CEOS-ARD for Land

Analysis Ready Data at the Canada Centre for Mapping and Earth Observation

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Committee on Earth Observation Satellites

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Agenda Item L4.3

LSI-VC-20

Reston, VA, USA

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ARD at CCMEO

Working with the Canada Space Agency (CSA) and the Earth Observation Data Management System (EODMS), CCMEO is focused on creating CEOS-compliant SAR ARD products for both on-demand and systematic processing environments.

Within the CEOS SAR ARD specification, CCMEO aims to support:

- Normalised Radar Backscatter (NRB) ✓
- Polarimetric Radar (POL) ✓
- Ocean Radar Backscatter (ORB)
- Geocoded Single-Look Complex (GSLC)
- Interferometric Radar (INSAR)
- Composite Backscatter (CB)



https://ceos.org/ard/

On-demand ARD

On-demand ARD is integrated as a processing method in the SAR Toolbox hosted on EODMS.

CEOS ARD

RCM Compatible beam modes:

5 Stripmap modes, 1 ScanSAR mode

6 Polarizations (HH, HV, VH, VV, CH, CV)

in progress…

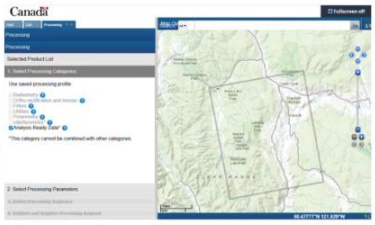
RADARSAT-2 Compatible beam modes:

17 Stripmap modes

4 Polarizations (HH, HV, VH, VV)

Radarsat-2/RCM modes and ARD Sampling Size

10 m	5 m
• Standard • Low Incidence • High Incidence • Standard Quad Polarization • Wide Standard-Quad Polarization • Wide • Medium Resolution 16m	• Fine • Wide Fine • Multi-Look Fine • Wide Multi-Look Fine • Fine Quad Polarization • Wide Fine-Quad Polarization • Extra Fine • Quad-Pol
2.5 m	**1.25 m**
• Ultrafine • Wide Ultra-Fine • High Resolution 5m	• SpotlightA • Very High Resolution 3m • Spotlight
20 m	
• Medium Resolution 30m	





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Systematic ARD - RCM

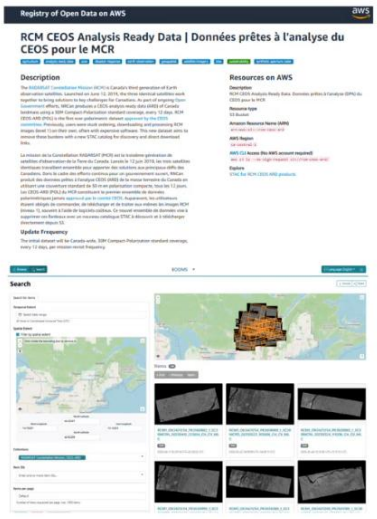
Single mode, systematic coverage of Canada's landmass, every 12 (24) days.

ScanSAR 30-metre MLC, CH/CV

Launched in early 2025, more than 22,000 ARD products are available.

Registry of Open Data Access on AWS: https://registry.opendata.aws/rcm-ceos-ard/

STAC Browser: https://radiantearth.github.io/stac-browser/#/external/eodms-sgdot.nrcan-rncan.gc.ca/search/collections/rcm-ard



Systematic ARD – RADARSAT-1

Fine and Standard Stripmap modes, systematic coverage of Canada's landmass over full mission life (~200,000 images)

Single-pol HH – NRB only

CEOS ARD as of August, 2026

Registry of Open Data Access on AWS:
https://registry.opendata.aws/radarsat1-ceos-ard/

in progress....

30 years of RADARSAT – 1996 to 2026



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ARD at CCMEO

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