

The International DORIS Service: genesis and early achievements

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International DORIS Service: genesis

- ➔ ITRF-94: first DORIS contribution to the IERS
- ➔ DORIS Days, Toulouse, April 27-29, 1998
- ➔ IUGG, July 1999, Birmingham: IAG DORIS Pilot Experiment
- ➔ September 1999: call for participation
- ➔ DORIS Days, Toulouse, May 2-3, 2000
 - http://ids.cls.fr/html/report/doris_days_2000/programme.html
- ➔ February 2002: Martine Feissel-Vernier, Analysis Coordinator

International DORIS Service: genesis

- ➔ **IDS Workshop, Biarritz, June 13-14, 2002**
 - http://ids.cls.fr/html/report/ids_workshop_2002/programme.html

- ➔ **2002 Analysis campaign**
 - http://lareg.ensg.ign.fr/IDS/events/camp_2002.html

- ➔ **IDS Analysis Workshop, Marne La Vallée, February 20-21, 2003**
 - http://lareg.ensg.ign.fr/IDS/events/prog_2003.html

- ➔ **IUGG, July 2003, Sapporo: IDS accepted as an IAG service**

International DORIS Service: genesis

- ➔ 2003 Analysis campaign
 - http://lareg.ensg.ign.fr/IDS/events/camp_2003.html
- ➔ IDS Plenary Meeting, Paris, May 3-4, 2004
 - http://lareg.ensg.ign.fr/IDS/events/prog_2004.html
- ➔ February 2006: Frank Lemoine, new Analysis Coordinator
- ➔ IDS Workshop, Venice, March 13-15, 2006
 - <http://ids.cls.fr/html/events/IDS2006>

15 YEARS OF PROGRESS IN RADAR ALTIMETRY

Governing Board

- ➔ **Gilles Tavernier** **CNES** **Chairperson**
- ➔ **Hervé Fagard** **IGN** **Network representative**
- ➔ **Frank Lemoine** **NASA GSFC** **Analysis coordinator**
- ➔ **Carey Noll** **NASA GSFC** **Data Flow coordinator**
- ➔ **Ron Noomen** **Delft UT** **Representative of the IERS**
- ➔ **John Ries** **UTEX CSR** **Member at large**
- ➔ **Laurent Soudarin** **CLS** **Director of the Central Bureau**
- ➔ **Pascal Willis** **IGN / JPL**
- ➔ **TBD** **Stations Selection Group Chairperson & Representative of the IAG**

Central Bureau

➔ CNES/IGN/CLS

- Jean-Pierre Granier, Gilles Tavernier
- Laurent Soudarin, Jean-Jacques Valette
- Hervé Fagard, Pascal Willis

➔ Website :

- <http://ids.cls.fr>

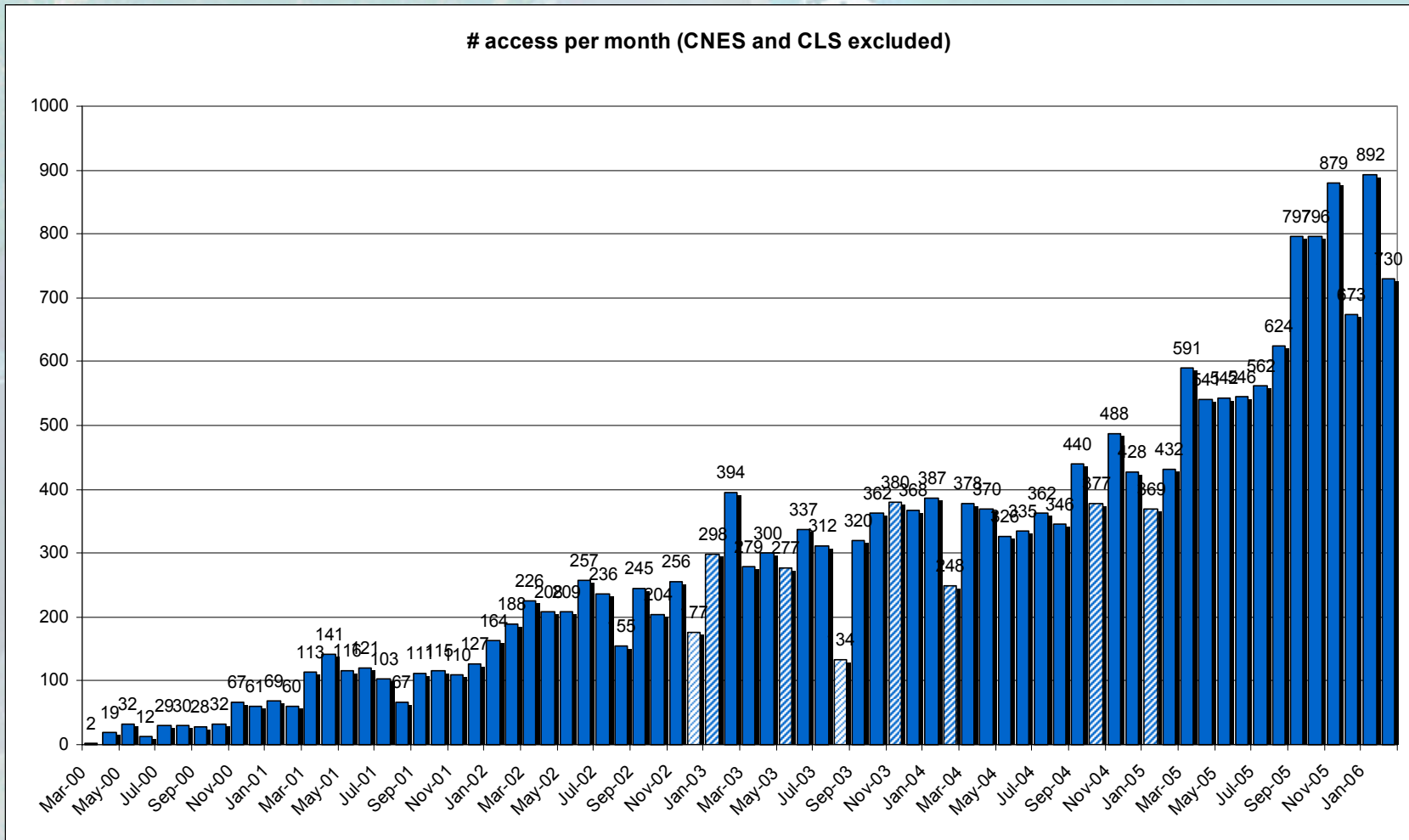
➔ IDS Mails

- DORIS Mails <http://listes.cls.fr/www/arc/dorismail>
- DORIS Reports <http://listes.cls.fr/www/arc/dorisreport>
- Analysis Forum <http://listes.cls.fr/www/arc/ids.analysis.forum>



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Web server statistics



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Central Bureau

➔ Network site logs

- <http://ids.cls.fr/html/doris/sitelog.html>

Belgrano - Doris Station



Site logs

[BEMB200507.LOG](#) (current; see below)
[BELB200405.LOG](#)

Other pictures

[BELB.jpg](#)

Site news

Local events

None

Doris mails

- [No 0393](#) DORIS station upgrade at Belgrano (Antarctica)
- [No 0306](#) New station at Belgrano (Antarctica)

BELGRANO DORIS site description form

0. Form

Prepared by : SIMB (DORIS installation and maintenance department)
 Date prepared : 13/07/2005
 Report type : UPDATE

1. Site location information

Site name : BELGRANO
 Site DOMES number : 66018
 Host agency : Instituto Antartico Argentino
 City :
 State or province :
 Country : Antarctica (Argentine base)
 Tectonic plate :
 Geological information :

Geographical coordinates (ITRF) :

North Latitude : -77 deg 52' 26''
 East Longitude : -34 deg 37' 41''
 Ellipsoid height : 240 m m

Approximate altitude :

2. DORIS antenna and reference point information

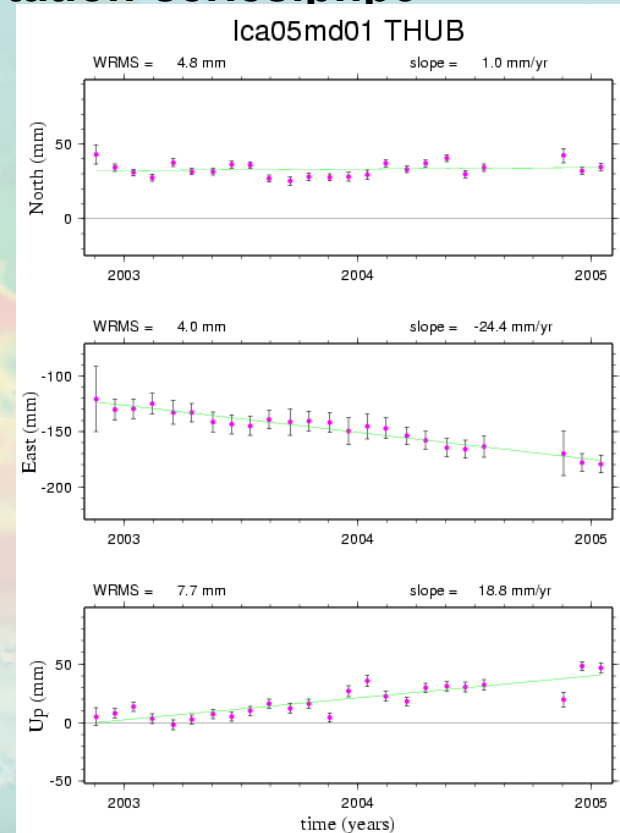
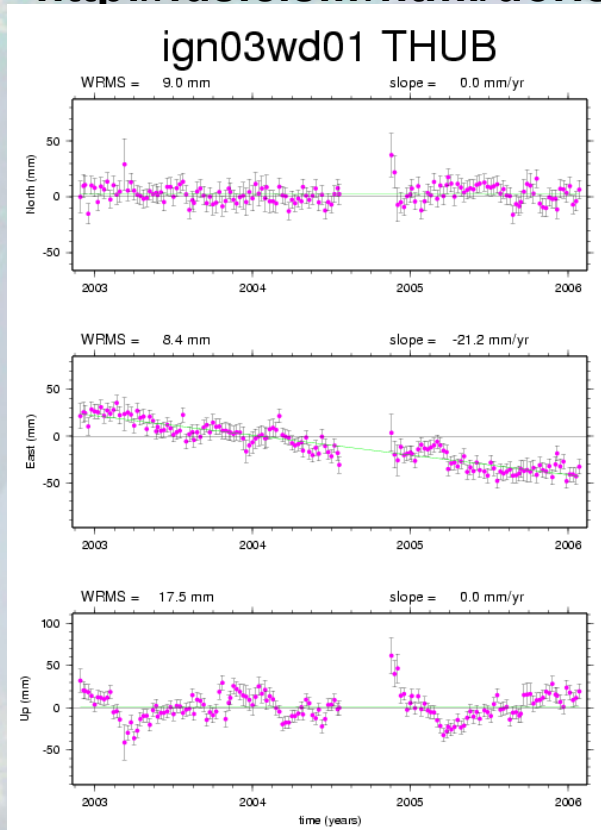
2.1

Four character ID : BELB
 Antenna model : Starec 52291 type

Central Bureau

➔ IDS time series of station coordinates

- <http://ids.cls.fr/html/doris/ids-station-series.php3>



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Central Bureau


- ➔ DORIS/SSALTO daily status - CNES/SOD MOE orbits
 - <http://ids.cls.fr/html/doris/moe.php3>


DORIS/SSALTO daily status
CNES/SOD MOE orbits


[Description](#)


Data validation and residuals


select a satellite


[Spot 2](#)


[Spot 4](#)

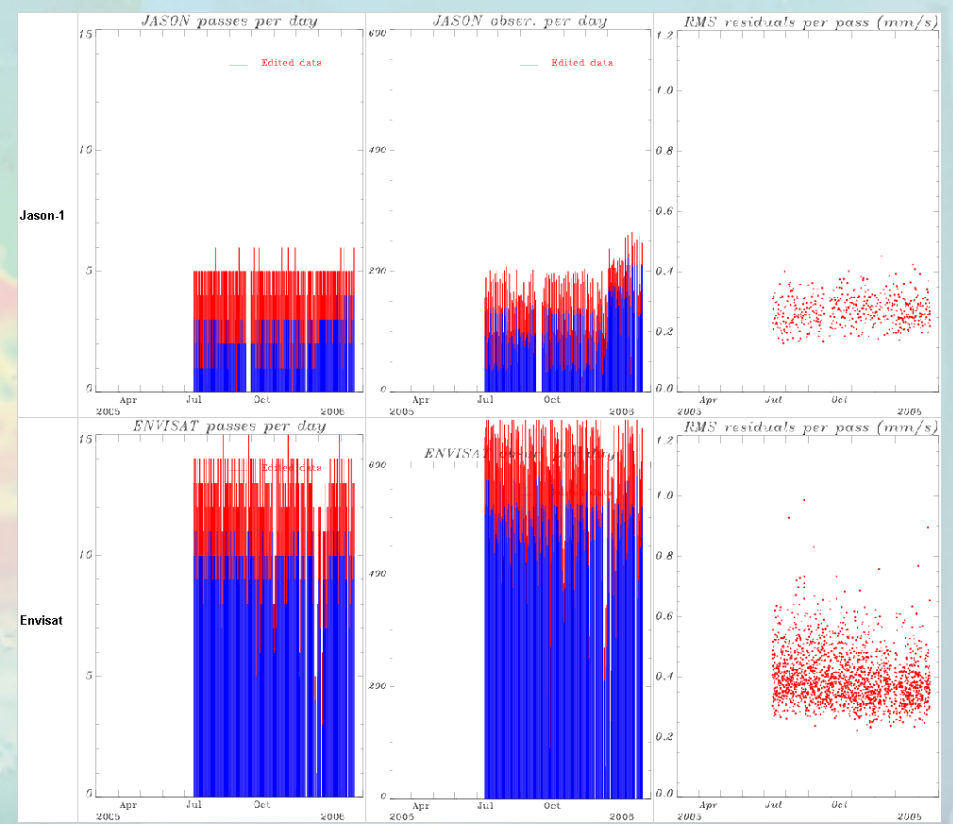

[Spot 5](#)


[Jason-1](#)


[Envisat](#)

select a station

PURA ▲
 RAQB
 REUB
 REYB
REZB
 RIDA ▼
 RIOB
 RIPB ▼



Central Bureau

➔ Bibliography

- <http://ids.cls.fr/html/report/citation.html>

- List of [peer-reviewed articles](#) related to DORIS.
- [On-line DORIS publications](#).

Citation

It is important that you acknowledge the IDS in your papers and presentations that rely on DORIS data and results. The following article is suggested for citation:

G. Tavernier, H. Fagard, M. Feissel-Vernier, F. Lemoine, C. Noll, J. Ries, L. Soudarin, P. Willis (2005), The International DORIS Service (IDS), *Adv. Space Res* 36(3) :333-341, DOI : 10.1016/j.asr.2005.03.102

Furthermore, please include DORIS as a keyword in your papers. The DORIS community relies on these acknowledgements and references to strengthen its requests for continued support from its funding organizations.

See also complete list of all [peer-reviewed articles](#) related to DORIS.

- http://ids.cls.fr/html/report/IDS_for_ITRF2004_v1_0.pdf

Venice (Italy), 13 > 18 March 2006

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Stations Selection Group

- ➔ **TBD (Frank Lemoine GSFC, Kristine Larson Univ. of Colorado)**
- ➔ **Geoscience Australia Ramesh Govind**
 - Sorsdal glacier, Antarctica: Dec. 2001- Jan. 2002, January 2004
 - Lambert glacier , Antarctica: January 2003
 - Burnie: permanent altimeter calibration site in Bass Strait
- ➔ **BKG - Wettzell W. Schlüter, H. Hase**
 - Wettzell: fundamental geodesy, May 2003
 - TIGO-Conception: fundamental geodesy
- ➔ **TU Crete S. Mertikas**
 - Gavdos Island: permanent altimeter calibration site, September 2003
- ➔ **IAA/AWI J.L. Hormaechea, H. W. Schenke**
 - Belgrano II, Antarctica, February 2004

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Data flow coordination Data Centers

➔ Data flow coordination : Carey Noll NASA GSFC

➔ Data Centers :

- ◆ preprocessed DORIS measurements from 7 satellites (5 still active)
- ◆ ancillary data
- ◆ Analysis Centers products

● NASA GSFC CDDIS - USA

Carey Noll



- ◆ http://cddis.gsfc.nasa.gov/doris_summary.html
- ◆ <ftp://cddis.gsfc.nasa.gov/pub/doris/>

● IGN LAREG - France

Bruno Garayt (TB)



- ◆ <ftp://lareg.ensg.ign.fr/pub/doris/>

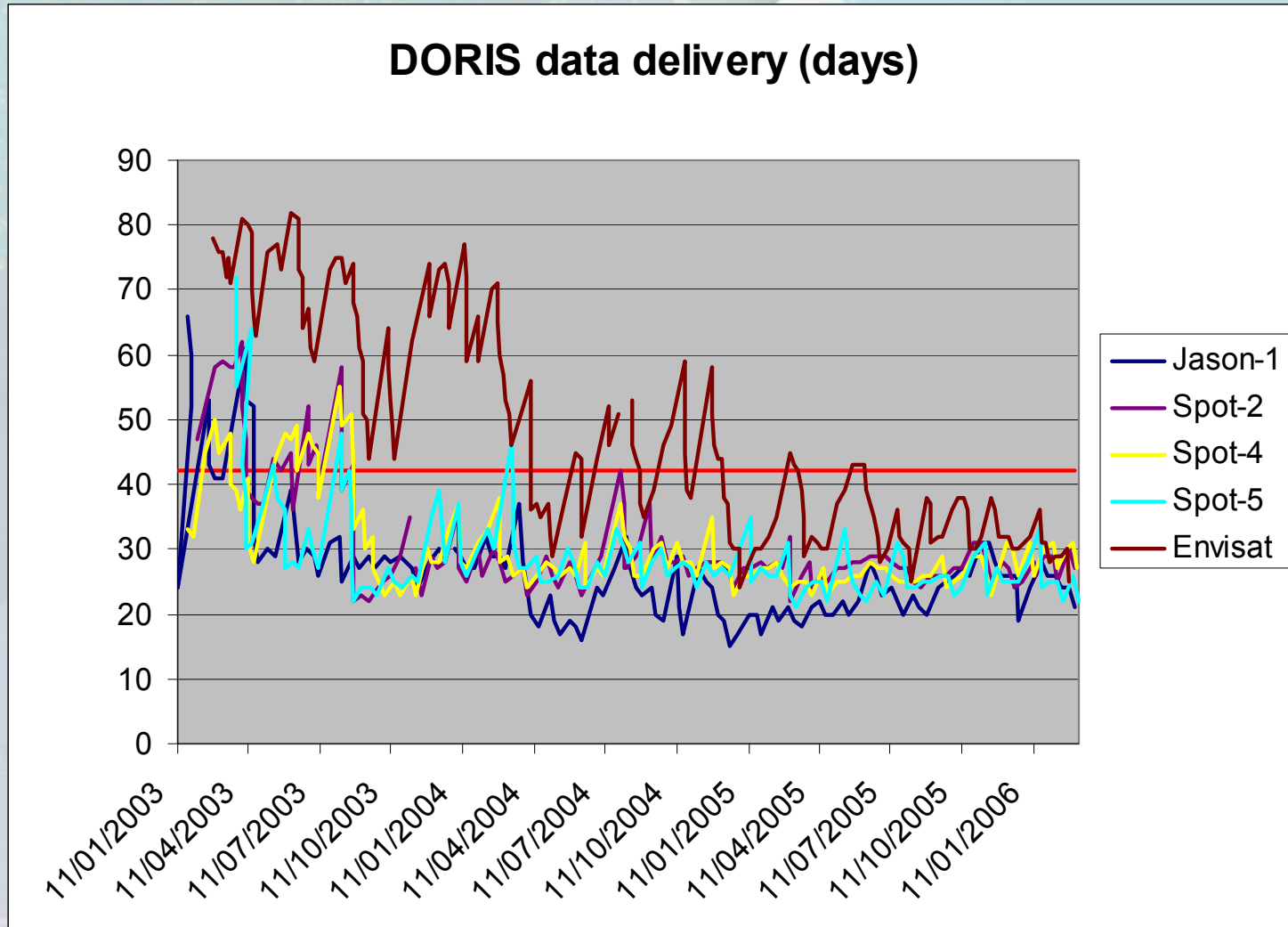
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DORIS ARCHIVE CONTENT

Satellite	Time Span
TOPEX/Poseidon	25-Sep-1992 through 01-Nov-2004
SPOT-2	31-Mar through 04-Jul-1990 04-Nov-1992 through present
SPOT-3	01-Feb-1994 through 09-Nov-1996
SPOT-4	01-May-1998 through present
SPOT-5	11-Jun-2002 through present
Jason-1	15-Jan-2002 through present
ENVISAT	13-Jun-2002 through present

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DORIS data delivery (days)



IDS Analysis coordination

- ➔ **Analysis coordination : Frank Lemoine NASA/GSFC**
 - **Analysis coordination page: <http://lareg.ensg.ign.fr/IDS/> initiated by Martine Feissel-Vernier to be moved to the CB server soon**

- ➔ **Presentation:**
 - Analysis coordination and steps required towards generation of IDS products**

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IDS Workshop programme

➔ Monday, 13 March 2006

- **14.00-16.20 Session 1 - Chairpersons: Frank Lemoine , Gilles Tavernier**

- ◆ 14.00-14.20 The International DORIS Service: genesis and early achievements G. Tavernier
- ◆ 14.20- 14.50 DORIS System Improvements A. Auriol
- ◆ 14.50- 15.20 DORIS network 2006 review: renovation result, stability and co-location assessment, prospects.
- ◆ 15.20- 15.40 Analysis coordination and steps required towards generation of IDS products F. Lemoine

- **15.40- 16.10 Coffee break**

- **16.10-17.40 Session 2 - Chairpersons: Pascal Willis, John Ries**

- ◆ 16.10-16.30 Overview of the anomalies at the Kourou beacon site P. Yaya
- ◆ 16.30-16.50 Analysis of DORIS stations coordinates long time series with CATREF software J.J. Valette
- ◆ 16.50-17.10 Spectral characteristics of the DORIS position time series & Statistical studies of DORIS stations stability in view of a combined solution K. Le Bail

- **17.10-17.40 Discussion, Moderators: J. Ries, P. Willis**

- ◆ DORIS system evolutions, future missions

- **18.00- 19.30 Ice breaker reception**

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IDS Workshop programme

➔ **Tuesday, 14 March 2006**

- **9.00-10.40 Session 3 – Chairpersons: Frank Lemoine, John Ries**
 - ◆ 9.00-9.20 A model of present-day plate motions from the DORIS system L. Soudarin
 - ◆ 9.20-9.40 Plate motion and glacial isostatic adjustment from DORIS P. Willis
 - ◆ 9.40-10.00 DORIS absolute velocities on Sorsdal and Lambert glaciers in Antarctica J.J. Valette
 - ◆ 10.00-10.20 DORIS data processing with Bernese GPS Software at Geodesy Observatory Pecny: tests, initial results and future prospects P. Stepanek
 - ◆ 10.20-10.40.1 Current status of the South Atlantic Anomaly corrective model for Jason-1 DORIS Doppler data J.-M. Lemoine, P. Sengenès
- **10.40- 11.10 Coffee break**
- **11.10 -12.30 Session 4 – Chairpersons: Nikita Zelensky, Jean-Michel Lemoine**
 - ◆ 11.10-11.30 Positioning results with the SAA corrective model for Jason DORIS data L. Soudarin
 - ◆ 11.30-11.50 DORIS solutions using phase measurements, application on Spot5 data F. Mercier
 - ◆ 11.50-12.10 DORIS Time Bias estimated using Jason-1, TOPEX/POSEIDON, and ENVISAT orbits N. Zelensky
 - ◆ 12.10-12.30 Evolution of the different processing steps impacting the Doris 1B Products F. Mercier
- **12.30- 14.00 Lunch Sala Laguna**

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IDS Workshop programme

➔ Tuesday, 14 March 2006 (continued)

● 14:00 –17:20 **Session 5 – Chairpersons: Gilles Tavernier, Frank Lemoine**

- ◆ 14.00-14.30 IDS Analysis and Combination Centers: Status and Plans

IGN/JPL	P. Willis
LEGOS/CLS	L. Soudarin
GSFC/Geoscience Australia	F. Lemoine
INASAN	S. Kuzin/F. Lemoine
Geodesy Observatory Pecny	P. Stepanek
IDS Combination Center	JJ. Valette

- ◆ 14:30-15:30 Discussions Moderators: Frank Lemoine; Gilles Tavernier
 Analysis coordination, future campaigns JJ. Valette
 Support to new Analysis Centers F. Lemoine, L. Soudarin

● 15.30- 16:00 **Coffee break**

- ◆ 16.00– 17.00 Discussions (continued): Moderators: Frank Lemoine; Gilles Tavernier
 Jason-1 SAA models, assessment campaign J.-M. Lemoine, F. Mercier
 IDS contribution to the International Polar Year J.J. Valette, G. Tavernier

● 17.20- 18.00 **IDS Governing Board Meeting**

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IDS Workshop programme

➔ Wednesday, 15 March 2006

- **9.00-12.00** **Session 6 – Chairpersons: Karine Le Bail, Gilles Tavernier**
 - ◆ 9.00-9.20 Combination of Polar motion parameters series obtained from DORIS D. Gambis
 - ◆ 9.20-9.40 Ionospheric Applications of the Scintillation and Tomography Receiver P. Bernhardt
in Space (CITRIS) used with the DORIS Radio Beacon Network
 - ◆ 9.40-10.00 New DORIS 2GXX Data and associated products J.P. Granier
 - ◆ 10.00-10.20 Discussion Moderators: F. Mercier, N. Zelensky
New standards for Jason-1 and ENVISAT reprocessing

- **10.20- 10.50** **Coffee break**
 - ◆ 10.50-11.20 Discussion Moderators: J.P. Granier, J. Ries
DORIS Data delivery delay and format
 - ◆ 11.20-12.00 Discussion Moderators: D. Gambis, J. Ries, J.J. Valette
Estimation of EOP rates for DORIS
Motion of the Geocenter
Ionospheric Studies and New Data Products

- **12.00-12.30** **Concluding session**
Chairpersons: Frank Lemoine, Laurent Soudarin, Pascal Willis
Summary
Recommendations

Venice (Italy), 13 > 18 March 2006