

# **Meeting Summary and Recommendations International Polar Year (IPY) Space Task Group (STG) Synthetic Aperture Radar (SAR) Coordination Workshop**

30 September – 1 October 2008  
German Aerospace Centre (DLR)

At the second STG meeting, the Canadian Space Agency (CSA) received an action item to set up an inter-agency meeting of SAR (synthetic aperture radar) mission managers to optimise SAR coverage - in order to address top level scientific objectives/requirements stated in the GIIPSY (Global Inter-agency IPY Polar Snapshot Year) User Requirements Document. CSA hosted the first IPY STG SAR Workshop in March 2008. At the first meeting, there was an assessment of SAR system capacity compared to the science objectives.

At this second SAR Coordination meeting, the objective was to produce an acquisition plan and consolidate the activities of the various agencies and ground segment operators. The issue of distribution of data must be addressed. The goal was to avoid gaps and overlaps, and distribute the imaging load among the agencies to optimize the use of resources. This should be done to create a data legacy during and after IPY. Strategies for data collection, processing and dissemination were needed. The work must be done within the constraints of budgets and resources. Regarding dissemination, the group must comply with the IPY Data Policy, recognizing that some data has dissemination challenges. The group must work within the mission frameworks, security regulations and national legislation. Scientific and commercial mission objectives must be reconciled. The group should encourage science and the creation and sharing of derived products. Metadata must be available.

The group created a plan which essentially meets the meeting objectives, subject to commitments by the agencies after they have reviewed the plan in detail. This plan is in the form of a table which shows the science themes, the SAR missions, which SAR mission will contribute to which science theme(s) to what extent, and an assessment of the appropriateness or lack thereof for each SAR mission to achieve each science theme. The agencies committed to review, comment and commit to the plan by 15 October 2008.

Several substantial GIIPSY/STG milestones for Antarctica have already been achieved:

- 1) ESRIN has succeeded in obtaining C-band interferometric data of the northerly portion of Antarctica;
- 2) JAXA has for the first time done the same at L-band;
- 3) DLR X-band images of Coates Land and Jacobshavn glacier in Greenland.

We will soon have:

- 1) CSA/MDA first Antarctic pole to coast polarimetric imaging campaign;
- 2) CSA/MDA first Antarctic pole hole InSAR campaign;
- 3) DLR X-band planning for first focused pole hole InSAR campaign of the ice streams.

These events are significant and worthy of recognition.

The action items were listed as STG-C2 *An*, meaning STG Coordination meeting 2, Action *n*. The resulting action items were:

1. Action STG-C2 A1: CSA(R. St. Jean) -MDA-ASF (N. L.H.) to release description of RADARSAT-1 ordering mechanism for west Arctic sea ice acquisitions.
2. Action STG-C2 A2: R. Hall (KSAT) to unofficially contact Norwegian IPY Committee and Norwegian Space Centre (Guro Dahle Strom) and ask them to consider contributing funding support for processing of RADARSAT-1 archived data for IPY. Y. Crevier to specify details of specific dataset of interest. The official draft letter will be sent to the STG for transmission to NSC.
3. Action STG-C2 A3: GIIPSY and ASF to prepare consolidated ALOS PALSAR data needs for Greenland and Antarctica – and for K.J and N.L.H. to present them to M. Shimada (JAXA).
4. Action STG-C2 A4: GIIPSY should provide feedback on which IPY related applications absolutely require tandem interferometry – i.e due to decorrelation timescale limitations, or others requiring e.g. bistatic operation. These should be ones that can't be fulfilled by repeat-pass interferometry or single satellite.
5. Action STG-C2 A5: K.J. and M.D. to provide locations of focus for SPOT DEMS – via Presentation material from the previous STG meeting.
6. Action STG-C2 A6: M. Braun to coordinate acquisition planning for Antarctic ice shelf supersites. To provide information to STG on currently planned ice shelf and Antarctic Peninsula supersites. Contact other AO investigators to identify other potential additional supersites for the TerraSAR-X background mission (in conjunction with O'Higgins reception).
7. Action STG-C2 A7: GIIPSY to develop a management plan for how to approach supersites and report to STG.
8. Action STG-C2 A8: Action on GIIPSY to request that PI's submit proposals for acquisition plans in context of supersites (PALSAR).
9. ACTION STG-C2 A9: ESA (J.D.R) and CSA (R.St.J) to define optimal background missions and adjust priorities to ensure better coordinated ASAR and R2 coverage in the Arctic Basin.
10. ACTION STG-C2 A10: GIIPSY to craft a supersite requirement for TerraSAR-X based on specific priorities (see list below) including two cycles of Greenland interferometry (TerraSAR-X) over user-specified sites.
11. Action STG-C2 A11: All Coordination meeting participants to confirm commitments in the content of the planning table/matrix by October 15.
12. Action STG-C2 A12: Distribute Planning Table and meeting summary (after 15 Oct) to STG after Coordination meeting for comment and information on activities using other complementary mission/sensors.
13. Action STG-C2 A13: K.J. +M.D. + Y.C. + D.B. to produce strawman document regarding future directions for high level products from the IPY Legacy Data.