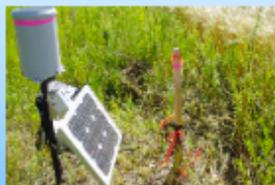
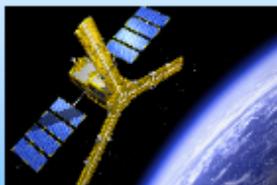


The Canadian Experiment for Soil Moisture in 2010 (CanEx-SM10)

Stéphane Bélair,

*Science and Technology Branch,
Environment Canada*



3-5 May 2011, 2nd SMAP Cal/Val Workshop, Oxnard, CA, USA

HISTORY and OBJECTIVES

Originated as an initiative of Canadian researchers to support SMOS validation over land

Was extended to include pre-launch Cal/Val for SMAP through a collaboration with the Canadian Space Agency (CSA) and the SMAP Project

More specific objectives:

- *Qualitative and quantitative analysis of L-Band microwave data*
- *Development of soil moisture retrieval algorithms from passive and active microwave data (SMOS, RADARSAT-2, ALOS-PaISAR, L-Band airborne data from EC's radiometer and NASA's UAVSAR)*
- *Scaling methodologies for SMOS / SMAP coarse resolution data*
- *Assimilation of SMOS / SMAP data in land surface systems to improve land surface initial conditions provided to environmental forecast models.*

BASIC INFORMATION

PERIOD

May 31st to June 17th, 2010

SITES

Agricultural site at Kenaston
Boreal forest site at BERMS

EXPERIMENTAL STRATEGY

Satellite: SMOS, RADARSAT2, ASAR-Envisat, ALOS-PALSAR

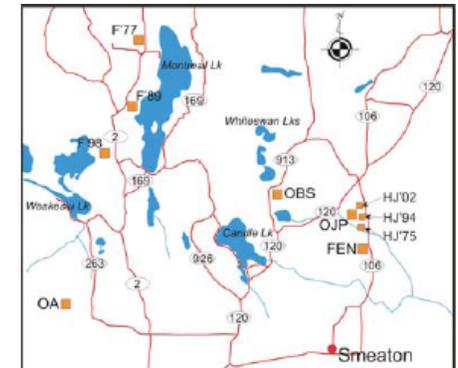
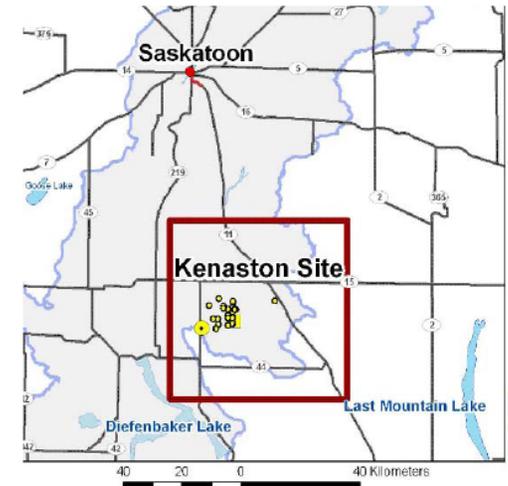
Aircraft: EC MW radiometers (including L-band) and UAVSAR

Ground networks at KEN and BERMS

Field-phase ground measurements

PARTNERS / INVESTIGATORS

University of Sherbrooke, Guelph University, University of Michigan, EC (MRD / CRD / HAL), AAFC, USDA, NASA (GSFC), JPL, NRC, CSA



PRESENTATIONS

Field Campaigns

1315 Discussion of Algorithm Requirements Related to Field Campaigns (O'Neill)

1400 CanEx-SM Results Presentations (Belair)

- Overview of the CanEx-SM10 field experiment (Belair, EC)
- Passive airborne measurements during CanEx-SM10 (Walker, EC)
- Active airborne measurements with the UAVSAR during CanEx-SM10 (Mladenova, USDA)
- UAVSAR interferometry during CanEx-SM10 (Hensley, JPL):
- Ground measurements over agricultural sites during CanEx-SM10 (Berg, Guelph/Toth, EC)
- Ground measurements over the Boreal Ecosystem Research and Monitoring Sites (BERMS) during CanEx-SM10 (Moghaddam, U. Michigan)
- Preliminary evaluation of soil moisture retrievals from airborne and space-based L-band data for CanEx-SM10 (Magagi, Sherbrooke U.)
- Summary and availability of CanEx-SM10 datasets (Magagi, Sherbrooke U.)
- Open discussion on lessons learned from CanEx-SM10

1600 SMAPEX Results and Australia Core Validation Site (Walker)