

Radar Sector Blanking

Background

When a private company is carrying out work on communications towers located near an ECCC radar installation, they phone ECCC in advance so they can blank a predefined radar sector (no transmission) to protect the working personnel from radar radiation.

Blanking a sector means that while no data is collected for a slice of the radar domain, ECCC can still detect precipitation from other directions and provide meaningful data to its forecasters and customers.

18 out of 33 ECCC radars require sector blanking to accommodate local Telecom within 400m of a radar site.

Actions triggered from a request to blank a sector

- ECCC will determine the radar sector to blank according to the specific location (tower) where workers will be located.
 - Request to blank a sector is mostly done on the same day
 - ECCC phone line for such a request is available 24/7.
- ECCC will emit a notice bulletin (AACN31 bulletin), disseminated to stakeholders and clients with detailed information on the sector blanked.
 - Format: RADAR NAME CAXXX N/A FROM 1540Z JUN 03 DUE **TO SECTOR BLANKING XX to YY DEG** NATIONAL DATA QUALITY ASSURANCE DESK
 - **True degrees are used**
 - **In this message, N/A is only for the blanked sector (degrees), not the full radar.**
 - If you want to receive AACN31 bulletins to your email address, please write to f.clientelemeteoaviation-aviationweatherclients.f@ec.gc.ca.
 - Of note, AACN31 notice bulletins can be emitted for other purposes such as full radar stop due to maintenance or hardware work:
 - RADAR NAME CAXXX N/A FROM HHMMZ JUN 04 DUE **TO MAINTENANCE** NATIONAL DATA QUALITY ASSURANCE DESK
 - RADAR NAME CAXXX N/A FROM HHMMZ JUL 13 DUE **TO RADAR HARDWARE** NATIONAL DATA QUALITY ASSURANCE DESK
- Once work is completed, another AACN31 notice bulletin will be emitted
 - RADAR NAME CAXXX IS NOW AVAILABLE

How to know if a sector is blanked on an ECCC radar

1. You received an AACN31 bulletin mentioning sector blanking:

AACN31 CWTO 141539

RADAR CASMB

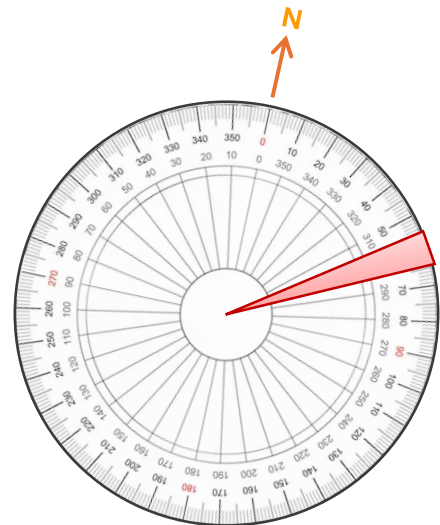
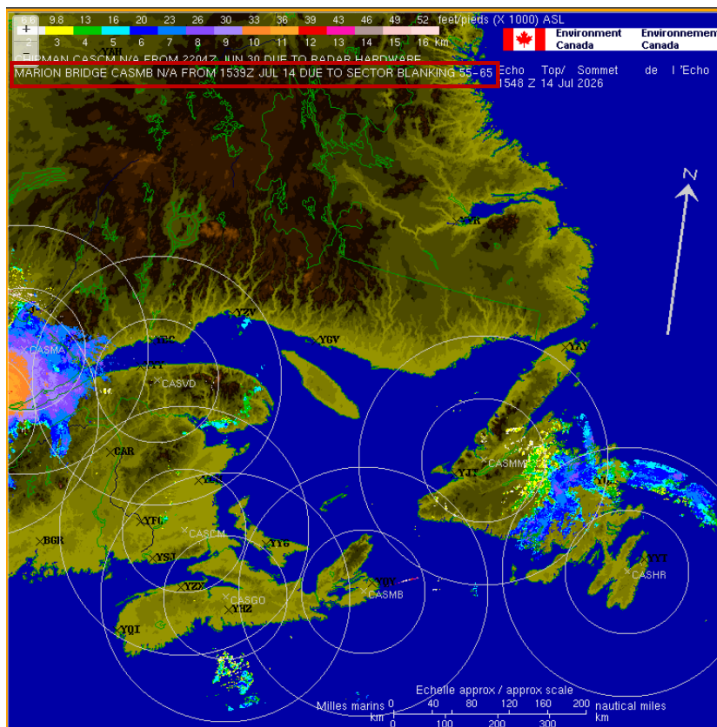
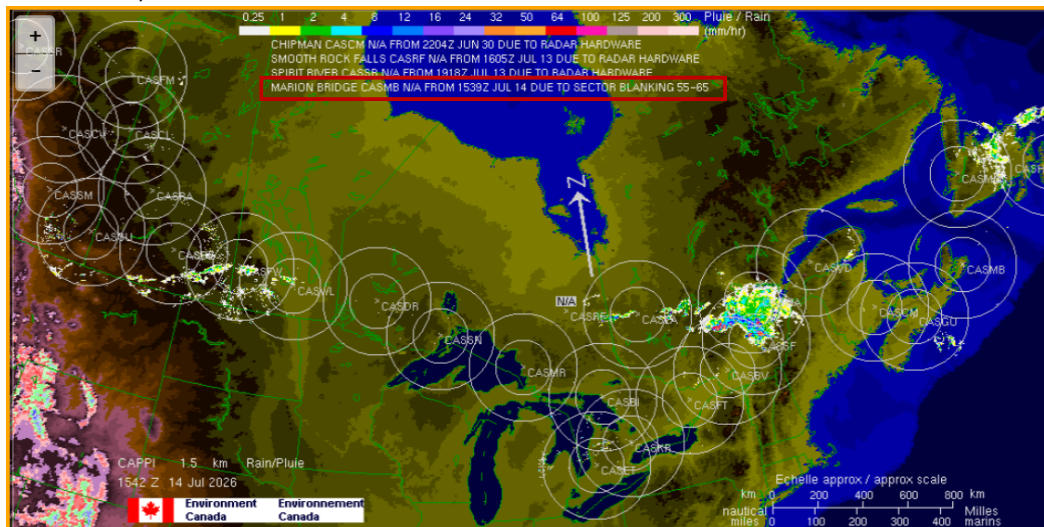
OPEN TICKET NO.50066018

MARION BRIDGE CASMB N/A FROM 1539Z JUL 14 DUE TO **SECTOR BLANKING**

55-65 DEG

NATIONAL DATA QUALITY ASSURANCE DESK

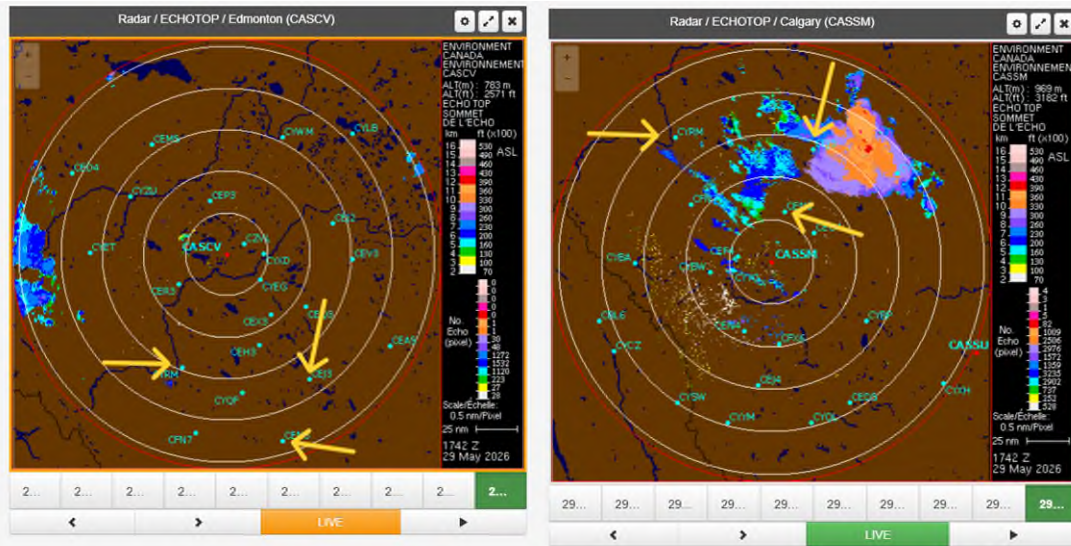
2. You see the bulletin information on the National or Regional radar imagery (CAPPI & ECHOTOP)



**Of note, there could be a slight delay (minutes; next image) between the emission of the AACN31 and the inclusion or removal of the AACN31 text from the National and Regional Radar imagery.

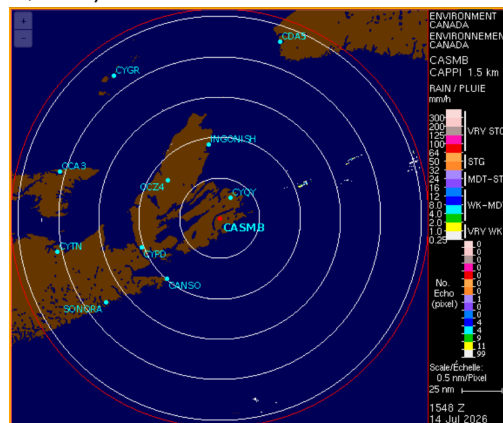
What to be cautious about

Individual radars depictions are not currently mentioning the notice bulletin when there is a blanked sector. This could be misleading to a user looking solely at an individual radar.

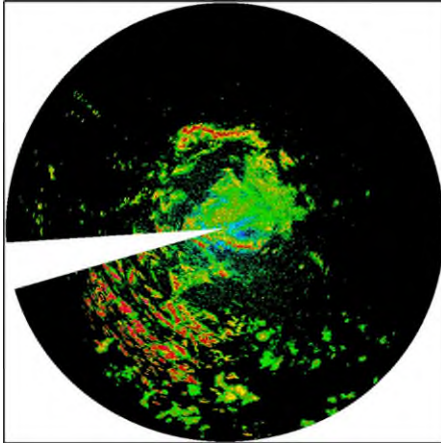


Future improvements by ECCC

- o Addition of the AACN31 bulletin message on individual radar imagery (development 3 months+; TBD)



- o Creation of a "mask" that will hide the blanked section on radar files that are not images (CFPS, Animet, HubWx) (development 12 months+; TBD)



Example of a radar blanking mask.