

3.4.4 International DORIS Service (IDS)

The activity related to DORIS is conducted as a worldwide cooperation within a Pilot Project of the International Association of Geodesy. After a pre-operational phase, it should become a full IAG Service (tentatively in Sapporo in 2003).

The DORIS Pilot project includes a Steering Committee, a Central Bureau, Data Centers and Analysis Centers.

The Steering Committee is composed of the following individuals: M. Feissel-Vernier (France, Analysis Coordinator), F. Lemoine (USA, stations selection group), C. Noll (USA, Data flow coordinator), J. Ries (USA), L. Soudarin (France, Central Bureau), G. Tavernier (France, chairman) and P. Willis (France, representative to IERS). With the help of the Central Bureau (CNES/CLS/IGN) it defines the orientation of the Pilot Experiment.

In particular, there is a dedicated DORIS Web site at <<http://ids.cls.fr>> for the Pilot Experiment and another one at <<http://lareg.ensg.ign.fr/IDS/>> for the Analysis coordination aspects as well as a DORISMail facility at <<http://list.ensg.ign.fr/www/arc/dorismail>> to allow easy information between all groups (59 messages in 2002).

In 2002, only one Data Center was operational at NASA/CDDIS (anonymous ftp access at [cddisa.gsfc.nasa.gov](ftp://cddisa.gsfc.nasa.gov)). It contains DORIS data from all DORIS satellites, DORIS products (see below) and general DORIS information (satellite models description, attitude files, information on satellites maneuvers or data gaps). However, another Data Center (IGN) was under rejuvenation in 2002 and effectively started in 2003.

Several DORIS Analysis groups have participated to the DORIS Pilot project. The table below summarizes their contributions :

Table 1: DORIS Pilot Experiment Analysis Centers (O = Operational, P = Planned)

Analysis Center	Country	Global Sinex	Time series Sinex	Geocenter	EOP	ionosphere
CNES	France		P		O	
CNES/SSALTO	France		O			
IGN/JPL	France/USA	O	O	O	O	
LEGOS/CLS	France	O	O	O		
INASAN	Russia	O	O	O	O	
UT/CSR	USA	O				
AUSLIG	Australia	P	P	P	P	
ESA/ESOC	Germany				P	
G.O. Pecny	Czech Rep.	P	P	P		
IAA	Russia	P	P	P		
ROB	Belgium					
U. Newcastle	UK	P	P	P	P	P

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To review the results obtained by the different groups, an IDS Workshop has taken place in Biarritz on June 13-14. Attendance (90 people in total), agenda and presentations in PDF format can still be found at http://ids.cls.fr/html/report/ids_workshop_2002/programme.html.

In 2002, data from 3 more DORIS satellites became available (JASON, SPOT5 and ENVISAT). Consequently the current DORIS constellation increased drastically from 3 to 6 satellites in 2002. Furthermore, the new satellites carry improved DORIS receivers (increased accuracy and multi-channel capability allowing tracking of 2 tracking beacons simultaneously). They also carry new DIODE software to allow improved on-board real-time orbit computation (<20 cm radially). Results from all analysis groups have been improved and were recently presented at an IDS Analysis Workshop, held in Paris on February 20 and 21, 2003 (agenda, attendance and presentation in PDR format can be found at http://lareg.ensg.ign.fr/IDS/events/wkshp_2003.html).

In 2002, an important effort has been made in the DORIS community for inter-comparison of results. Within the scope of an international analysis campaign, DORIS analysis groups were asked to submit times series of coordinates and EOP and several groups submitted results (some for the campaign time period like INASAN, others already for all available DORIS data from 1993 to 2002 like IGN/JPL and LEGOS/CLS). Other groups were in charge of the inter-comparison and the merging of solutions provided in SINEX format (CLS, DGFI and IGN). Additional information can be found on the organization of this campaign as well as on the results obtained at http://lareg.ensg.ign.fr/IDS/events/camp_2002.html. A complete workshop was organized in early 2003 to discuss the results. This Analysis Campaign can be considered as a pre-operational DORIS Service.

In 2002, the DORIS network has been very stable (around 50 stations). However, the task initiated in 2000 by the IGN/SIMB continued in order to improve the stability of the antennas (better support structures) and the quality of the local ties with other techniques (35 collocations in total). Information on any individual DORIS station is regularly updated and can be found on the Web at <http://www.ign.fr/fr/PI/activites/geodesie/DORIS/stations-en.html>.

With the launch of the new DORIS instruments on the recent satellites (dual-channel), the limitation of beacons in the same area is much looser. CNES has proposed to install new DORIS beacons for densification, and an international group has been created to select between the different proposals received (12 in total). In February 2002, a specific DORIS campaign has been conducted in Antarctica on the Sorsdall glacier, following the observations made

in December 2001. This continued also in early 2003 by observations on the Lambert glacier.

Pascal Willis



Figure 1 : Current DORIS network in 2002