

# NETWORK 2004 REVIEW: EVOLUTION, MAINTENANCE AND COLOCATIONS

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## What's new in the network since Feb. 2003?

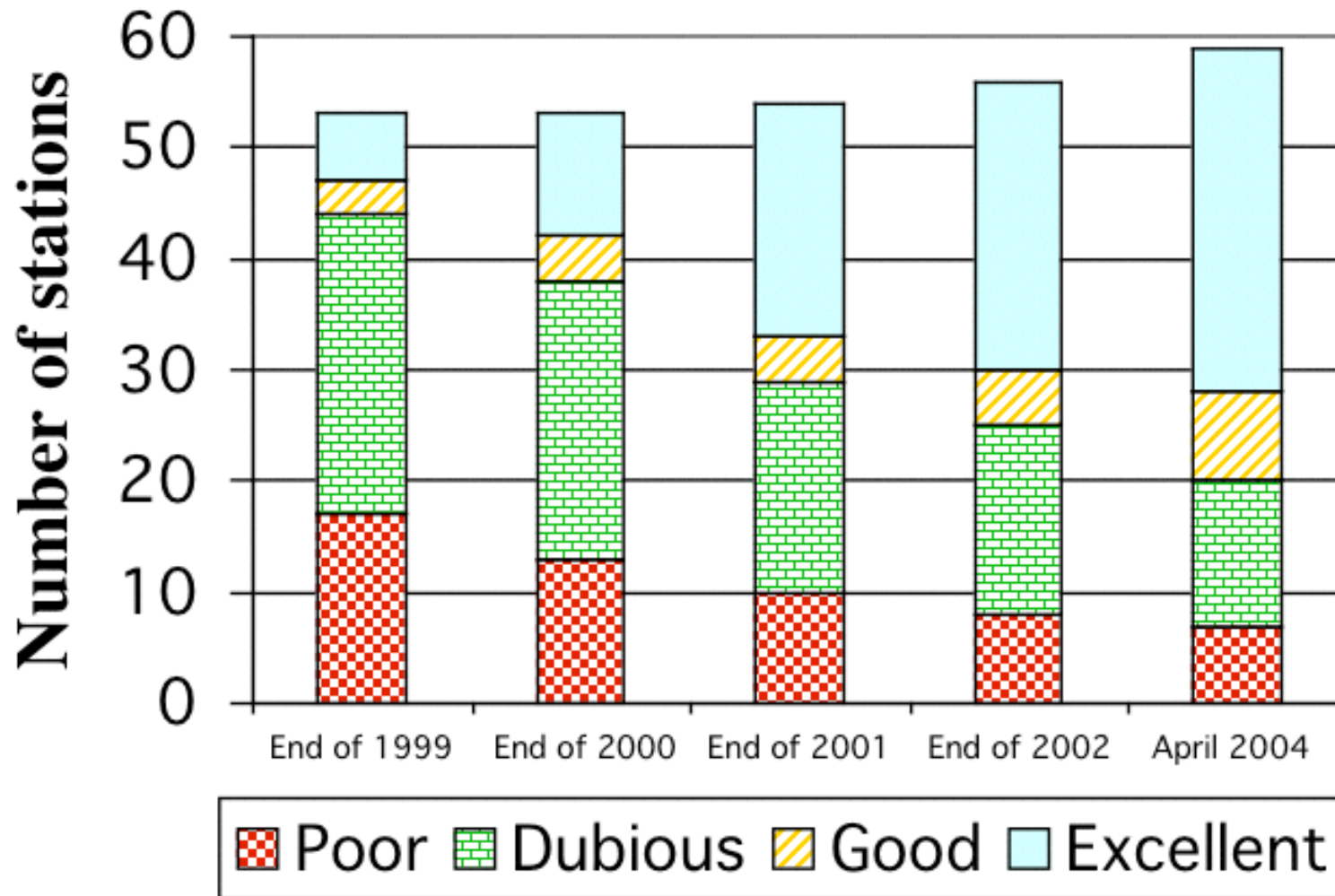
- **New permanent stations:**
  - Jiufeng (China): Dec 2003
  - Crozet (French Southern Indian Ocean territories): Dec 2003
  - Belgrano (Antarctica): Feb 2004, following an IDS proposal
- **Renovations:**
  - Manila (Feb 2003)
  - St Helena + Ascension (Mar 2003)
  - Ny-Ålesund (Aug 2003)
  - Yaragadee (Nov 2003)
  - Mount Stromlo (Jan 2004)
  - Cachoeira Paulista (Mar 2004)
- **IDS stations:**
  - Wettzell (May 2003 to Jan 2004)
  - Gavdos (starting Sep 2003, may become permanent once validated)
  - Sorsdal (Nov 2003 to Jan 2004): follow-up of last year's experiment

# Network's evolutions since Feb. 2003



- unchanged
- × planned removal
- ◆ renovated
- ★ new
- IDS

## Permanent network renovation progress



# Antennas estimated stability (2004/04)

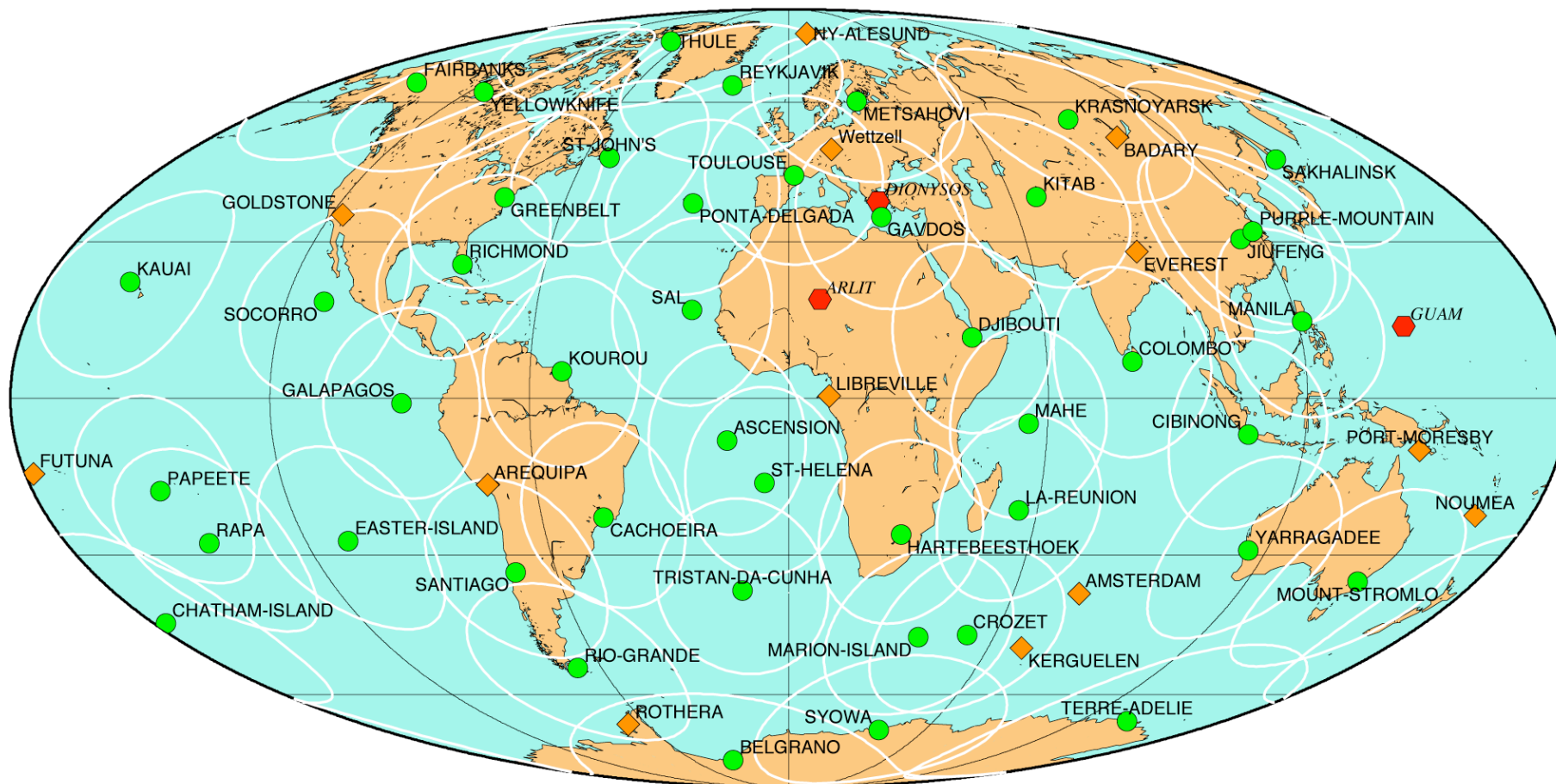


○ excellent      ■ good      ▼ dubious      ◆ poor

## Network's planned evolutions in 2004

- **Next renovations:**
  - Marion Island: under way
  - Badary & Yuzhno-Sakhalinsk: August
  - Reykjavik: this summer
  - Libreville: before the end of the year
- **New stations in project:**
  - Pohnpei, Micronesia: replacement of Guam, planned reconnaissance by Geoscience Australia
  - Tamanrasset, Algeria: replacement of Arlit
  - Other projects: Maldives, Midway, etc
- **IDS stations:**
  - New sites to be selected

# Maintenance: sometime in the network's lifetime...



Stations status on 2004/04/19:      ● OK      ◆ no data      ◆ planned removal

Visibility circles are for SPOT and Envisat satellites, 12 degrees cut-off

# Distribution of the DORIS equipment



1st generation (1.0 or 1.1) beacon



2nd generation beacon



3rd generation beacon



Alcatel antenna

8 stations



Starec antenna

14 stations



Alcatel antenna

1 station



Starec antenna

12 stations



Alcatel antenna

1 station

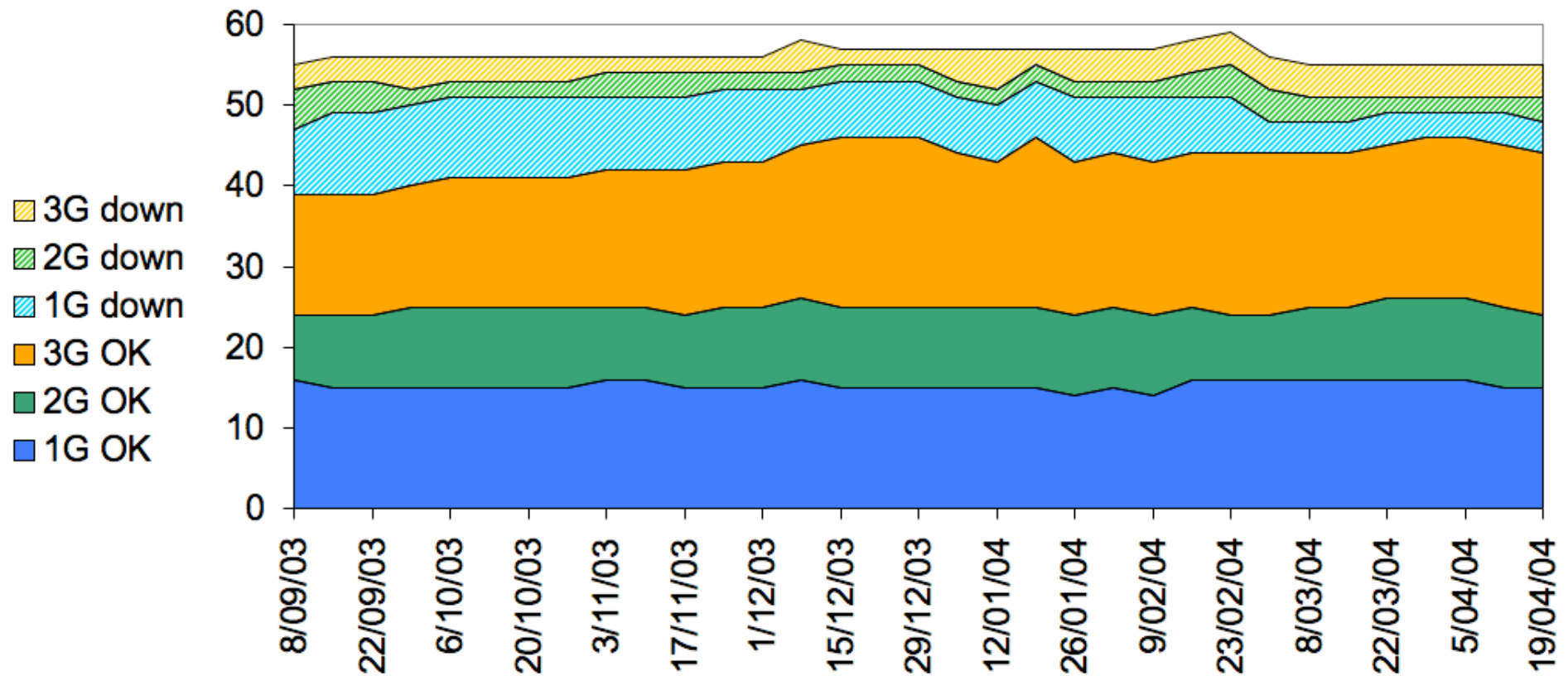


Starec antenna

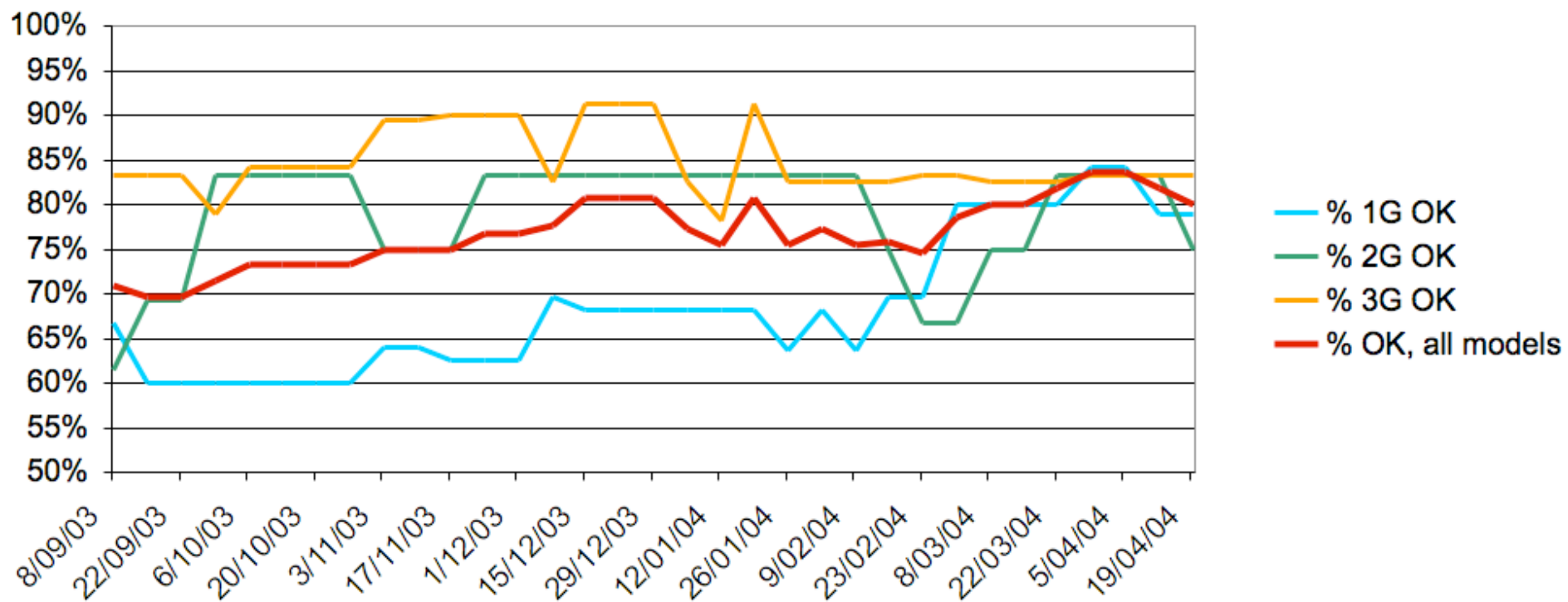
24 stations



## Maintenance: number of active/broken beacons per model

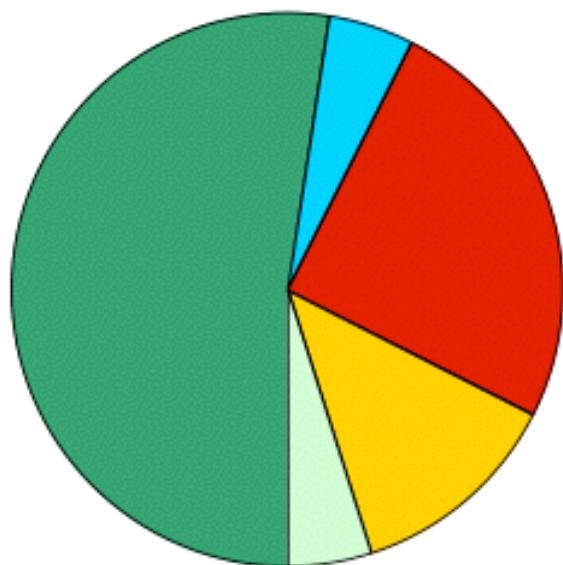


## Maintenance: working rate for each beacon model



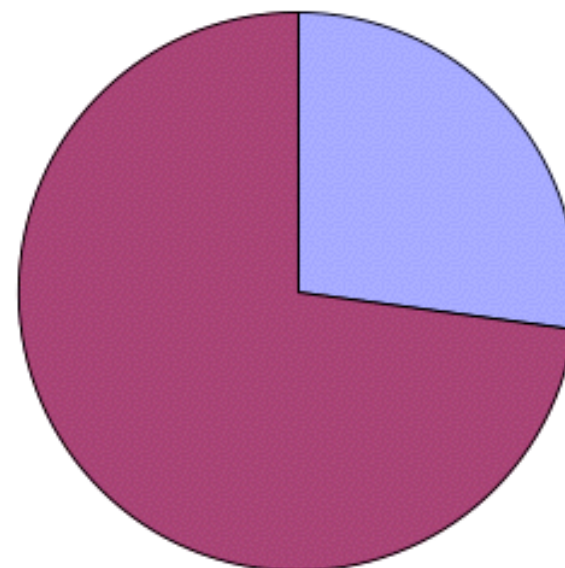
## 3rd generation beacons: deployment status & failures

Status of the 40 delivered beacons



- Installed, working (21)
- On site, pending installation (2)
- In repair (10)
- In retrofit (5)
- Spares (2)

Nature of the 11 failures since delivery



- OUS (3)
- 2 GHz (8)

# Colocations (<10 km) with other active IERS techniques



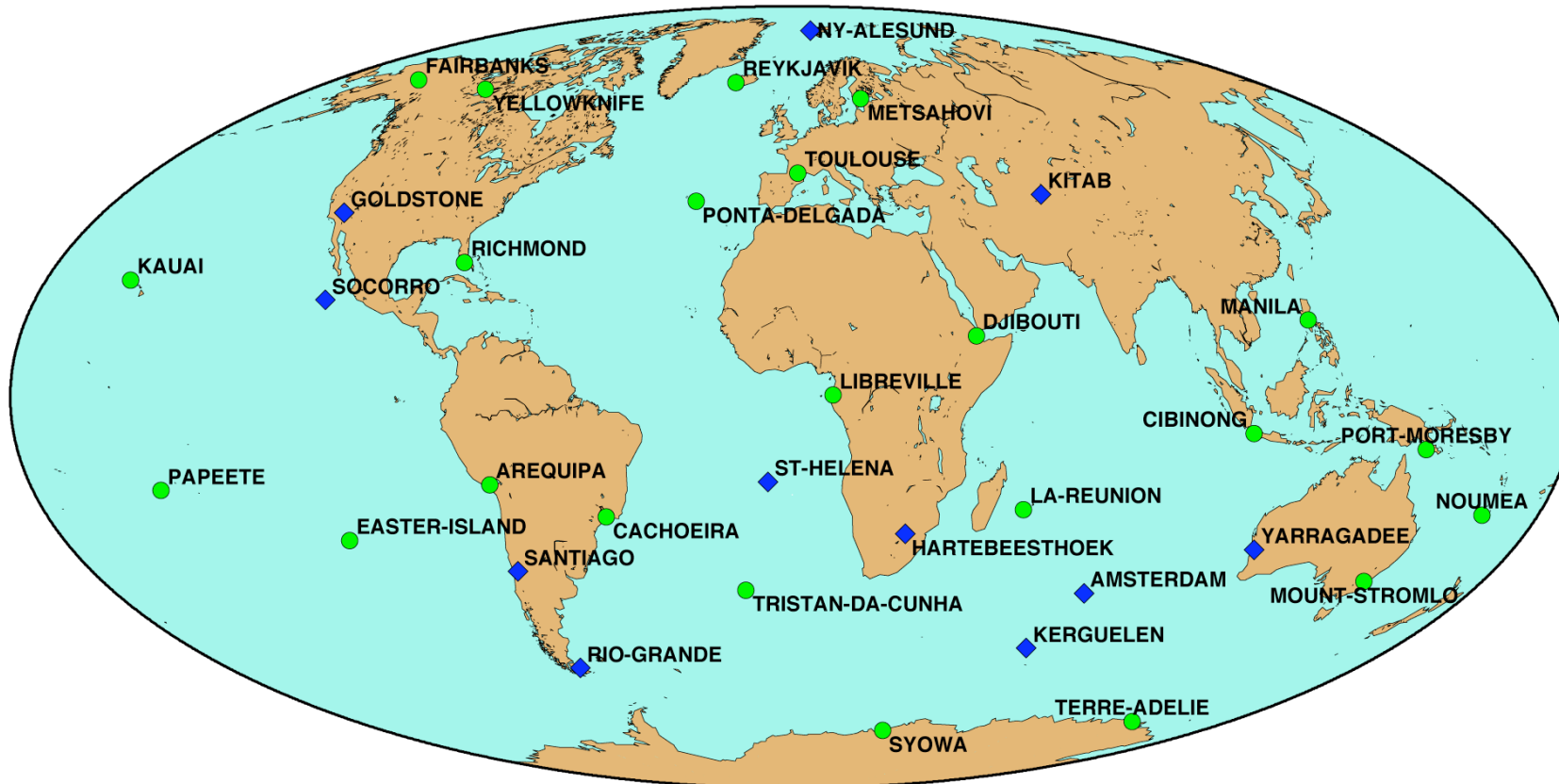
● GPS (IGS)

● SLR

● VLBI

○ No active colocation < 10 km

# DORIS-DORIS colocations

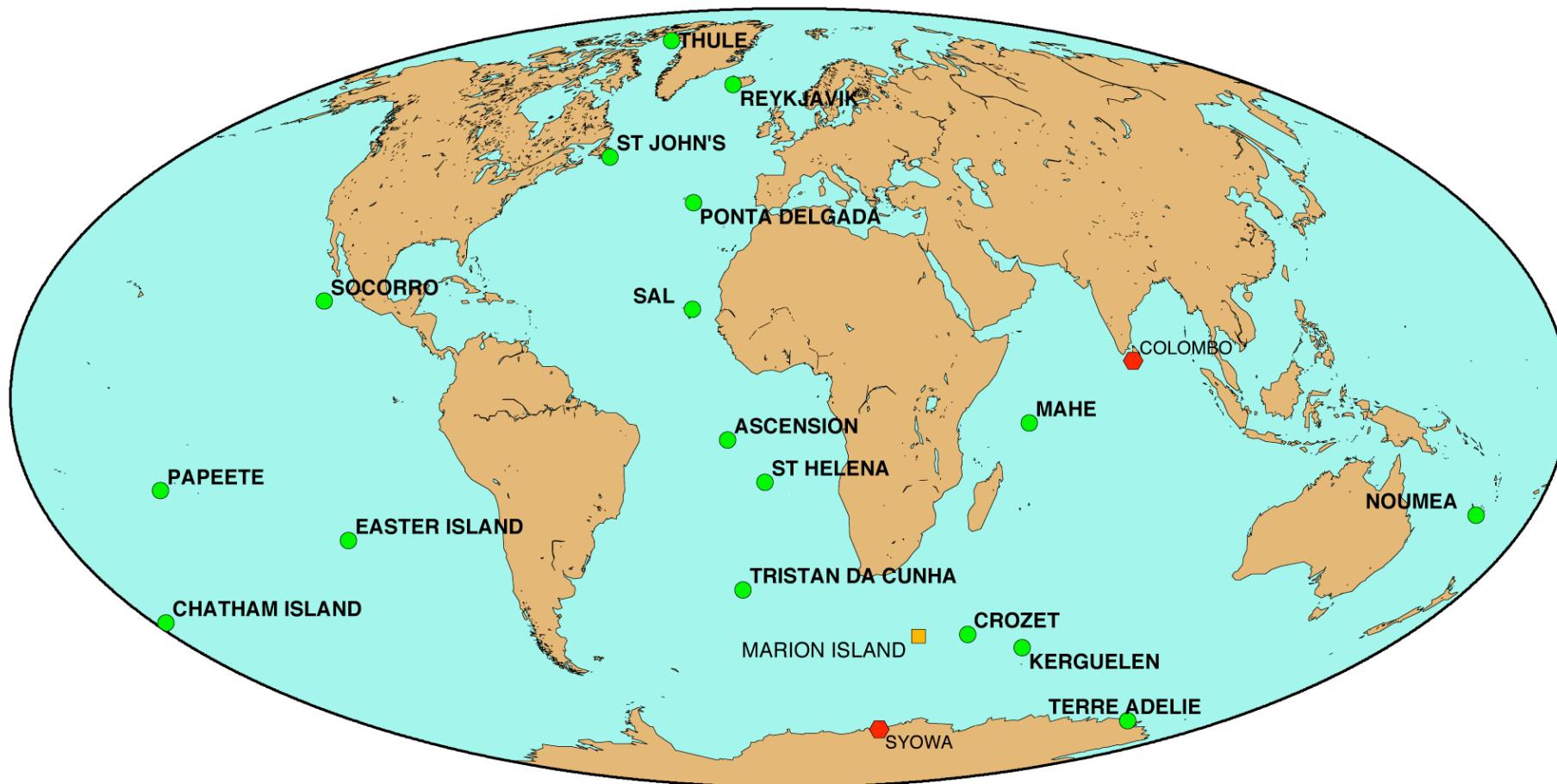


● 2 DORIS antenna positions

◆ 3 DORIS antenna positions

All ties have been measured, except: HBKA-HBLA, KERA-KERB, GOLA-GOMA

# Tide gauges colocations (<10 km)



● Measured tie

■ Planned tie

◆ Missing tie