Summary and availability of CanEx-SM10 datasets

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With the contribution of the CanEx-SM10 team

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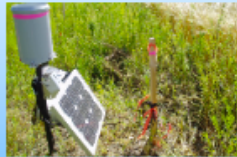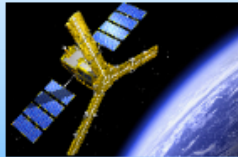
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Overview of CanEx-Sm10

http://www.pages.usherbrooke.ca/canexsm10/

Summary of CanEx-SM10 datasets

- Available ground, airborne, and satellite measurements during CanEx-SM10

Measurements	Sites	Kenaston														BERMS
	June 2010	1	2	3	4	5	6	7	8	9	10	11	12	13	14	16
Ground		-	√	-	-	√	√	√*	-	√	-	-	-	√	√	√
Satellite	SMOS	√√	√	√√	-	√√	-	√	√√	-	√√	√	√	√√	-	√√
	AMSR-E	√√	√√	√√	√	√√	√√	√√	√√	√√	√√	√√	√√	√√	√√	√√
	RADARSAT-2	√√	√	-	-	√√	-	-	√√	-	-	√	√	-	-	-
	ASAR	-	-	-	-	-	√	√	-	-	√√	-	√	√	-	√
	ALOS-PALSAR	-	-	-	-	-	√	√	-	√	-	-	-	-	√	-
Airbornes	Twin Otter and UAVSAR	-	√	-	-	√	√	√*	-	√	-	-	-	√	√	√

√: one acquisition per day
√√: two acquisitions (ascending and descending) per day
√*: Partial coverage due to rain event

Datasets

Datasets	Description	Contact	Processing
Airborne			
Twin Otter	**Micro-wave TBH, TBV 1.4 GHz (40°) 6.9, 19, 37, and 89 GHz at 55°**	**Anne Walker Environment Canada**	**100 %**
	Landsat simulator 457-521 nm 523-595 nm 630-687 nm 762-897 nm		
	Infra red Ts		
UAVSAR	**L-band Sigma0 HH, HV, VV 25-65°**	**Tom Jackson USDA**	**100 %**
Ground Network			
KEN intensive network (10 km)	**Soil moisture profiles**	**Brenda Toth Environment Canada**	**100 %**
KEN extensive network (40 km)	**Soil moisture profiles**	**Aaron Berg University of Guleph**	**100 %**
BERMS permanent	**Meteorological data and soil moisture profiles for 2010**	**Anne Walker Erin Thompson EC**	**100 %**
BERMS temporary	**Soil moisture profiles**	**Mike Cosh Tom Jackson USDA**	**??**

Datasets	Description	Contact	Processing
Ground data collection			
Kenaston	**Soil moisture, soil temperature, bulk density, texture, roughness, LAI, MSR**	**Ramata Magagi Brenda Toth Heather Mcnairn Aaron Berg**	**100 %**
	Vegetation water content	**Brenda Toth**	**??**
BERMS	**Species identification, Vegetation water content and geometric characteristics, soil moisture**	**Mahta Moghaddam, University of Michigan /**	**100 %**
	Gravimetric soil moisture at temporary sites	**Brenda Toth**	**100 %**
	Soil and organic weights		
Ancillary data			
Annual crop maps	**NDVI, LAI, Land cover map of of the entire Canadian Prairie**	**Heather Mcnairn, Jiali Shang Agriculture and Agri-food Canada**	**100 %**
Field description	**Tillage, residue, etc.**	**Aaron Berg University of Guleph**	**100 %**
MODIS	**Surface reflectance**	**Tom Jackson Iliana Mladenova USDA**	**100 %**

CanEx-SM10

For more information
http://www.pages.usherbrooke.ca/canexsm10/

- Current status

  - Data processing ~ 85-90% completed

  - Data analysis

  - Dissemination

- Availability of the data to public in 2012

Thanks!

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  - Environment Canada (EC)
  - *Canadian* Space Agency (CSA)
  - Agriculture and Agri-Food *Canada (AAFC*)
  - National Aeronautics and Space Administration (NASA)
  - Universities (Sherbrooke, Guelph, Michigan)
- All the participants to CanEx-SM10
- ESA for providing us SMOS data