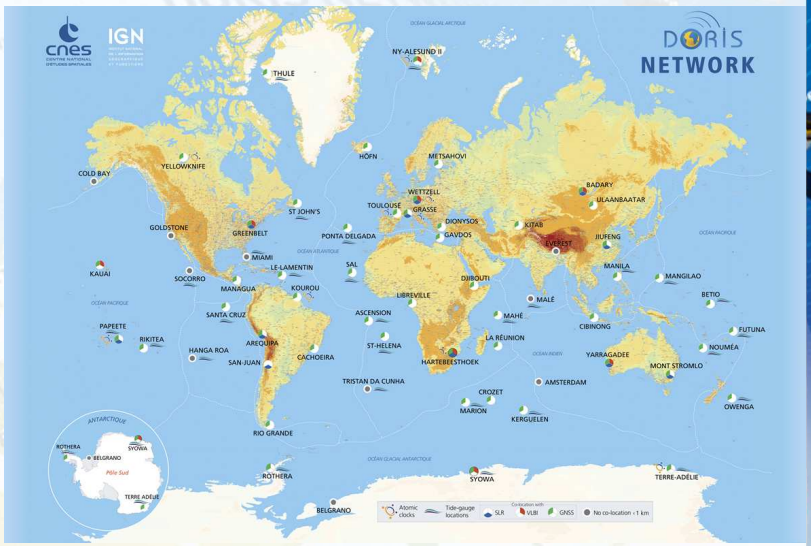
  Laurent Soudarin (CLS, France)



Hosting a DORIS station

- Propose a new site
  - ⇒To support the network
  - ⇒To satisfy clear scientific objectives

Ulaanbaatar DORIS Station, Mongolia



Where are the information?

- On the website : Home - International DORIS Service
- **Contact : Bureau Central**

Ids.central.bureau@ids-doris.org

Key points
Way to get involved in the DORIS community

- **Explore** DORIS products
- **Look** at station coordinate time series viewer
- **Join** an existing or a proposed **Working Group**
- **Partner with** an existing **Associate Analysis Center** or **Analysis Center** in analysis of DORIS Data
- **Propose a new DORIS site** that would support the network and satisfy clear scientific objectives
- **Contact** IDS Bureau Central