



International DORIS Service

San Francisco, Ca., USA

December 10, 2007

Page 1

GOVERNING BOARD MEETING San Francisco, California, USA, December 10, 2007

AGENDA:

- DORIS instruments: status of satellites, future missions
- New analysis centers, review of GOP
- Data Centers & IDS web pages
- CITRIS
- Plans for 2008 IDS Analysis Workshop
- DORIS special issue following Analysis Workshop
- Review of ToR and terms of GB members
- Network, status of beacons, future stations
- Review of actions items from 2006 position paper
- Switch to ITRF2005 for the sitelogs and DORIS-mails, status of DPOD2005
- IDS report for 2006, 2007
- Review of actions from the GGOS UAW
- DORIS prospective
- Next GB Meeting

MAIN DECISIONS :

- Preparation of the IDS combination for the next ITRF
- IDS Analysis Workshop November 2008
- New DORIS special issue

ATTENDEES:



Governing Board: Hervé Fagard, Frank Lemoine, Carey Noll, John Ries, Laurent Soudarin, Gilles Tavernier, Pascal Willis

Guest: Karine Le Bail



<p>DORIS instruments: status of satellites, future missions</p>	<p>To achieve scientific accuracy a minimum constellation of 4 contributing DORIS satellites is necessary.</p> <p>There are currently 5 + 1 (CITRIS) flying DORIS satellites, but only 4 really contribute: SPOT-2, 4 and 5 and ENVISAT.</p> <p>SPOT-2 end of life: after the failure of CryoSat Launch, CNES decided to postpone SPOT-2 de-orbitation until Jason-2 launch, which is now scheduled mi-June 2008. SPOT-2 de-orbitation might then occur by the end of 2008.</p> <p>SPOT-2 is getting pretty old. Since the 13 of November 2007 at 13:55 its DORIS instrument is in Fixed-Frequency Doppler Search mode (so-called "waiting mode"). This may slightly affect the quality of measurements.</p> <p>ENVISAT end of life: ENVISAT, which is a critical component of the current constellation, has completed its nominal Mission on March, 2nd, 2007. Given the excellent performance of the Satellite and the interest in the science data, the Mission has been extended up to end 2010 (phase E3), and a further extension beyond 2010 is being sought (phase E4).</p> <p>The proposed scenario is to keep the current station keeping strategy until October 2010. The ENVISAT orbit will then be lowered by 17,4 km (new repeat cycle 30 days / 431 orbits). Then only altitude will be controlled until fuel is exhausted. Due to the free inclination drift, Mean Local Solar Time will thus change from 22:00:00 up to 22:09:28 in May 2012 then down to 21:50 in August 2014.</p>	
--	---	--

	<p>See attached document ENVISAT_extension_scenario_beyond_2010_Issue1.pdf</p> <p>SPOT-4, SPOT-5, Jason-1: nominal</p> <p>Launches to come:</p> <ul style="list-style-type: none"> - Jason-2/OSTM: June 2008 - CryoSat-2: March 2009 - SARAL / Alti-KA: end 2009 – beginning 2010 - Pleiades-1: end 2009 – beginning 2010 (will not contribute) - Pleiades-2: June 2011? (will not contribute) <p>Possible future missions:</p> <ul style="list-style-type: none"> - HY-2A: 2009? Chinese altimetry mission with a DORIS receiver - Sentinel 3: 2010? - Jason-3: end 2012? - CEMIT: «Coupled Electrodynamics of the Magnetosphere Ionosphere Thermosphere» mission. Proposal by Prof. Rod Heelis from the University of Dallas to a NASA “Small Explorer Missions” Call for Proposals. 2 satellites on the same orbital plane, one on a circular orbit, one on a slightly elliptic orbit, 400 km altitude, Possible (considered) CNES contribution: STAR like ONERA micro-accelerometer and DORIS receiver. CNES Phase 0 proposal by Richard Biancale and Sean Bruinsma. - SEOSAT: 2011? Spanish (University of Alicante) 300 kg optical Earth observation satellite. LEO sunsynchronous orbit with an equatorial crossing time between 10:00 and 14:00. Some room left on-board for a DORIS receiver. <p>Gilles Tavernier will prepare a DORIS Mail about these missions, after checking the status and agreement of different partners.</p> <p>A new version of the AVISO web site is currently being developed. The DORIS section will be updated and a page dedicated to the missions will be added. The new site will be online early 2008.</p> <p>A summary of the CNES Mission Group report will be prepared in English and sent to the DORIS Mail.</p>	<p>G. Tavernier</p> <p>G. Tavernier</p>
--	--	---

<p>New Analysis Centers, review of GOP</p>	<p>Petr Stepanek, from the Geodetic Observatory Pecny has achieved very interesting results. As a recognition, he would need a letter by IDS, accepting GOP as an official Analysis Center.</p> <p>Criteria to be accepted as an Analysis Center:</p> <ul style="list-style-type: none"> - Stations coordinates time series: 1 year of data (2005) to be tested with current ACs products, to check that is is compatible, - Orbits: January 2005, should compare reasonably with existing orbits - Commitment to deliver products on an operational basis. <p>“Old” Analysis Centers should pass these criteria.</p> <p>Other possible new Analysis Centers should be contacted (e-mail):</p> <ul style="list-style-type: none"> - ESOC: J. Dow, T. Springer, M. Otten - TU Delft - University of Texas 	<p>F. Lemoine</p>
---	--	-------------------

		<p>San Francisco, Ca., USA</p> <p>December 10, 2007</p> <p>Page 3</p>
	<p>The Analysis Coordination, with the support of the Central Bureau, will send the list of criteria to all the ACs, and will evaluate them. Results of the evaluation will be given on the IDS Web site.</p>	<p>F. Lemoine, L. Soudarin</p>
<p>Data Centers & IDS web pages</p>	<p>Pascal Willis noticed that some files can be find at CDDIS but not at IGN. There are currently no comparisons between CDDIS and IGN Data Centers contents. Pascal Willis recommends to check that data (i.e. files) exist on both sides.</p> <p>Data, products, Data Centers structure: Martine Feissel-Vernier's document should be checked and probably updated.</p> <p>The document and the contents of both DCs will be checked by the Data Flow Coordinator and the Central Bureau.</p> <p>New products:</p> <ul style="list-style-type: none"> - Orbits: <ul style="list-style-type: none"> - LCA started delivering sp1 orbits. SSA should follow. IGN only consider delivering orbits for tests. - Should orbit be delivered regularly to be combined? - Some comparisons should be performed: 1 month to start, then 1 year (2005 + other period for SPOT-3 & TOPEX/POSEIDON: 1 month in 1995?) - TOPEX/POSEIDON & Jason-1 quaternions: GGOS UAW action item. Such data require some information on about how to use them. - 2GXX (Jason-2 and Following missions) measurements in RINEX format: <ul style="list-style-type: none"> - daily files TBC - smoothed DIODE time tagging (1μs accuracy), precise time tagging before delivery (new specific tool not requiring POD) - data set to perform tests (1 cycle) <p>Web pages</p> <ul style="list-style-type: none"> - visits statistics: provide information to the GB twice a year (see example below) - POE statistics under construction: soon on-line - Stations coordinates time series: INSAN page to be added soon - Contact SOPAC about their tool to show ACs results 	<p>C. Noll, L. Soudarin</p> <p>Analysis Coordination</p> <p>Central Bureau</p> <p>L. Soudarin</p>
<p>CITRIS</p>	<p>Paul Bernhard should be reminded that we are expecting a DORIS Mail about the status of the CITRIS mission and current results</p> <p>Then, the IDS GB will ask for the data.</p>	<p>G. Tavernier, L. Soudarin</p>
<p>Plans for 2008 IDS Analysis Workshop</p>	<p>2008 OSTSTM and associated events could be November 16-21 in Nice (TBC):</p> <ul style="list-style-type: none"> - OSTSTM: Monday to Wednesday morning. 	

	<ul style="list-style-type: none"> - GODAE symposium: Wednesday afternoon to Saturday morning - ARGO Workshop: Tuesday to Wednesday morning - IDS Workshop: Wednesday afternoon to Friday <p>IDS Workshop could consist in ½ day for general information (system, missions, network, IDS) and 2 days devoted to Analysis: products comparison, combination.</p> <p>The combination might require reprocessing: IGN would need 2-3 months, CLS up to 6 month (less automated processing).</p> <p>ITRF2008 should take data until end of 2008 into account: combination might have to be delivered early 2009.</p> <p>It might be necessary to have an earlier Analysis meeting (ACs including Petr Stepanek and inviting Tim Springer + Analysis Coordinator + Combination Center(s) + Zuheir Altamimi): Toulouse? Paris? March? EGU, April?</p>	
<p>DORIS special issue following Analysis Workshop</p>	<p>Pascal Willis thinks that new results presented during the Analysis Workshop (new data, new Analysis Center(s), comparisons, combination) could be published in a new DORIS special issue. The GB fully agrees and asks Pascal Willis to act as guest editor and to contact possible editors:</p> <ul style="list-style-type: none"> - 1 – Journal of Geodesy - 2 – Journal of Geodynamics - 3 – Compte-rendu Géoscience (French Academy of Sciences, papers in English). <p>Schedule:</p> <ul style="list-style-type: none"> - Analysis Workshop: November - Deadline to submit papers: February or March 2009 (at least 3 months after the Workshop) - Publication: end 2009-beginning 2010 	
<p>Review of ToR and terms of GB members</p>	<p>GB members designation:</p> <ul style="list-style-type: none"> - Appointed members: IAG & IERS representatives, CB director - Analysis Centers and Data Centers representatives: elected by the IDS community (CB to “find” 2 candidates for each position?) - Network representative, Analysis Coordination, 2 members at large: elected by the GB <p>Who will collect the votes? CB.</p> <p>CB will prepare a DORIS Mail describing the election procedure (organization, schedule) and ask for candidates or nominations. The procedure shouldn’t be too long: 1 month at most.</p> <p>CB will contact IAG and IERS about their representatives.</p> <p>Add on the Web site the terms of each GB member.</p> <p>Terms of Reference:</p> <ul style="list-style-type: none"> - No Combination Centers exist as such. ILRS, for instance has 2 Combination Centers. Should we ask a new group to join? - We could contact current IGS, ILRS and IVS Combination Centers to see whether 	<p>L. Soudarin</p> <p>L. Soudarin</p> <p>L. Soudarin</p>

		<p>San Francisco, Ca., USA</p> <p>December 10, 2007</p> <p>Page 5</p>
	<p>one of them would consider combining a DORIS solution and then send a call for participation early 2008. The existing and new Combination Centers would stand at the same level.</p> <ul style="list-style-type: none"> - ToR could remain as is until next term when we might consider updating it - Anyway, for ITRF2008, we'll have to know what we give to IERS: a combination? The best solution? <p>Combination organization:</p> <ul style="list-style-type: none"> - Specific tasks should be identified - A schedule should be prepared <p>Frank Lemoine will prepare this organization with Jean-Jacques Valette and then submit it to Pacal Willis and Laurent Soudarin and update it if necessary.</p>	<p>F. Lemoine, J.J. Valette</p>
<p>Network: status of beacons, future stations</p>	<p>New station in Riyadh: an agreement is about to be signed. The antenna should stand on a 2 m tower.</p> <p>New station in Tamanrasset: very slow progress, to get high level agreement.</p> <p>IDS GB to send an official answer to IGN: proposals accepted with shifted frequencies to avoid jamming.</p> <p>New station in Kenya: proposal by Suzanna Zerbini (University of Bologna).</p> <p>New station in the North Pacific area (network's weakest zone): Adak. Some progress this fall, waiting for a reply.</p>	<p>G. Tavernier</p>
<p>Review of actions items from 2006 position paper</p>	<p>2006.1.0: it was not possible to get an agreement for PLEIADES data delivery (classified attitude information). IDS action although led to a green light for a cooperation with China. Closed</p> <p>2006.2.0: Conduct measurement and force model inventory. IERS2003 recommendations.</p> <p>2006.2.1: Analysis centers should update their analysis description forms on file at the CDDIS and IDS central servers: see GGOS action item.</p> <p>2006.3.0: New POD Standards for the IDS.</p> <p>2006.4.0: Decide orbit format for analysis campaigns. Sp1 is currently used. Should we keep sp1 or go for sp3c like other services? Probably yes. Laurent Soudarin will provide sp3c orbits for tests.</p> <p>2006.4.1: Conduct analysis campaign for TRF scale and geocenter comparisons</p> <p>2006.5.0: Conduct analysis campaign for Jason-1 SAA model validation</p> <p>2006.6.0: Evolve IDS towards an operational service</p> <p>2006.7.0: Request submission of ionosphere files for years prior to 2000-2001</p> <p>2006.7.1: Publicize availability of ionosphere data.</p> <p>2006.8.0: Ask analysis centers to define arcs so that overlaps are available</p> <p>2006.9.0: Harmonize a priori positions in all STCD files</p> <p>2006.9.1: Ensure that all AC's can create STCD files and associated plots</p> <p>2006.9.2: Publicize availability of STCD files and plots among the geophysics community – DORIS Mail + IGS + IVS + ILRS + GGOS</p>	<p>L. Soudarin</p> <p>Central Bureau Central Bureau Central Bureau</p>



International DORIS Service

San Francisco, Ca., USA

December 10, 2007

Page 6

<p>Switch to ITRF2005 for the sitelogs and DORIS Mails, status of DPOD2005</p>	<p>Switch to ITRF2005 for sitelogs and DORIS Mails should be done for all the stations at the same time. This requires that DPOD2005 is available.</p> <p>Pascal Willis indicates that DPOD2005 should be available by March or April 2008.</p> <p>Jason-1 and ENVISAT orbit reprocessing schedules (standards define by the end of 2007, tests for final tuning until March 2008) require that DPOD2005 is available earlier.</p>	
<p>IDS report for 2006, 2007</p>	<p>IAG expects a report for 2003-2007</p> <p>CB will send existing contributions to be updated to authors.</p>	<p>Central Bureau</p>
<p>Review of actions from the GGOS UAW</p>	<p>See attached document</p>	
<p>DORIS prospective</p>	<p>DORIS prospective groups are currently working.</p> <p>Inputs are expected from IDS on two subjects:</p> <ul style="list-style-type: none"> - IDS evolution, IDS needs for DORIS system evolution - Network evolution: for instance, places where there is a velocity effect. 	
<p>Next GB Meeting</p>	<ul style="list-style-type: none"> - EGU 2008 ? 	



International DORIS Service

San Francisco, Ca., USA

December 10, 2007

Page 7

**Monthly IDS web site visitors
October 2007 statistics**

