



Canadian Cordillera Array (CCArray) Earth Observation Network (EON-ROSE)

*Katherine Boggs
on behalf of the
CCArray working group*



Natural Resources
Canada

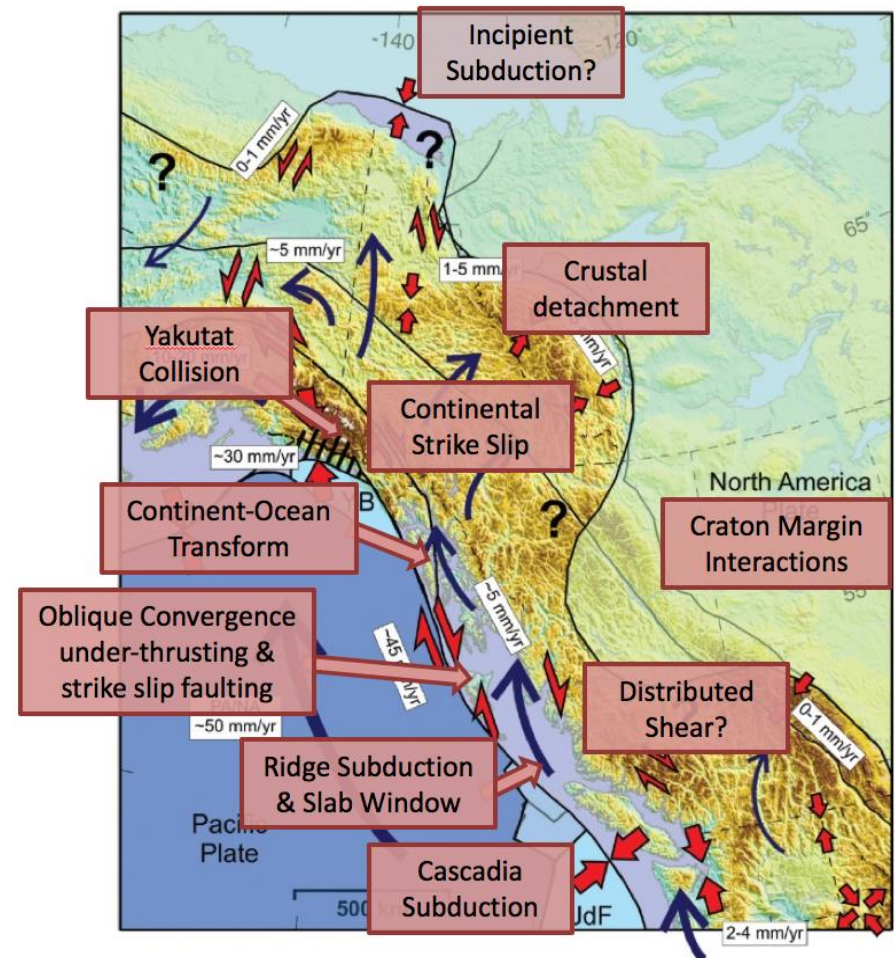
Ressources naturelles
Canada

Canada



CCArray Outlook

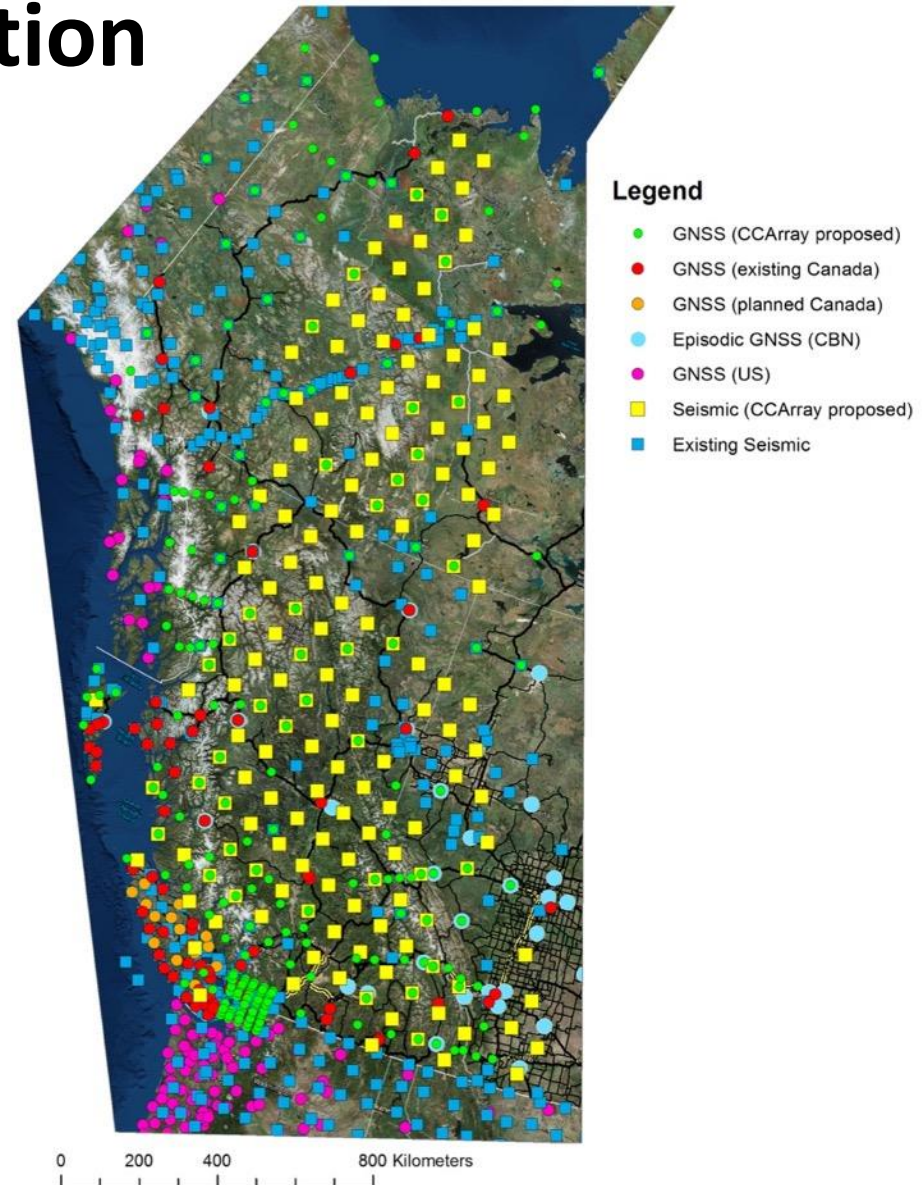
- Bridge the plate-boundary gap in the Yukon and British Columbia
- Complete synoptic investigation of the North American plate margin north of Mexico



(After Mazzotti et al., 2008)

Proposed Instrumentation

- Broadband seismometers
- GNSS
- Meteorology
- Still and video cameras
- Magnetotelluric
- Riometers
- Atmosphere, permafrost and groundwater monitoring
- Absolute, relative and superconducting gravimetry
- Supplement with remote sensing (InSAR, LIDAR, satellite gravity, etc.)

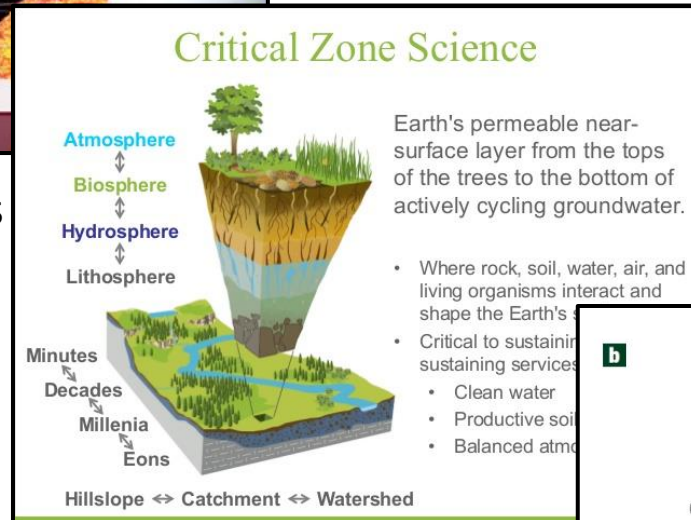


CCArray – Goal:

New Research Network – Entire Earth Systems from Magnetosphere through Lithosphere Deep into Mantle

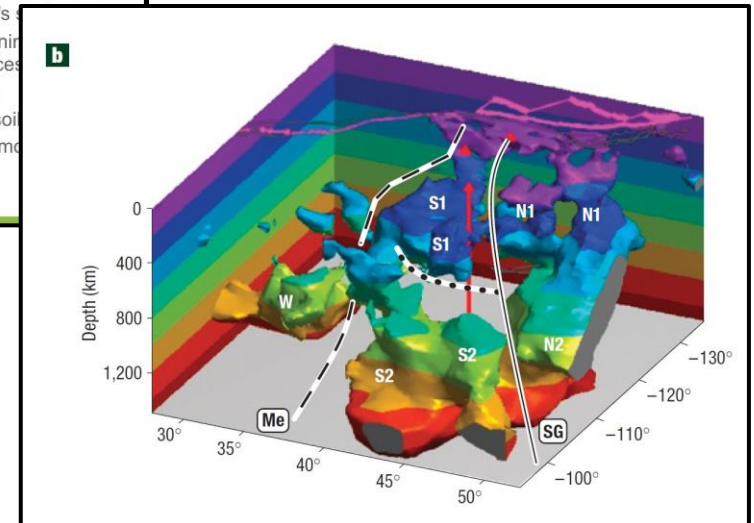
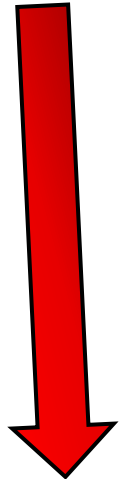


Magnetosphere & Auroras
(SWARM (ESA) logo)



(ahm-2014-Integrated-data-management)

Auroras
To
Critical Zone
To
Tomography



(Sigloch et al, 2008; Nature Geoscience)

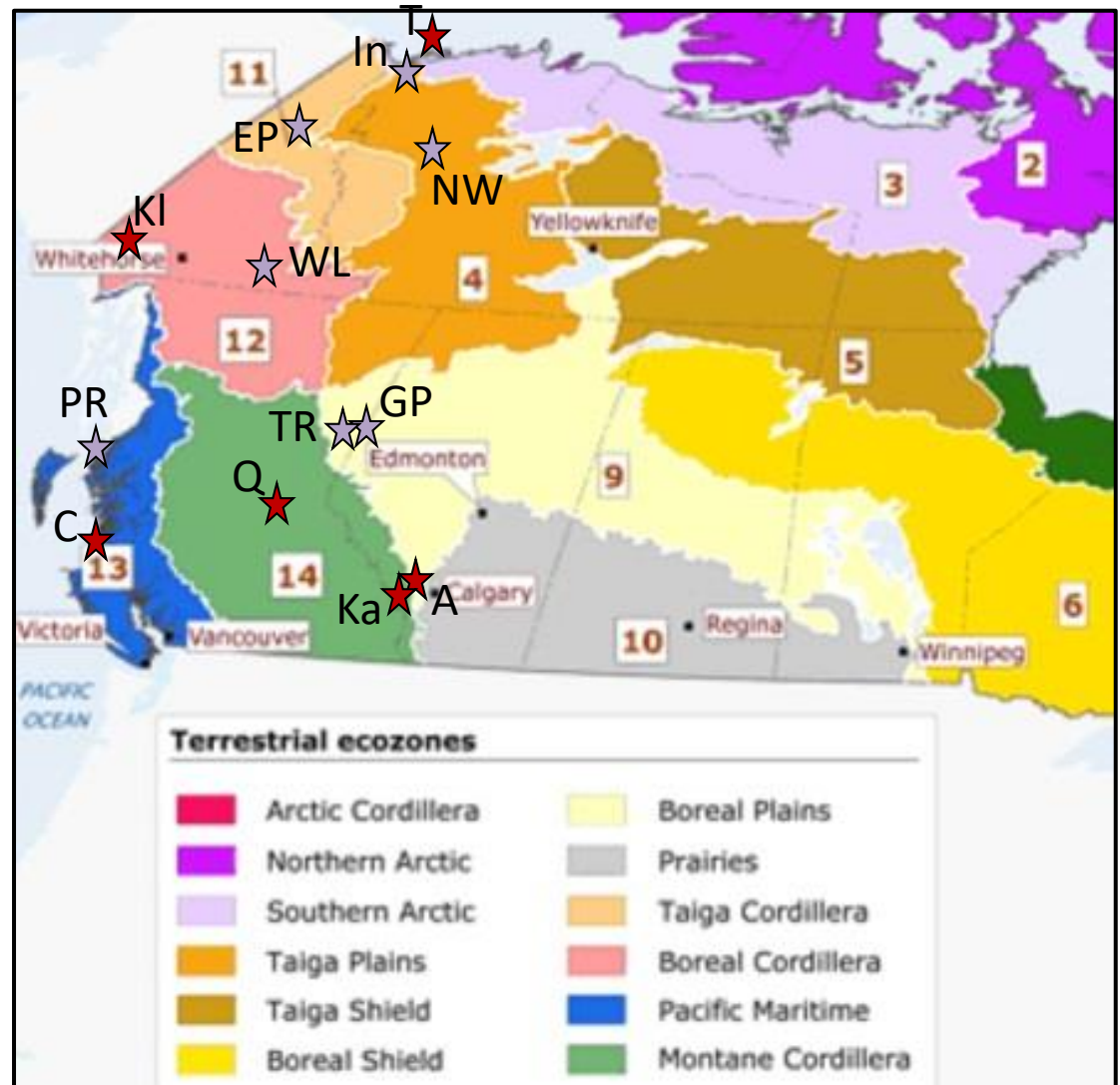
Critical Zone Observatory Plan for CCArray

“Legacy Stations”

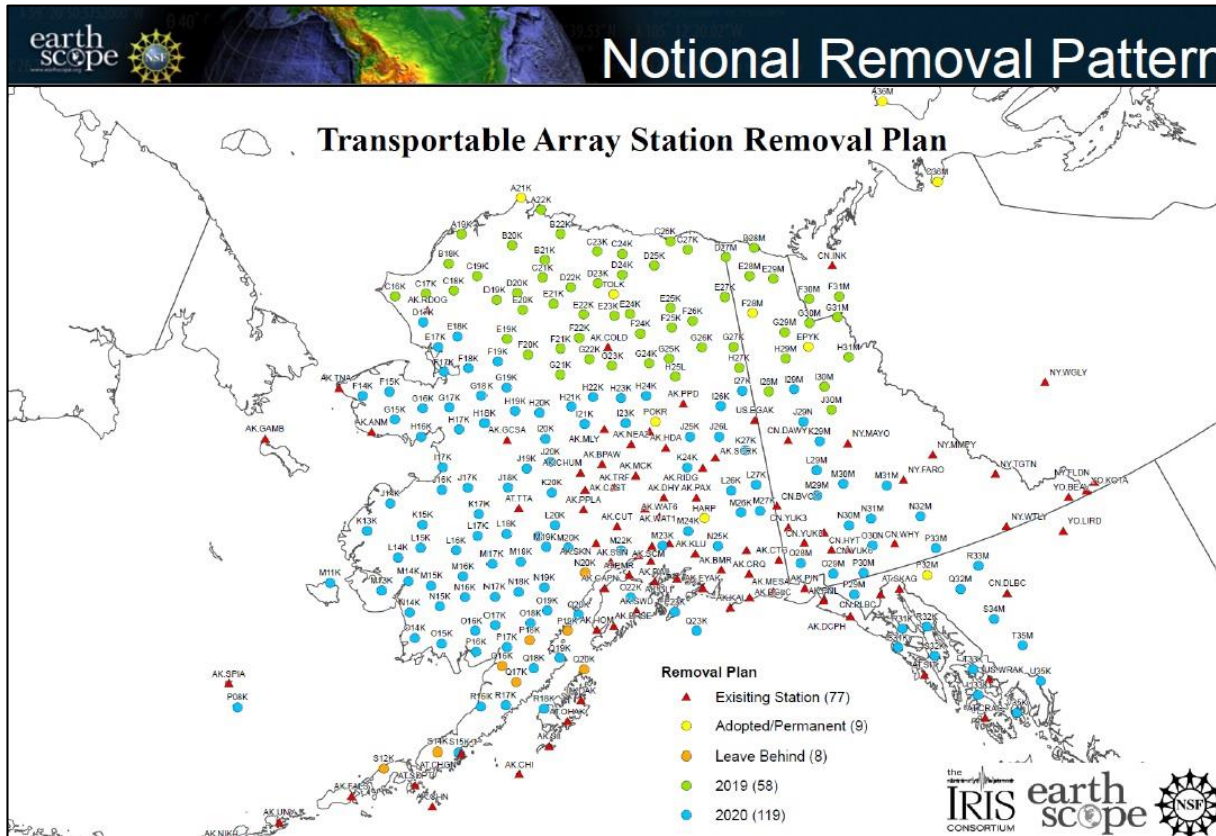
- ★ Partial CZO in place
- T – Tuktoyaktuk
- KI – Kluane*
- C – Calvert Island*
- Q – Quesnel River
- Ka – Kananaskis
- A – ASCCA
- * sensor installation summer 2018

☆ Proposed new CZO

- In – Inuvik
- NW – Norman Wells
- EP – Eagle Plains
- WL – Watson Lake
- PR – Prince Rupert
- GP – Grand Prairie (or)
- TR – Tumbler Ridge



Collaboration Opportunities



CCArray is exploring avenues for retention of some TA sites in Canada
 ~13 – 2019
 ~21 – 2020

(From Busby, AGU 2017)