First Workshop on
Canadian SMAP Applications and Cal-Val

Tuesday 6 October and Wednesday 7 October 2009
Environment Canada's Biosphere, Montreal, Quebec, Canada

Tuesday 6 October 2009

08h00 to 08h30: **Arrival of participants and registration**

08h30 to 10h30: **The Soil Moisture Active and Passive (SMAP) mission**

Welcoming remarks

Jean Langlais, Director of Biosphere

Michel Béland, Environment Canada, Advisor to the Director General of Research Atmospheric Science and Technology Directorate, President of the Commission for Atmospheric Science of the World Meteorological Organization

Thomas Piekutowski, Canadian Space Agency, Director, Solar and Earth System Sciences

The Soil Moisture Active and Passive (SMAP) mission (30 min)

Kent Kellogg (Jet Propulsion Laboratory), **Eni Njoku** (Jet Propulsion Laboratory), Peggy O'Neill (Goddard Space Flight Center), and **Dara Entekhabi** (Massachusetts Institute of Technology)

Canadian plan for SMAP (30 min)

Stéphane Bélair, Environment Canada

10h30 to 10h45: **Health break**

10h45 to 11h45: **SMAP Calibration - Validation plan**

SMAP cal-val planning and soil moisture validation (40 min)

Tom Jackson, United States Department of Agriculture

SMAP L3_F/T and L4_C cal-val plan (20 min)

Kyle McDonald, Jet Propulsion Laboratory

11h45 to 12h10: **Visit of the Biosphere (optional)**

12h10 to 13h30: **Lunch Break**

13h30 to 15h00: **Possible core validation sites in Canada (I)**

Soil moisture monitoring networks for satellite and model validation: Design and applications (30 min)

Aaron Berg, Jon Belanger, Catherine Champagne, and Gift Dumedah, University of Guelph

Integration of field studies and remote sensing for the Prairies (20 min)

Brenda Toth, Al Pietroniro, Jessika Toyra, Garth ven der Kamp, Raoul Granger, and Craig Smith, Environment Canada

Boreal Ecosystem Research and Monitoring Sites (BERMS) (20 min)

Anne Walker, Environment Canada

Canadian flux sites for forests and peatlands (15 min)

Hank Margolis, Laval University

Experimental activities in Nunavik (15 min)

Monique Bernier and Parvin Kalantari, Institut national de la recherche scientifique

15h00 to 15h30: **Health break**

15h30 to 17h00: **Possible core validation sites in Canada (II)**

Considerations for a new soil moisture network in the Okanagan Valley (British Columbia) (15 min)

Paul Whitfield, Environment Canada

Other suggestions for possible core validation sites for soil moisture and freeze/thaw

All, other contributions?

Discussion

All (requirements for these sites – costs, what's feasible; should we target other areas of the country; period of activity; AAFC supersite; readiness of the sites; what's missing)

Wednesday 7 October 2009

08h00 to 08h30: **Arrival of participants and registration**

08h30 to 10h30: **Possible field experiments**

SMOS Canadian field campaigns (30 min)

Ramata Magagi, Imen Gherboudj, Louis-Phillipe B.-Rousseau, Sherbrooke University

Canadian airborne microwave radiometer platform for SMAP science applications and cal/val (20 min)

Anne Walker, Environment Canada

Possible surface-based passive and / or active measurements

All, other contributions

Discussion

All (collaboration with other international partners; how soon could we be ready for campaigns prior to launch; synergy with SMOS related activities; co-location with validation core sites)

10h30 to 10h45: **Health break**

10h45 to 12h00: **Applications and R&D Plan (I)**

Retrievals of land surface temperature under snow and snow water equivalent using 10, 19, and 37 Ghz brightness temperatures (20 min)

Alain Royer, **Alexandre Langlois**, Jacqueline Kohn, Ally Touré, and Kalifa Goita, CARTEL, Sherbrooke University

Water resources monitoring at INRS (20 min)

Monique Bernier and Parvin Kalantari (Université Laval)

SMAP's active radar sensor for monitoring soil moisture to support agricultural risk mitigation (30 min)

Heather McNairn, Amine Merzouki, and Anna Pacheco, Agriculture and Agri-Food Canada

12h00 to 13h30: **Lunch**

13h30 to 15h00: **Applications and R&D Plan (II)**

CCRS soil moisture and permafrost activities (30 min)

Francois Charbonneau, A. Trichtchenko, S. Wang, B. Brisco, P. Dudkewitsch, N. Short, and M. Trudel (Canadian Centre for Remote Sensing)

Inclusion of SMAP data in the Canadian Land Data Assimilation System and data impact studies on numerical weather and hydrology predictions (30 min)

Marco Carrera, Stéphane Bélair, Bernard Bilodeau, and Sheena Solomon, Environment Canada

Discussion

All (other applications; other organizations interested in using SMAP data; connections with the SMAP Applications working group)

15h00 to 16h00: **Wrap-up and end of workshop**

Meeting wrap-up
Stéphane Bélair, Environment Canada

Final comments
All