

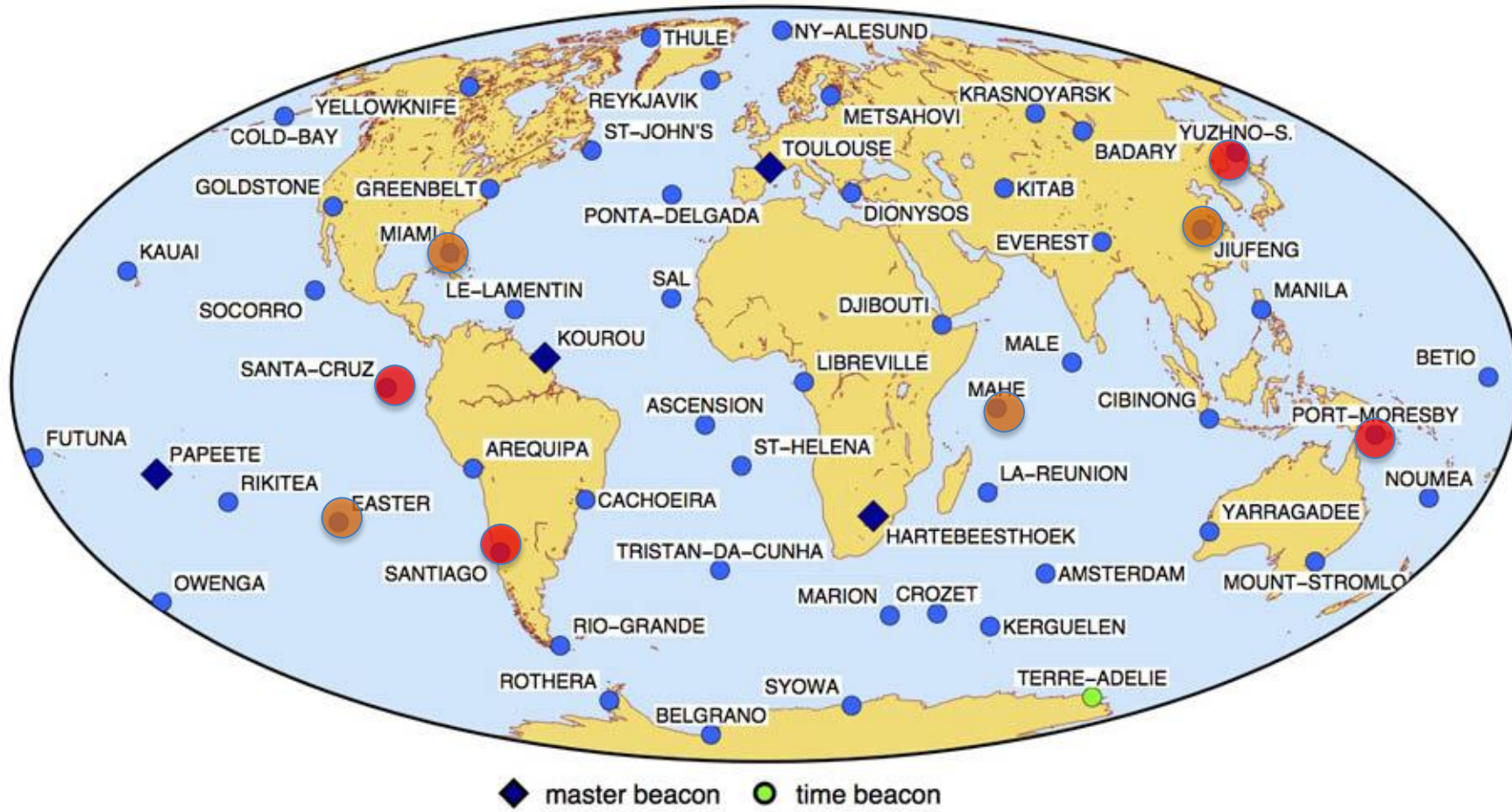
DORIS NETWORK STATUS + LOCAL TIE SURVEYS

MAY 2015



OPERATIONNAL STATUS

58 stations of which: 8 beacons are out of order (4 for over a year)

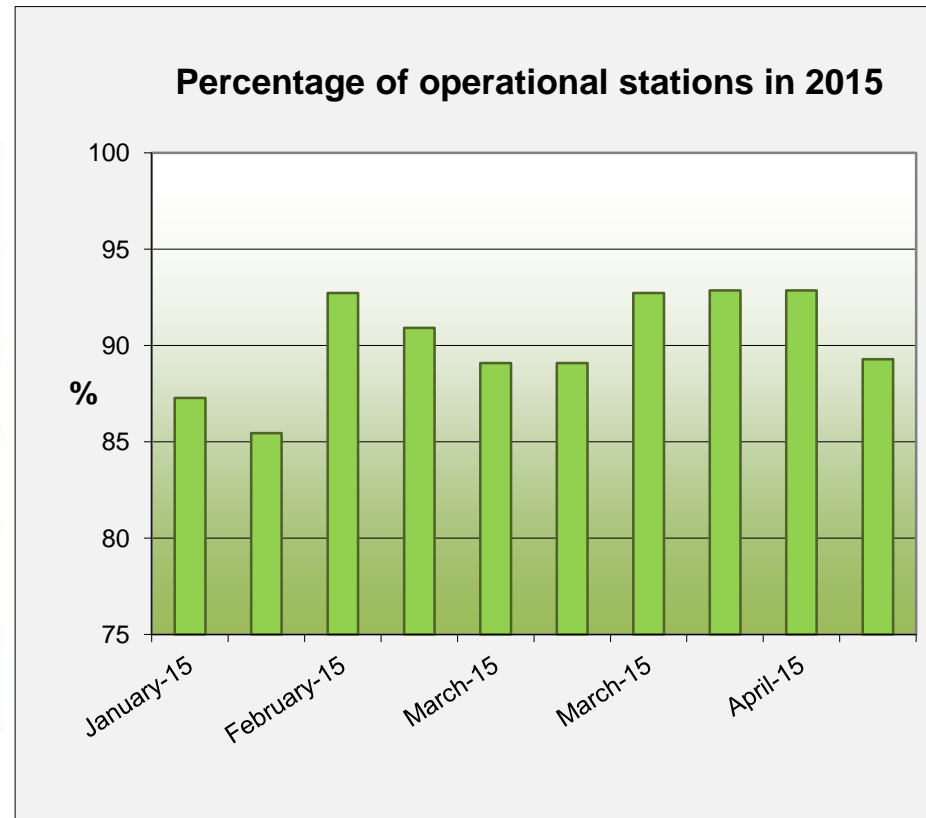
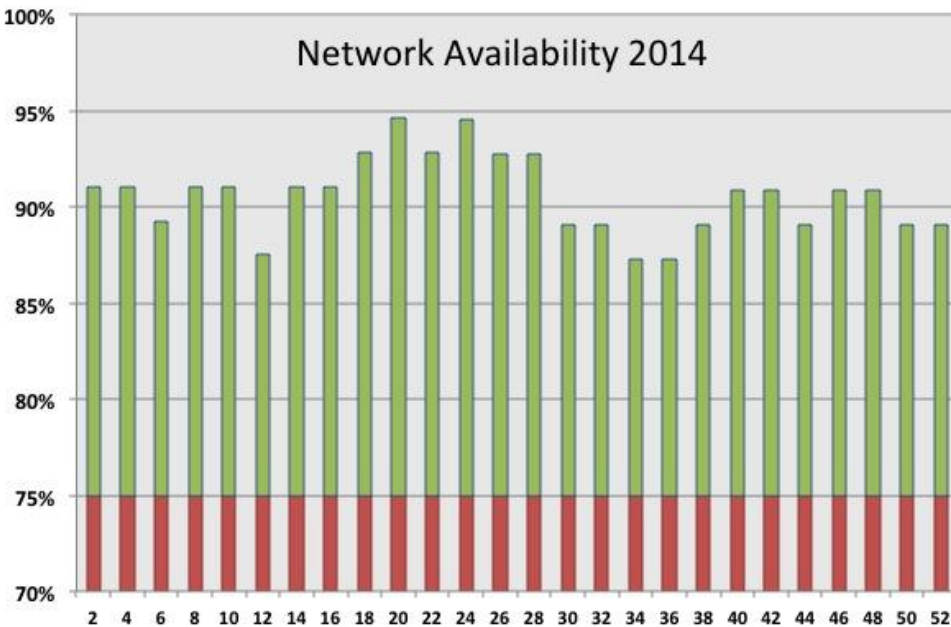


Out of Order for over a year:

Yuzhno-Sakhalinsk (11/2005), Santa Cruz (06/2009), Santiago (05/2013), Port-Moresby (06/2013)

NETWORK AVAILABILITY

- PROMPT AND EFFECTIVE MAINTENANCE



From CNES/SALP data

NETWORK EVENTS



2014-2015	Station		Event
May	KRWB	<i>Kourou</i>	<i>Tracking oscillator replacement</i>
April	ADHC	<i>Terre Adélie</i>	<i>Time beacon back to operation</i>
	TLSB	<i>Toulouse</i>	<i>Beacon & Tracking oscillator replacement</i>
March	GONC	Goldstone	New site
	ADHC	<i>Terre Adélie</i>	<i>Antenna replacement</i>
January	CIDB	<i>Cibinong</i>	<i>Beacon replacement</i>
	KEUC	<i>Kerguelen</i>	<i>Antenna replacement</i>
	ROWC	<i>Rothera</i>	<i>Antenna replacement</i>
December		Wettzell	Reconnaissance with a view to install a new station
November	OWEC	Owenga	New site in place of Chatham
	COBB	<i>Cold Bay</i>	<i>Beacon replacement</i>

■ SCHEDULED IN 2015

- Sal, CPV: major renovation (antenna re-location to get better visibility) planned in April
- Kitab, UZ: major renovation (station moving 200 m to get better visibility)
- Managua, NIC: new site in place of Miami (interferences with TV-mobile)

■ UNDER NEGOTIATION

- Easter Island, CHL: station re-location near IGS station “ISPA”
- Chichijima, JPN: waiting for frequency clearance
- Hokkaido, JPN: new station in place of Sakhalinsk; waiting for frequency clearance
- Santiago, CHL: possible re-location in Argentina, San Juan (SLR+GNSS site)
- Port-Moresby, PNG: station re-location in Northern Australia (Weipa or Katherine)
- Ny-Alesund, NOR: station re-location (co-location GNSS+SLR+VLBI)

IDS STATIONS

▪ WETTZELL, GE

- Reconnaissance in December 2014: 3 options for DORIS antenna.
- First VLBI/DORIS compatibility tests performed by BKG last month.
- Tests on real conditions planned in May.

▪ GUAM, US

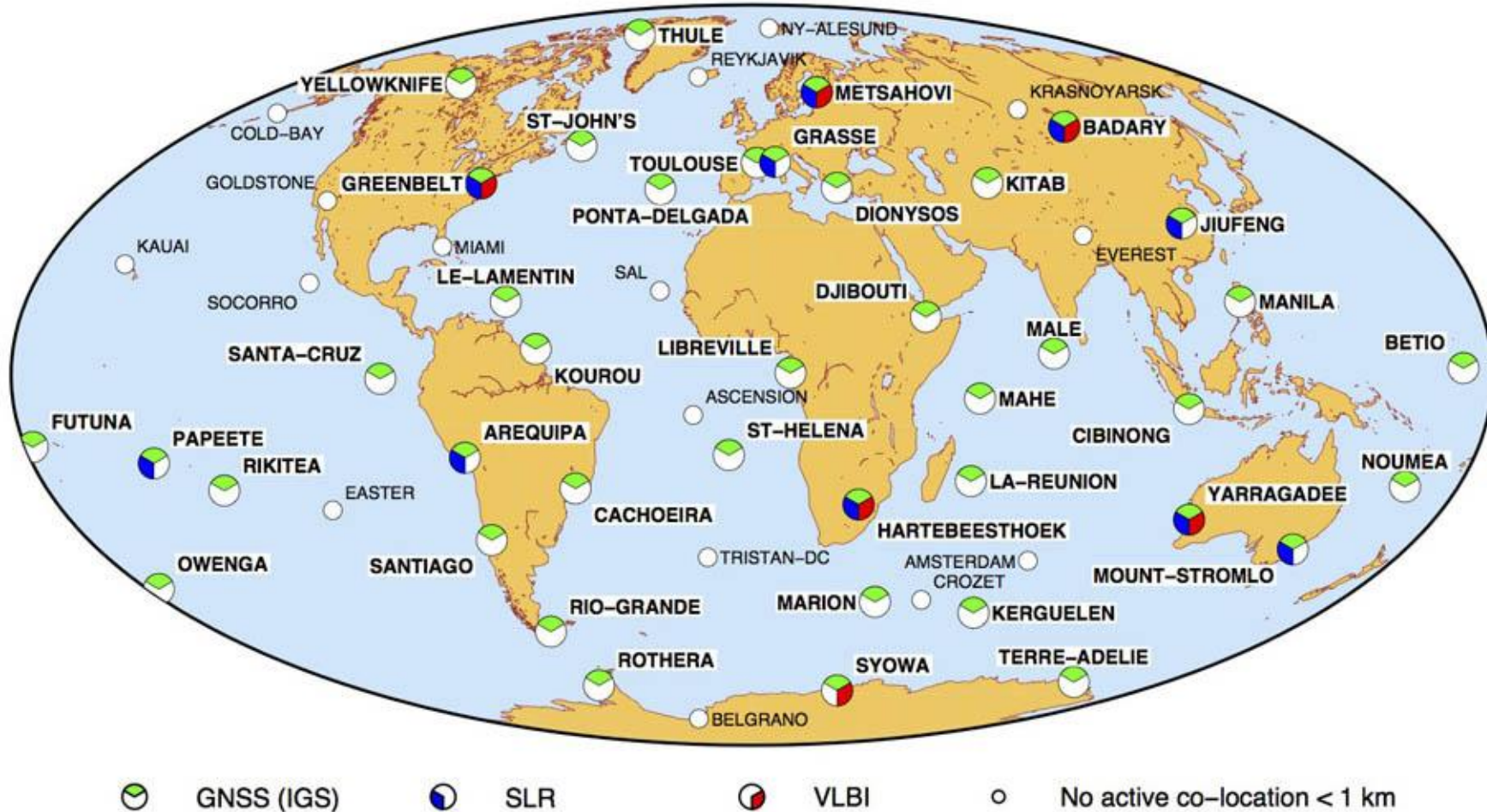
- IGS “GUUC” + tide gauge co-location
- Reconnaissance planned at the end of 2015

▪ SEJONG, KOR

- Fundamental site project
- GNSS and VLBI already operational; managed by NGII
- SLR: on-going re-location; managed by KASI
- DORIS: final technique to be installed (2016-17)

CO-LOCATIONS

■ DORIS STATIONS CO-LOCATED WITH OTHER IERS TECHNIQUES

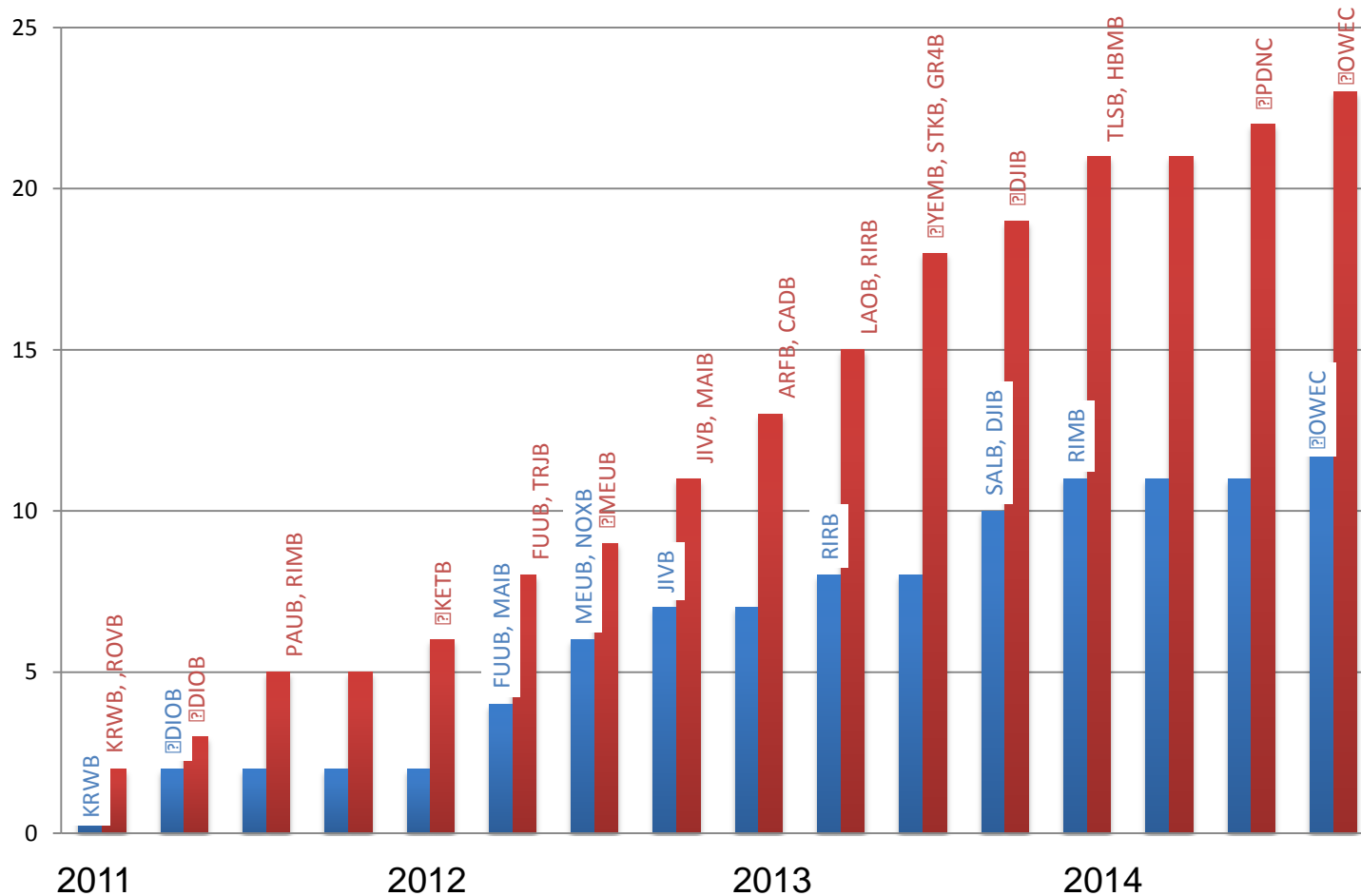


=> Co-location to-be: Wettzell, Ny-Alesund, Sejong

LOCAL SURVEYS AND CO-LOCATION



- 12 NEW CO-LOCATIONS WITH GNSS THANKS TO REGINA
- 23 HIGH PRECISION LOCAL TIE SURVEYS IN THE LAST 4 YEARS



■ IGN CO-LOCATION SURVEY REPORTS AVAILABLE ONLINE:

http://itrf.ign.fr/local_surveys.php (link available on IDS website: “Documents” > Stations > Local surveys)

- GRASSE, August 2013
- LE LAMENTIN, July 2013
- RIO GRANDE, June 2013
- AREQUIPA, January 2013
- JIUFENG, October 2012
- TRISTAN DA CUNHA, June 2012
- PAPEETE, July 2011
- RIKITEA, July 2011
- DIONYSOS, May 2011
- KOUROU, February 2011
- ROTHERA, February 2011

■ UPCOMING CO-LOCATION SURVEY REPORTS (DORIS + REGINA):

- FUTUNA, April 2012
- KERGUELEN, April 2012
- METSAHOVI, June 2012
- MAHE, December 2012
- CACHOIERA, March 2013
- ST JOHN’S, July 2013
- YELLOWKNIFE, July 2013
- DJIBOUTI, December 2013
- TOULOUSE, February 2014
- HARTEBEEESTHOEK, March 2014
- OWENGA, November 2014
- MANILLE, December 2014

■ IERS LOCAL SURVEY GUIDELINES AND SPECIFICATION

- IGN Draft document in the internal review process
- This text will be submitted to the IERS Working Group at the end of June
- After revision and validation, this document will be provided to **IERS** as **Technical Note**

- PROVISION OF ABOUT 20 ADDITIONAL TIE VECTORS
- RE-COMPUTING OF CO-LOCATION SURVEYS CARRIED OUT BY IGN IN THE PAST
 - Re-processing of GPS observations using new software, absolute antenna calibrations
 - But due to: missing data, shortage of manpower...
 - Just a couple of sites has been provided
- ITRF WEB SITE OVERHAUL
 - Status: the database is operational, web development has stopped since 09/2014
 - IGN has migrated to virtual machines and redefined its development priorities
 - New objective: mid 2016

⇒ ITRF2014 solution will be published on the current website

- **DORIS SPECIAL ISSUE (ADV. SPACE RESEARCH)**
 - “VLBI/DORIS Compatibility tests at GGAO”
Lawrence Hilliard (NASA), Christopher Beaudoin (MIT), Brian Corey (MIT), Cédric Tourain (CNES), William Petrachenko (NRCC)
 - “DORIS Ground Antenna Position – Initiating an error budget”
Jérôme Saunier (IGN), Albert Auriol (CNES), Cédric Tourain (CNES)
 - “Assessment of the DORIS Network Monumentation”
Jérôme Saunier (IGN)

- **DORISMAILS FOLLOWING EVERY ANTENNA CHANGING OR MOVING**
 - Coordinates of the new reference point + installation characteristics

- **REGULARLY UPDATED SITE LOGS**
 - <http://ids-doris.org/network/sitelogs.html>

- **DORIS INTERNAL FILE (EVERY 6 MONTHS)**
 - Successive antenna positions on the same site
 - ftp://doris.ign.fr/pub/doris/cb_mirror/stations/DORIS_int_ties.txt

- **CO-LOCATION SURVEYS REPORTS AND SINEX FILES**
 - http://itrf.ensg.ign.fr/local_surveys.php