



Online meeting

June 29, 2021

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## IDS GB meeting

### **AGENDA:**

DORIS system  
Postponement of the IDS workshop in 2022 / new event in 2021?  
IDS contribution to ITRF2020  
DORIS special issue  
IDS reports  
Newsletter

### **MAIN DECISIONS:**

-IDS workshop postponed in March 2022  
-DORIS day in November 2021, set up of an organization committee

### **ATTENDEES:**

Elected and appointed members: Claudio Abbondanza, Hugues Capdeville & Petr Stepanek, Pascale Ferrage, Karine Le Bail, Frank Lemoine, Patrick Michael, Guilhem Moreaux, Ernst Schrama, Laurent Soudarin, Tonie van Dam

Excused: Jérôme Saunier

« Ex-officio » member: Denise Dettmering

<p><b>Actions list</b></p>	<p>See appendix The list was not reviewed during the meeting.</p>
<p><b>DORIS system and Network</b></p>	<p><b>Missions (Pascale)</b></p> <ul style="list-style-type: none"> <li>• Successful launch of the Chinese satellite <b>HY-2D</b> on Wednesday, May 19, 2021. Same orbit as HY-2C (958 km, 66°)</li> </ul> <p>8 satellites currently in operation. 17 missions have contributed to IDS since 1990.</p> <ul style="list-style-type: none"> <li>• Future missions: SWOT (2022), Sentinel-3C (2023), Sentinel-3D, Sentinel-6B (2025) DORIS waiting for approval for the next HY-2E/F/G/H To be confirmed: ESA's mission CRISTAL (2 satellites) for glaciology and oceanography; Sentinel New G</li> </ul> <p><b>NRT Jason3 DORIS DATA (RINEX) &amp; Orbits from DIODE (sp3) (Pascale)</b> First feedback from the NRT WG (sent by Denise, May 6):</p> <ul style="list-style-type: none"> <li>• few remarks mainly related to the file structure on the server. Under consideration, but these changes will not be easily achieved.</li> <li>• the latency (2-4h) is very promising. DORIS can significantly contribute to the ultra-rapid modeling along with GNSS. By concerning the data distribution of DORIS, it can significantly mitigate the problem caused by the fluctuations in the number of GNSS receivers providing hourly data.</li> </ul> <p>Denises says the first results from the integration of the data in DGFI-TUM's ionospheric models should be given in October.</p> <p><b>System (Pascale)</b></p> <ul style="list-style-type: none"> <li>• ADM-x, the future new DORIS receiver <ul style="list-style-type: none"> <li>○ deep evolutions: lower recurrent cost, slight reduction of size and weight, same performances, and scalable</li> <li>○ work in stand-by pending confirmation of future missions with DORIS onboard.</li> </ul> </li> <li>• Mixed DORIS and GNSS receiver: <ul style="list-style-type: none"> <li>○ R&amp;T study still in progress since 2017, demonstrator phase planned for the end of 2021 (duration 2 years)</li> <li>○ manufacturing of an electrical model and performances assessments planned for 2023</li> </ul> </li> </ul> <p><b>Network (based on Jérôme's inputs)</b> <b>Badary:</b> Restarting of the station on April 28, 2021, after 3 years of stop! -New agreement CNES/IGN/INASAN/IAA -Reactivation by Host Agency -Numerous measurement interruptions found after the return to service of the DORIS station. The stand-by mode is used during each VLBI observations sessions. The BdRAO (Institute of Applied Astronomy) responded favorably to Jérôme to revise the question of DORIS compatibility with VLBI following their equipment upgrade to VGOS (VLBI2010 system) as they have done with the legacy VLBI (RT-32).</p>

	<p><b>Installation and Renovation</b></p> <ul style="list-style-type: none"> <li>No mission of the Station Installation and Renovation Service (SIRS) since September 2020. Several antenna replacements were on standby. But “business is picking up”. Several missions to come for antenna maintenance and B4G installation: <ul style="list-style-type: none"> <li>July: La Réunion (+ articles by Jérôme and Host Agency for next Newsletter)</li> <li>September-October: Male, Ny-Alesund, Santa Cruz, San Juan, Rikitea + Gavdos, new site on ESA’s calibration site “GVD1”</li> </ul> </li> <li>Files in progress for new sites: Hanga Roa (Chile), Katherine (Australia), Changchun (China), Russia</li> </ul> <p>Frank suggests looking at SLR stations whose host agencies will be more responsive to the demands of the DORIS project.</p> <p><b>Dionysos:</b> first experience of scientific collaboration with a host agency  Jérôme reports:  “Arnaud Pollet and Samuel Nahmani (IGN) both agreed to participate to the thesis Advisory Committee for a PhD student from the National Technical University of Athens.  This follows a discussion in Athens I had last September with the Director of the Dionysos Satellite Observatory that is hosting our DORIS station.  I hope there will be other opportunities. Maybe with the University of Chile following the ongoing negotiations for a new DORIS site in Easter Island...”</p> <p>Frank comments that there is another possibility of collaboration with Stelios Mertikas, Technical University of Crete.</p>
<p><b>Workshop IDS</b></p>	<p>The OSTST meeting, initially planned in October 2021, is postponed to March 2022, still in Venice. The IDS workshop is usually organized by CNES in conjunction with the European edition of the OSTST meeting. There is a possibility to postpone the Workshop in March 2022 too, from the 21<sup>st</sup> to the 23<sup>rd</sup>, only possible period at the convention center in the first half of the year.</p> <p>The GB agrees that the Workshop will be held on these dates, even though other important events will take place at that time (IVS General Meeting 24-26 March, EGU general assembly 3-8 April). There are doubts about the possibility of travel for the usual participants. That is why the GB asks the organization to study solutions to broadcast the sessions live or to record them. The objective is to organize a hybrid workshop.</p> <p>Other ideas have been expressed: pre-recorded presentations, Q&amp;A sessions.</p>
<p><b>DORIS day</b></p>	<p>Because of the postponement of the Workshop, it is proposed to organize a DORIS Day in Fall 2021, probably in November. Even though this event cannot be held face-to-face, the GB feels it is important for IDS to move forward after two years without interaction with the community. An organization committee is set-up: Frank (lead), Karine, Ernst, Pascale, Jérôme (TBC), Guilhem, Laurent.</p> <p>The first meeting will be held online on July 6, from 2pm to 4 pm UTC.</p>
<p><b>IDS contribution to ITRF2020</b></p>	<p>Guilhem gives the following status:</p> <ul style="list-style-type: none"> <li>the IDS contribution to ITRF 2020 is based on: <ul style="list-style-type: none"> <li>4 solutions (ESA, GOP, GRG, GSC) from 4 different software packages (Napeos, Bernese, Gins-Dynamo, Geodyn, respectively)</li> </ul> </li> </ul>

- a total of 14 DORIS missions from 1993.0 to 2021.0.
- the combined series contains EOP motion and positions of 200 stations at 86 sites including four sites with the 4 geodetic techniques (Wettzell, Badary, Yarragadee, Greenbelt). 57 sites are co-located with at least one other IERS technique. 26 sites (30%) have more than 20 years of observation.
- It performs better than the IDS contribution to the ITRF2014 in terms of station positioning, origin and scale.
- A new version is on the way to:
  - Mitigate start and end of life on some missions on the scale.
  - Fully include Sentinel 3A&B missions.
- GFZ provided with single solutions for Jason-1/2/3, Sentinel-3A/B.

**DORIS special issue**

Ernst reports the following status:

- 12-Apr-2021: Proposal to Pascal Willis for a **special issue in Advances in Space Research** on DORIS
- 14-Apr-2021: Maximum of ca 25 papers, the title of the special issue is: **New Results from DORIS for Science and Society**
- 30-Apr-2021: COSPAR approves the idea
- 21-Jun-2021: Announcement on the COSPAR website
- 23-Jun-2021: Wait for Elsevier to put a call for papers message on the ASR website, it depends on the vacation schedules.
- 01-Oct-2021: Anticipated first submissions in EES
- 01-Jan-2022: Deadline for first submissions, after COSPAR approval it became 31-jan-2022

Denise and Ernst are the guest editors of this special issue.

Announcement posted on the COSPAR website at <https://cosparhq.cnes.fr/assets/uploads/2021/05/DORIS-announcement.pdf>

**Action GB\_21\_03:** the Central Bureau will announce the DORIS special issue by DORISmail, on the website and in the next Newsletter issue.

**Central Bureau**

**IDS Activity reports**

- IDS contribution to IAG report 2019-2020 provided to Markku Poutanen on June 22.
- Still some missing contributions for the IDS activity report 2019-2020.

**Newsletter**

The next issue is planned for September 2021 with the following content:

- C. Jayles: Doppler crossings on-board Doris receiver carrier satellites
- A. Couhert: about geocenter determination with DORIS
- J. Saunier + Host Agency: DORIS in La Réunion
- IDS life



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**Next GB  
meeting**

Tuesday October 12, from 2pm to 4 pm UTC (before the DORIS day).



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## Appendix: action list

### New actions

#	Orgin	Title	Action	Answer	Resp.	Opening date	Deadline	status
GB_21_03	GB	DORIS special issue	announce the DORIS special issue by DORISmail, on the website and in the next Newsletter issue		Central Bureau	29/06/2021	11/10/2021	open