



Report on CEOS WGCV SAR Subgroup Report

Presented at

**25th CEOS WGCV Meeting
Budapest, Hungary
May 9-12, 2006**

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Canadian Space Agency**



Agence spatiale
Canadienne

Canadian Space
Agency

CEOS SAR Subgroup

- Action Plan:
 - Annual SAR CAL/VAL Workshop/Meeting
 - Calibration requirements and techniques for Polarimetry, Interferrometry, POLInSAR, Bistatic SAR
 - Set up standard CAL/VAL sites – inter-sensor comparison

- Recent Annual Workshop/Meeting
 - 2005 – Coordinated by DSTO in Adelaide, Australia
 - 2004 - Coordinated by ESA in Ulm, Germany
 - 2003 – Coordinated by CSA in Saint-Hubert, Canada
 - 2002 – Coordinated by BNSC in London, UK
 - Workshop Proceedings are prepared and distributed by LOC Chairperson after each workshop

Next CEOS SAR CAL/VAL Workshop/Meeting (1)

- Coordinated by The University of Edinburgh
- To be held in Edinburgh, Scotland, 3rd – 6th October 2006
- 3-day Workshop (4th – 6th) and a SAR Tutorial day on 3rd October
- LOC Chairman – Dr. Iain H Woodhouse, School of GeoSciences
- Website - <http://www.geos.ed.ac.uk/research/eeo/events/ceos2006/>

Next CEOS SAR CAL/VAL Workshop/Meeting (2)

➤ Timetable

- Abstract Submission 17th May, 2006
- Author Notification 5th July, 2006
- Presenting Author Pre-registration 14th July 2006
- Presentation Submission 21st September 2006
- Paper Submission 4th October 2006
- Workshop 4th – 6th October 2006
- Distribution of Proceedings 7th November 2006

Next CEOS SAR CAL/VAL Workshop/Meeting (3)

➤ Presentation Themes

- Geometry and Radiometry
- Calibration Requirements
- Calibration Instrument and Site
- Calibration Methodology and Tool
- Polarimetric and Interferometric (POLIn) SAR
- Bistatic SAR
- Validation and Application
- New Space borne SARs launched in 2006 (e.g., TerraSAR-X, ALOS, RADARSAT-2)
- Future SAR Missions

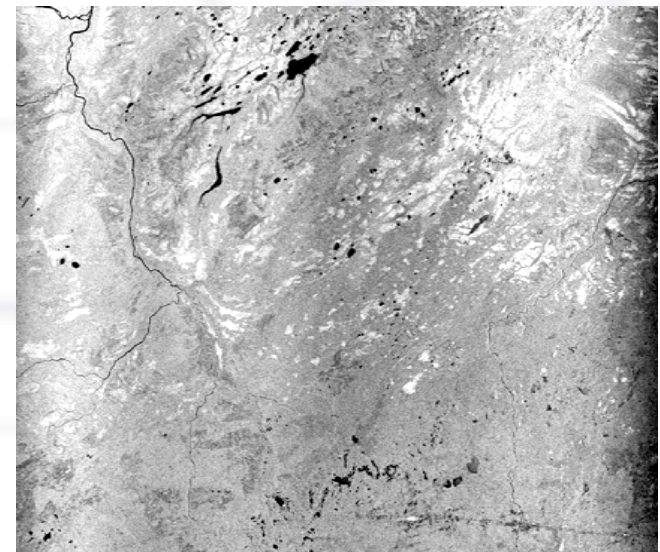
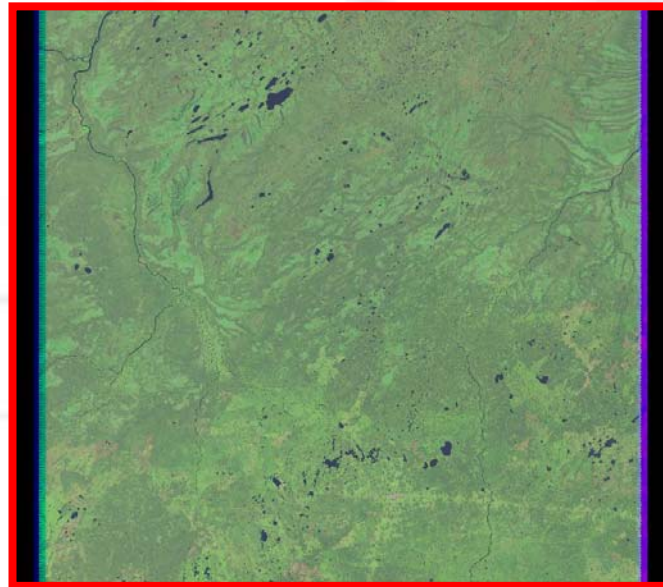
Calibration Sites (1)

- International Amazon Rainforest Site
 - Recommendation was made and accepted at the 19th CEOS Plenary to encourage CEOS agencies with SAR missions to use the international site as established by the SAR subgroup for calibration
 - Data is collected and analyzed for calibration monitoring of SAR satellites including RADARSAT-1
 - Radiometry of the site remains stable as observed from RADARSAT-1
 - Baseline for full polarimetric calibration of RADARSAT-2



Calibration Sites (2)

- Canadian Boreal Forest (Hearst Region)
 - Since January 2003, RADARSAT-1 data is routinely collected and analyzed for radiometric characterization of the site
 - Major progress has been made in characterization for summer and winter months for a wide range of incidence angles at C-band
 - Initial results indicate that it can be used as a secondary site for calibration but with a reduced accuracy compared to the Amazon site



CEOS working Group on Calibration & validation (WGCV)
25th Meeting, Budapest, Hungary

Calibration Sites (4)

- Multi-Transponder Site in Ottawa
 - Discussion has significantly advanced for relocation of an ENVISAT ASAR Transponder to a site in Ottawa where a RADARSAT-1 Transponder is located
 - Relocation expected in Summer/Fall 2006
 - Both Transponders can be used simultaneously by C-band SAR satellites (e.g., RADARSAT-1 and 2, ENVISAT) for inter-sensor comparisons

