Report of
The International DORIS Service:
DORIS System Status:

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IERS Directing Board Meeting No 43, San Francisco, 11 Dec. 2006

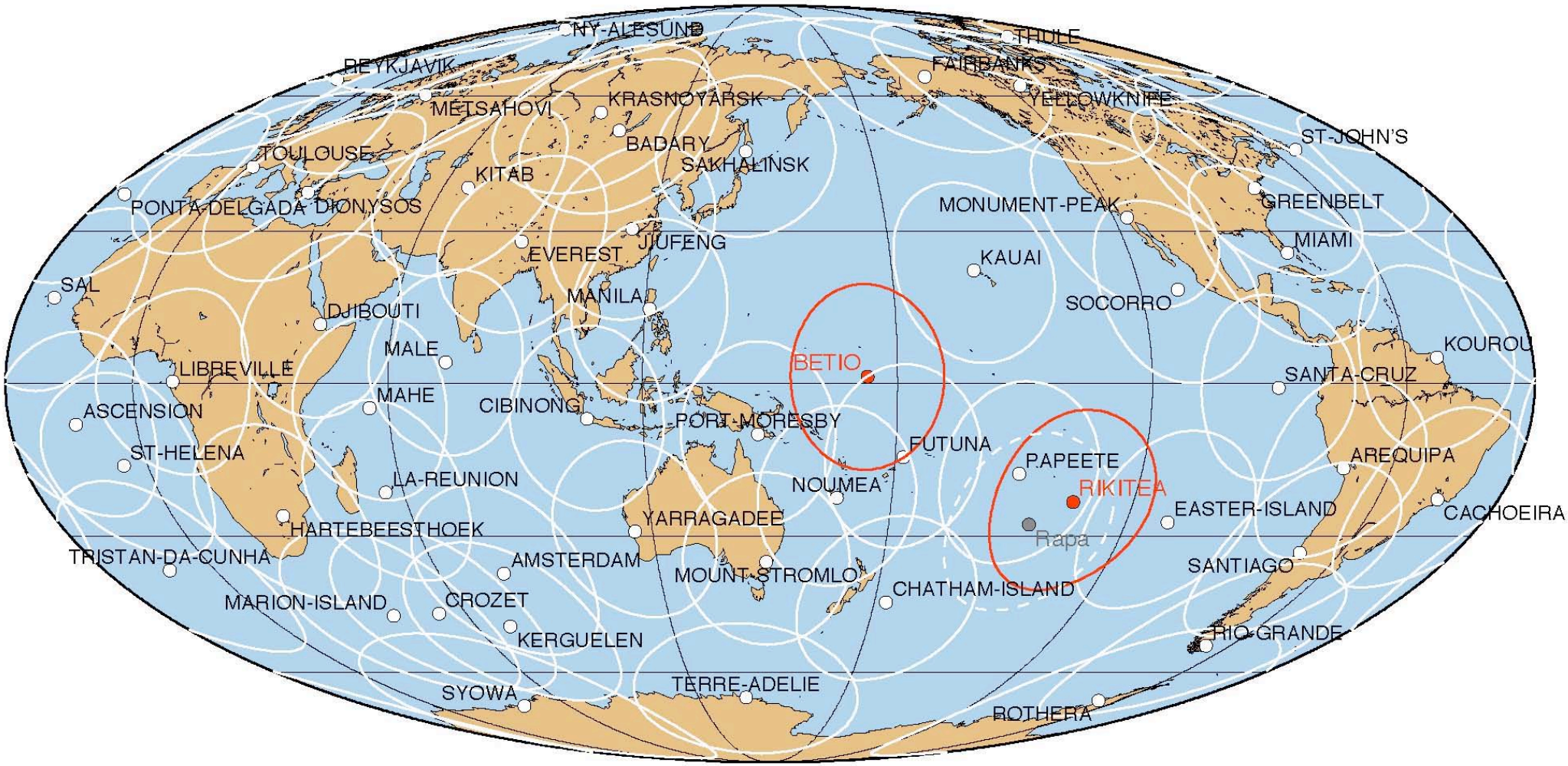
Outline

I. DORIS network
- Map
- Master and time beacons

II. DORIS special issue Journal of Geodesy

III. Future missions

DORIS Network



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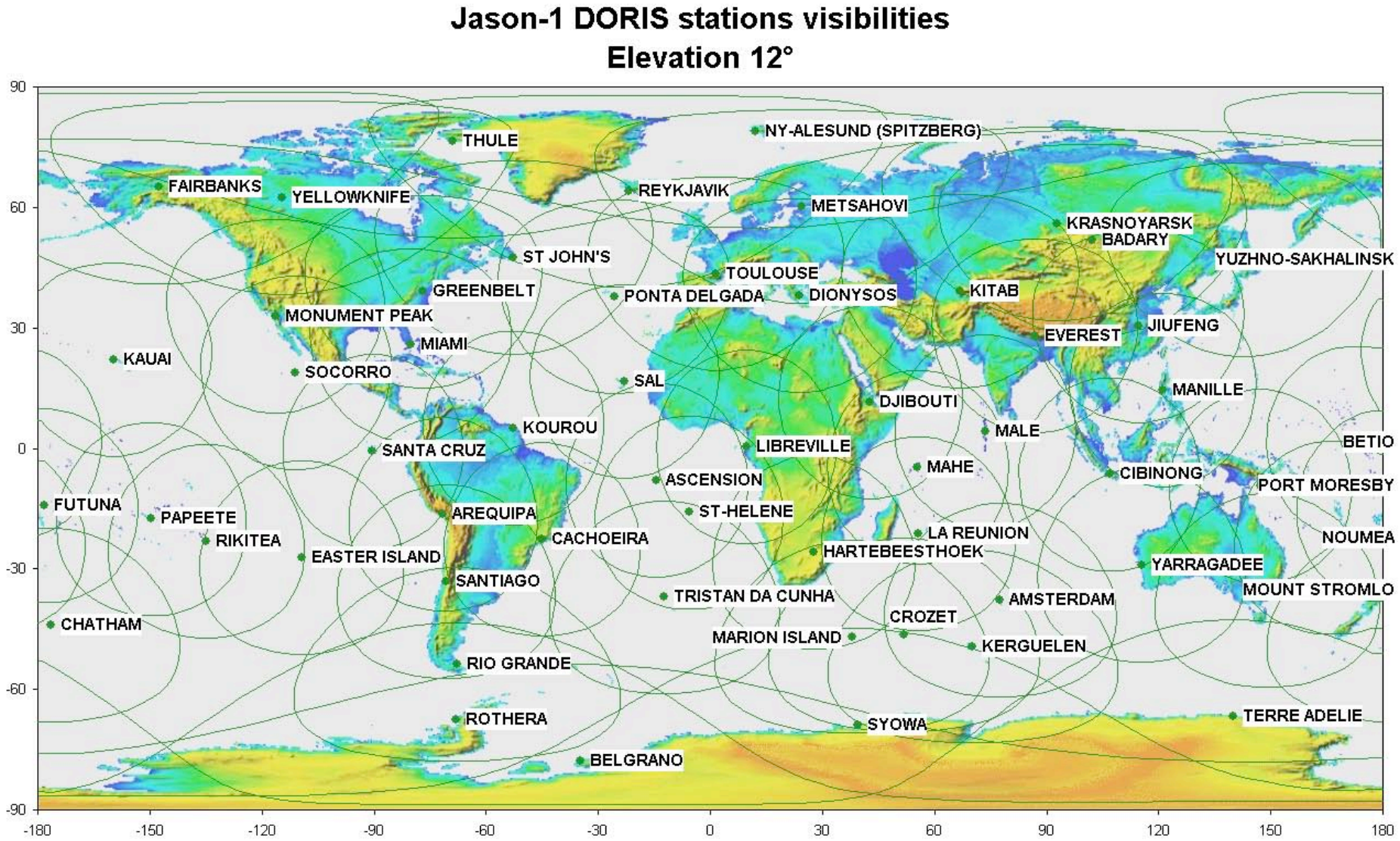
DORIS Network



DORIS Network Status

- Arequipa restored to operation after long hiatus, since August 2003 (new station ARFB. DORISMAIL 0458, August 7, 2006).

ARFB

DIOB

- Renovation of DIONYSOS station (DIOB). (DORISMAIL 0452).
- New antenna at DJIB (Djibouti), following discovery of tilt due to corroded base plate. (DORISMAIL 0456, July 3, 2006).
- Discovery of antenna tilt at Marion Island (MARB) (DORISMAIL 0453, June 8, 2006).

DORIS Network

Master and time beacons

- Time beacon = high accuracy time scale (atomic clock), used for on-board clock determination (500ns)
- Master beacon = time beacon + stations coordinates and time br
- 2 historical master beacons: Toulouse and Kourou
- 3rd master beacon: Hartebeesthoek September 12, 2005
- 4th master beacon (project): Papeete 2007
- time beacon (project): Yellowknife mid 2007

DORIS Special Issue
Journal of Geodesy, 80(8-11), November 2006
P. Willis (Ed.)

- 1st article submitted = October 2005, 3 reviewers per manuscript, 350 emails, publication = November 2006
- Country of Authors and co-authors: France (28), USA (13), UK (1), The Netherlands (1), Czech Rep. (1), Switzerland (1), Nepal (1)
- 17 articles in total
- DORIS system and IDS: 4 papers
- Geodynamics: 3 papers
- Ionosphere: 2 papers
- Reference frame and Earth rotation: 5 papers
- DORIS technical issues: 3 papers

New DORIS Citation

Tavernier, G.; Fagard, H.; Feissel-Vernier, M.; Le Bail, K.; Lemoine, F.; Noll, C.; Noomen, R.; Ries, J.C.; Soudarin, L.; Valette, J.J.; Willis, P. 2006.

The International DORIS Service: genesis and early achievements, in DORIS Special Issue, P. Willis (Ed.), *JOURNAL OF GEODESY 80(8-11):403-417, DOI: 10.1007/s00190-006-0082-4*

Future ocean observation missions

- 2GXX DORIS receiver: 7-channel, nominal and redundant chains in the same box, SPARC ERC32 processor, improved USO (short-term stability and reduced sensitivity to radiation)

- Jason-2 (NASA/CNES/NOAA/EUMETSAT) : June 2008
  T2/L2 (Time Transfer by Laser Link) + Carmen & JTD (radiation dose)

- CryoSat-2 (ESA): March 2009

- ALTI-KA (ISRO/CNES): 2009

- Jason-3?

- Sentinel-3?