



Environment
Canada

Environnement
Canada

Canada

Canadian FT Sites



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4th SMAP Cal/Val Workshop, Pasadena, CA, 5-7 November 2013



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FT Cal/Val in the CANADIAN PLAN (II)

Recent update of the Canadian Plan for SMAP, in preparation for Phase II of funding from the Canadian Space Agency

In these updates: most of the changes in sections for SM and FT Cal/Val, and for Data / Products / Outreach

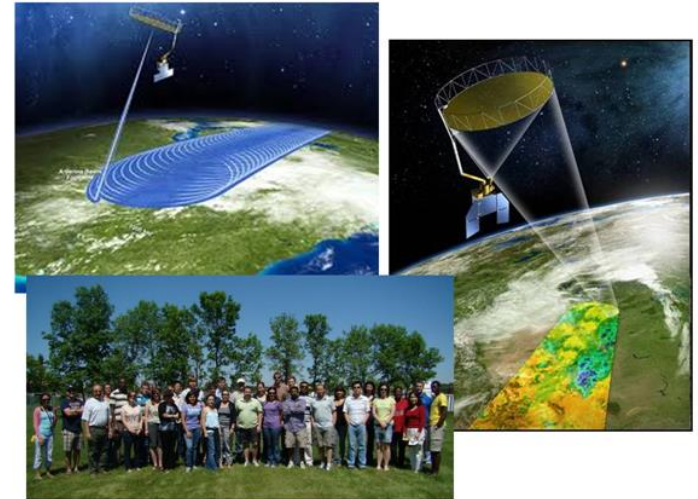
3 major aspects of Canadian FT plan

a) Existing surface networks

b) Information and distribution systems

c) Ground-based L-band radiometers

Canadian Science and Applications Plan for the Soil Moisture Active and Passive Mission



October 2013



Environnement Canada
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i

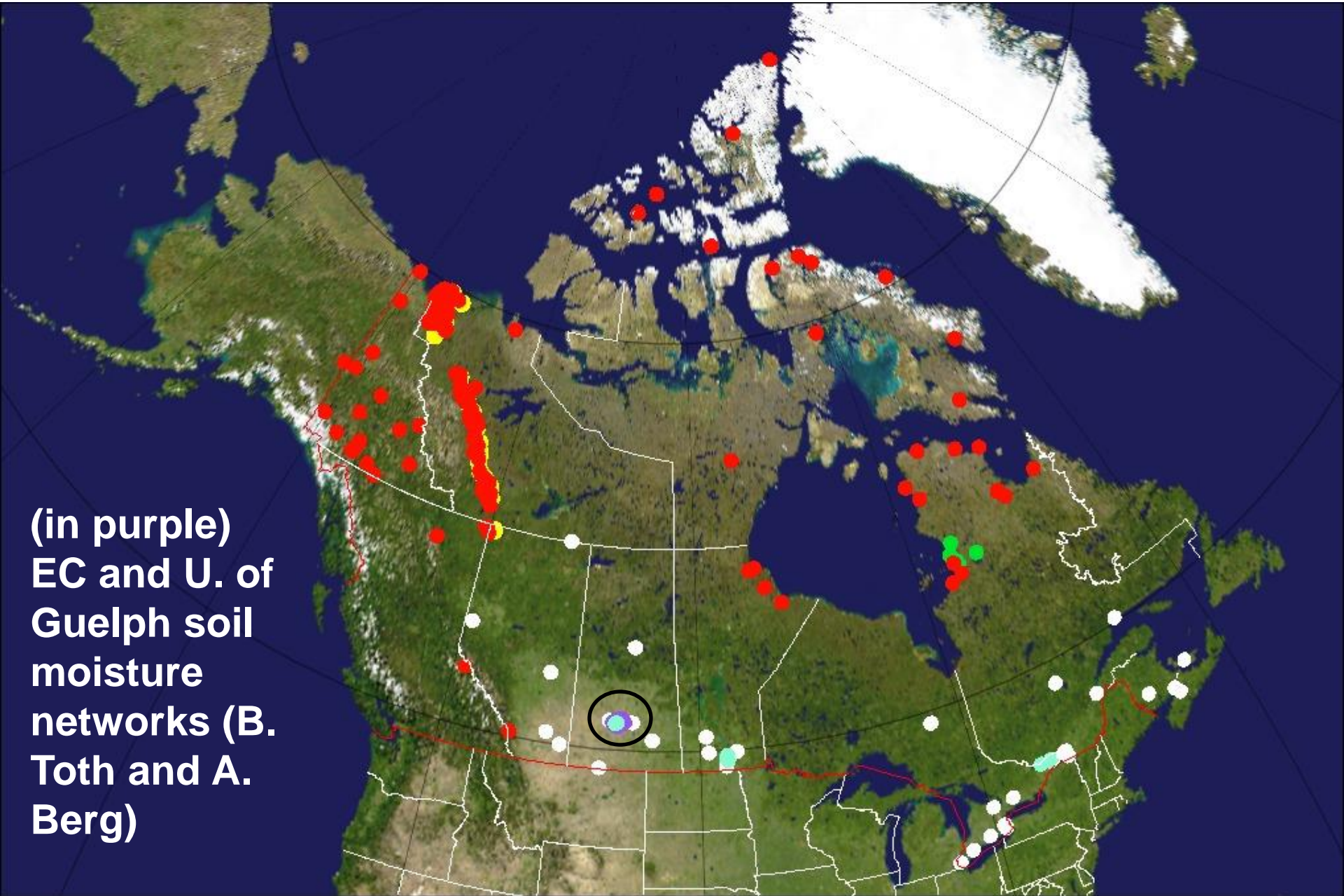


FT SURFACE STATIONS in CANADA

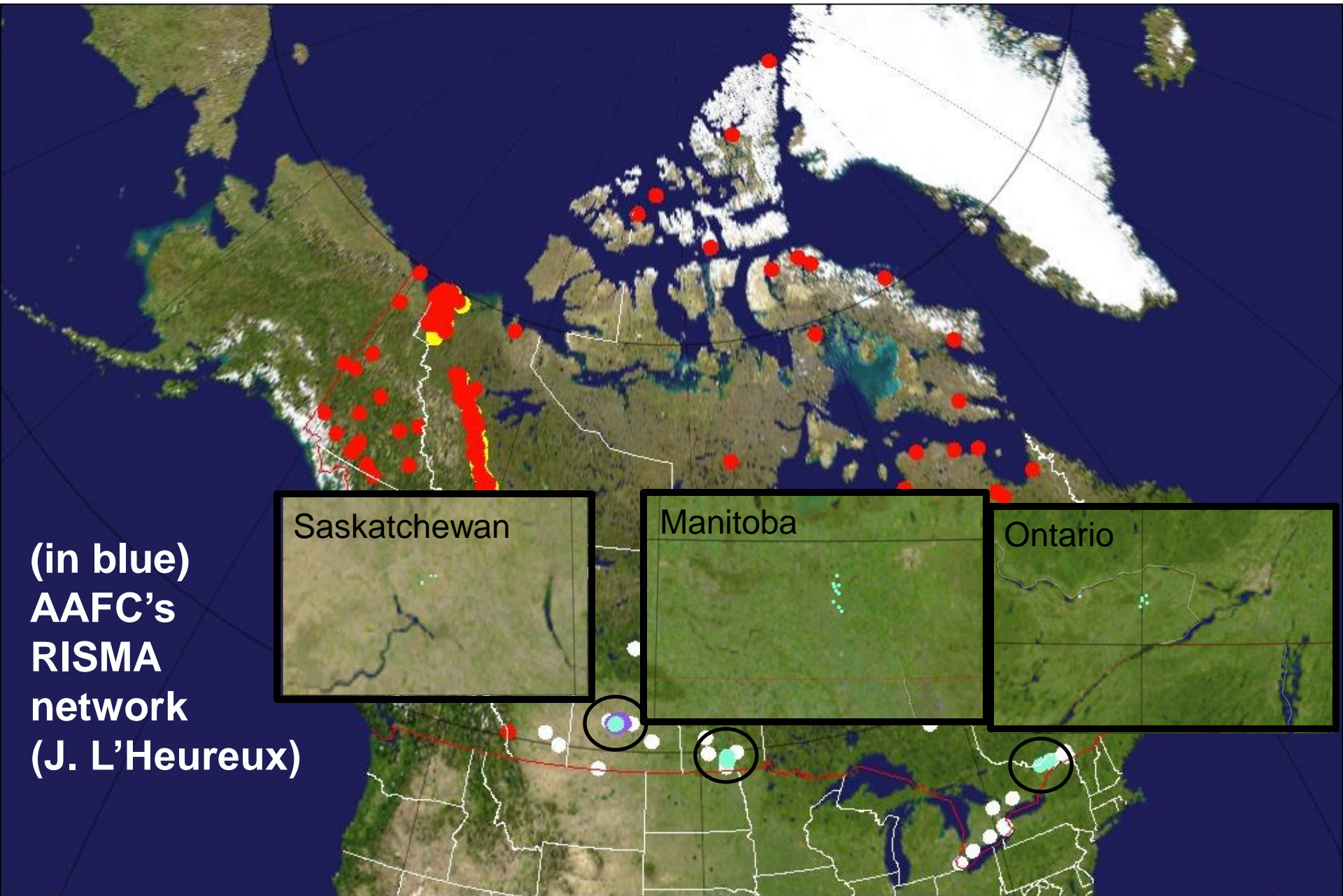


FT SURFACE STATIONS in CANADA

(in purple)
EC and U. of
Guelph soil
moisture
networks (B.
Toth and A.
Berg)

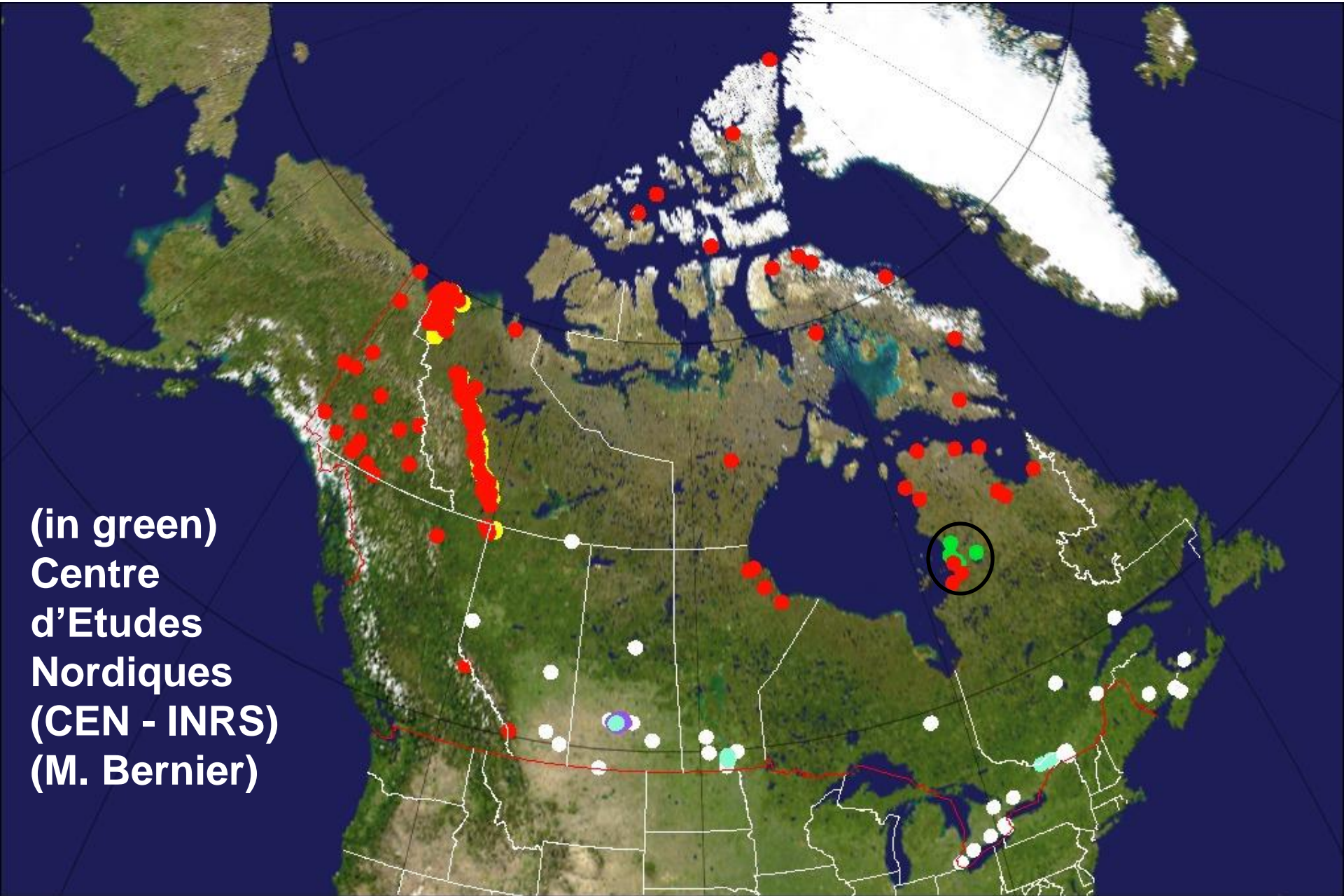


FT SURFACE STATIONS in CANADA



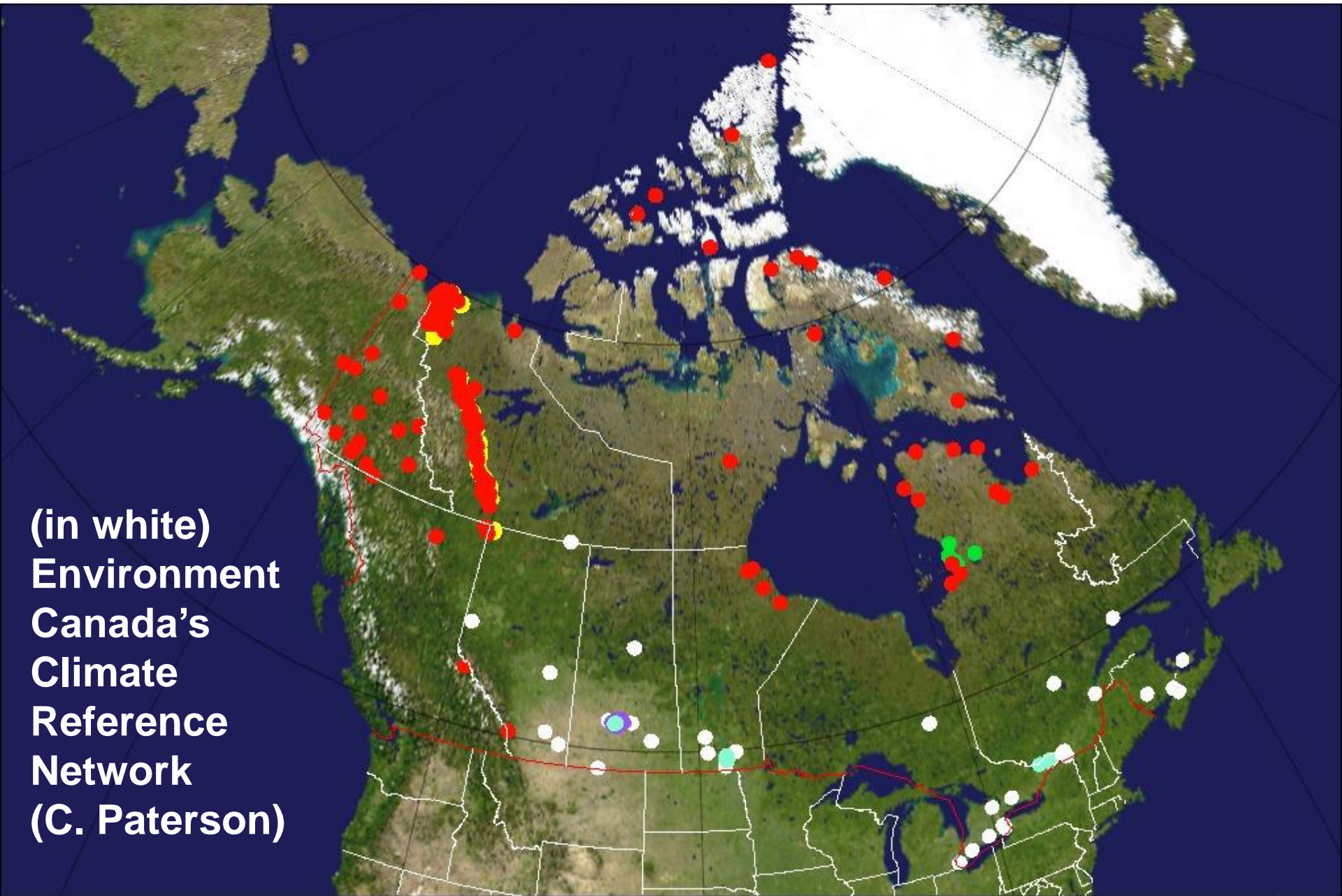
FT SURFACE STATIONS in CANADA

(in green)
Centre
d'Etudes
Nordiques
(CEN - INRS)
(M. Bernier)



FT SURFACE STATIONS in CANADA

(in white)
Environment
Canada's
Climate
Reference
Network
(C. Paterson)



FT SURFACE STATIONS in CANADA

(in yellow
and red)
NRCan's
arctic and
subarctic
networks
(S. Smith)



FT SURFACE STATIONS in CANADA

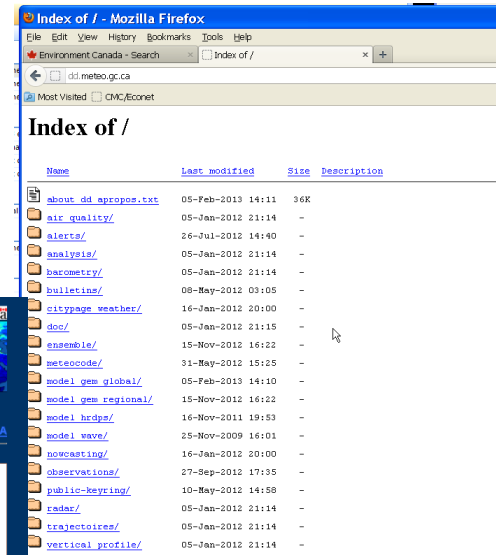
For each network, we are gathering information on:

- 1. Actual number of stations that could be used for SMAP F/T Cal/Val*
- 2. Latency of data, and*
- 3. Restrictions concerning distribution*

INFORMATION / DATA SYSTEMS

WHAT: Surface observations of ground and air temperatures, Level-4 analyses of F/T state, snow on the ground, ground temperatures, and air temperature

A) Data through EC's datamart

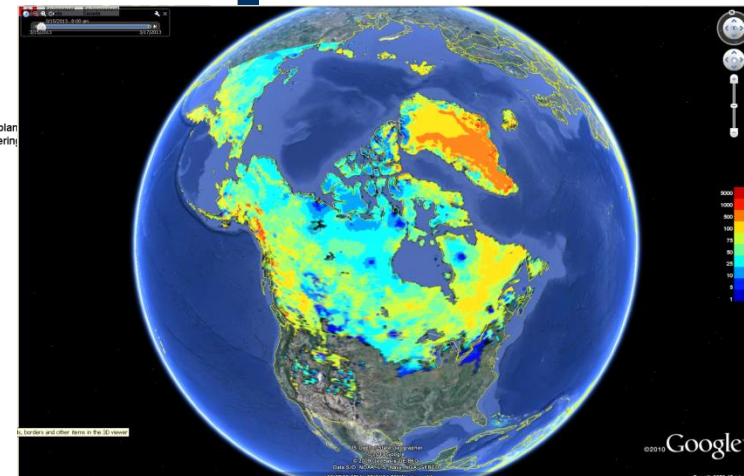


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analysis/	05-Jan-2012 21:14	-	
barometery/	05-Jan-2012 21:14	-	
bulletins/	08-May-2012 03:05	-	
citypage weather/	16-Jan-2012 20:00	-	
doc/	05-Jan-2012 21:15	-	
ensemble/	15-Nov-2012 16:22	-	
meteoecode/	31-May-2012 15:25	-	
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observations/	27-Sep-2012 17:35	-	
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radar/	05-Jan-2012 21:14	-	
trajectories/	05-Jan-2012 21:14	-	
vertical_profile/	05-Jan-2012 21:14	-	

B) Figures through SMAP-Canada web site

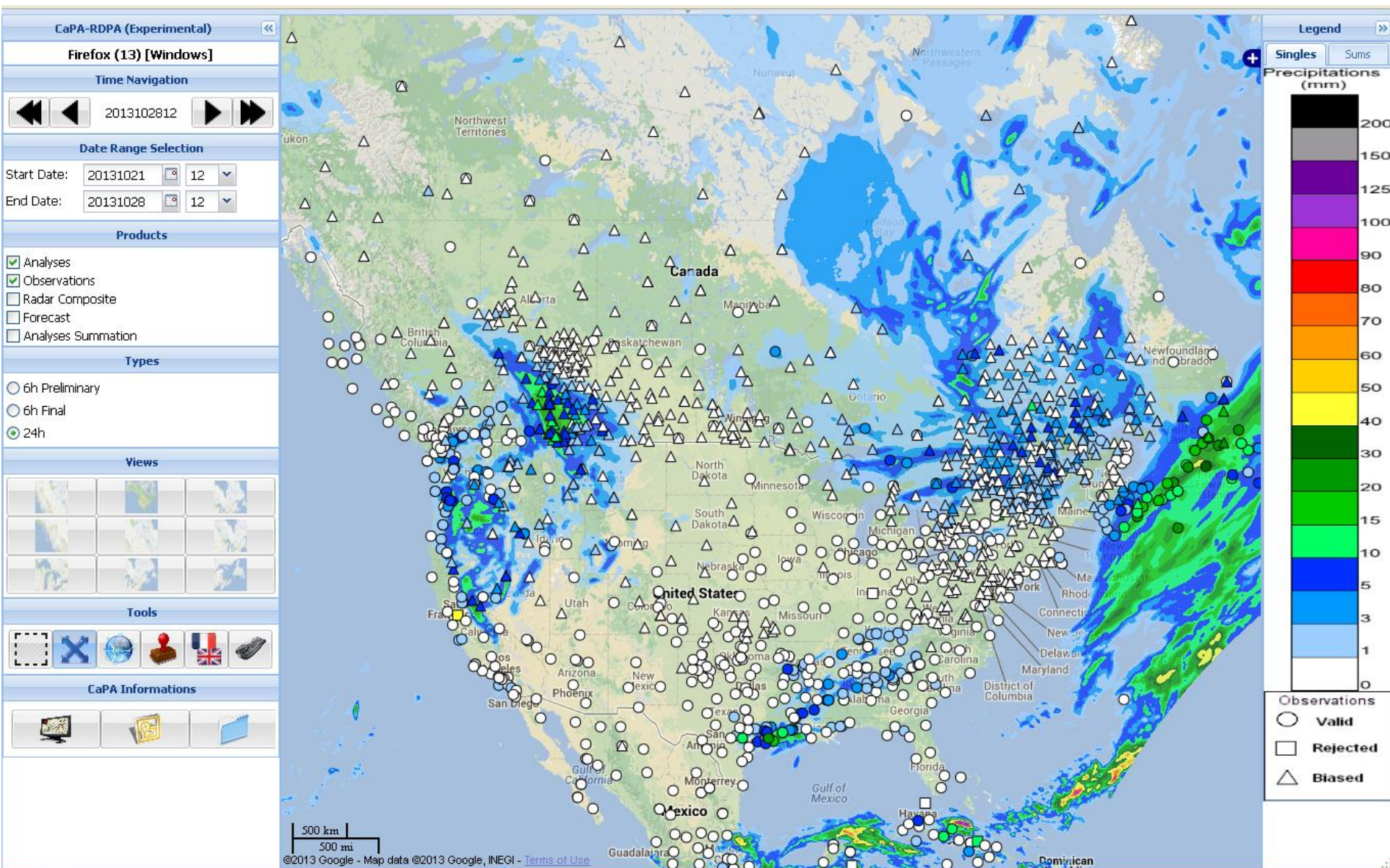


C) Georeferenced maps through web mapping service



This is part of a more general monitoring system for the land surface (including soil moisture)

WMS VIEWER from EC's COLLAB SITE



Currently for precipitation only, hopefully to be installed on external site soon (with more variables)

GROUND-BASED FT RESEARCH

(Derksen, Royer)

To improve methods of monitoring F/T processes with SMAP passive measurements (also contribute to ongoing SMOS+ project).

1. Installation of Env. Canada L-band radiometer at Caribou Creek (former BERMS site). Site visit and RFI check in late Nov. 2013.

2. Complementary use of Université de Sherbrooke multi-frequency (1.4 – 36.5 GHz) passive microwave measurements for surface / soil effective temperature and snow characteristics (site TBD).

