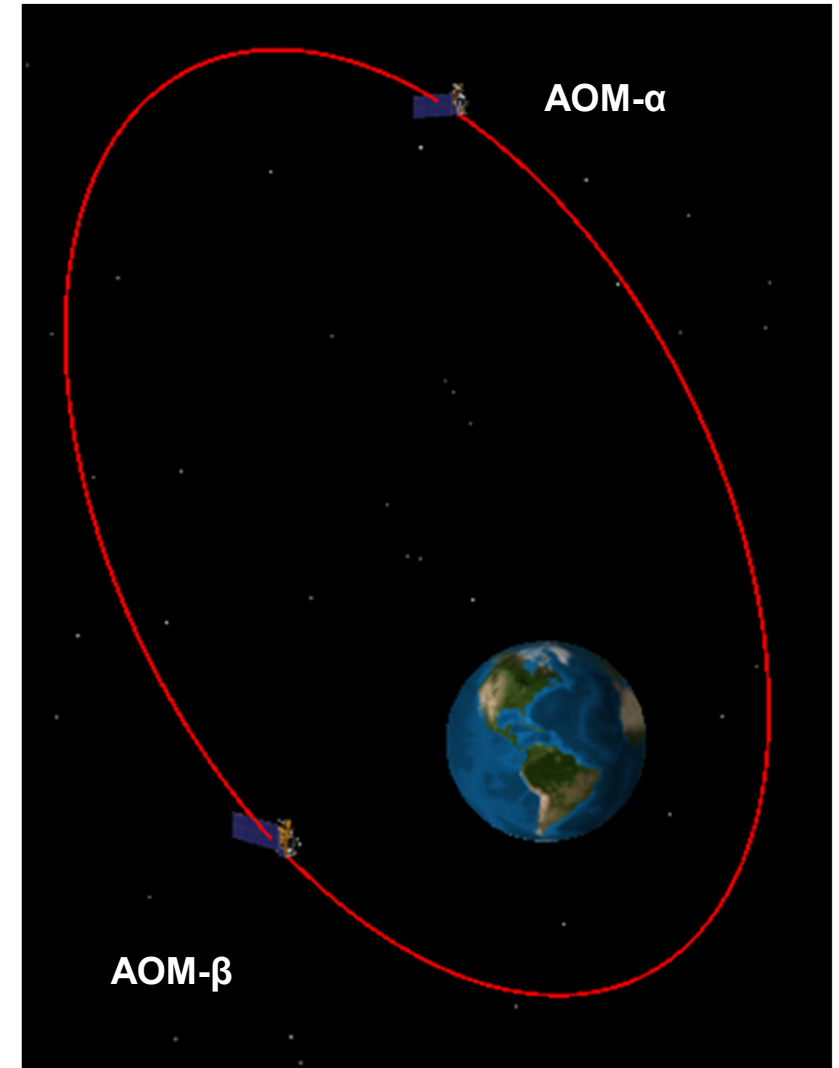


# The Arctic Observing Mission (AOM) International Partnership

presented by Ray Nassar (Environment and Climate Change Canada)

- AOM is an expanded version of the highly elliptical orbit (HEO) mission concept AIM-North ([www.aim-north.ca](http://www.aim-north.ca)), envisioned for implementation with international partners
- Discussions on potential partnership between ECCC & CSA have been underway with NOAA, NASA, EUMETSAT since 2019 and letters of support from senior officials in these organizations confirm interest in AOM, which may help to set the stage for future commitments/participation
- Currently in Phase 0, beginning a 'Pre-formulation study' to mature mission design, schedule and cost estimates
- Will seek funding approval for Canadian-led mission and commitments from partners around 2023, aim for 2032 launch and 10-year mission



# Potential Arctic Observing Mission (AOM) Payloads

## Next Generation Meteorological Imager



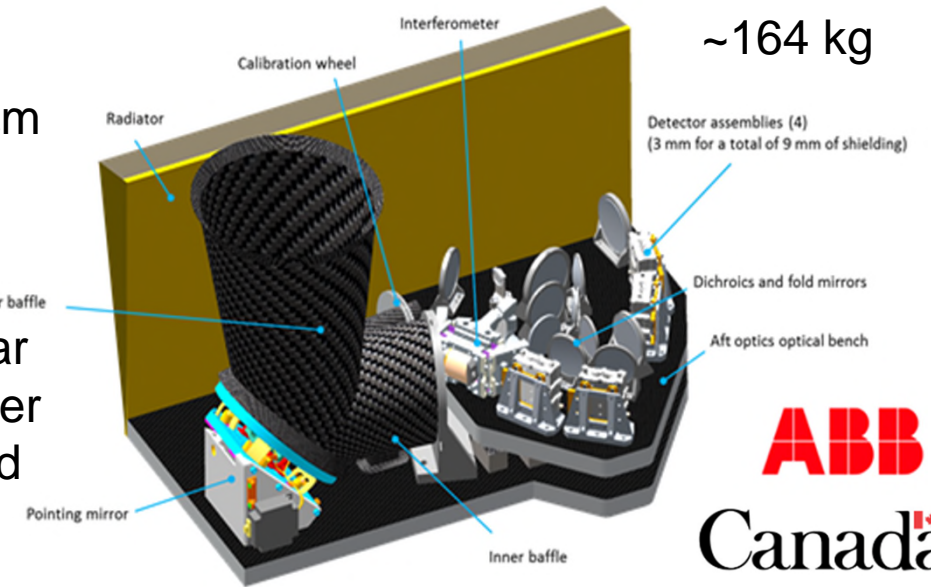
~350 kg

Advanced Baseline Imager (ABI)

## NIR-SWIR GHG Imaging Fourier Transform Spectrometer (IFTS)

Bands: 0.76, 1.61, 2.06, 2.34  $\mu\text{m}$   
 Pixels:  $\sim 4 \times 4 \text{ km}^2$   
 Cloud-informed pointing

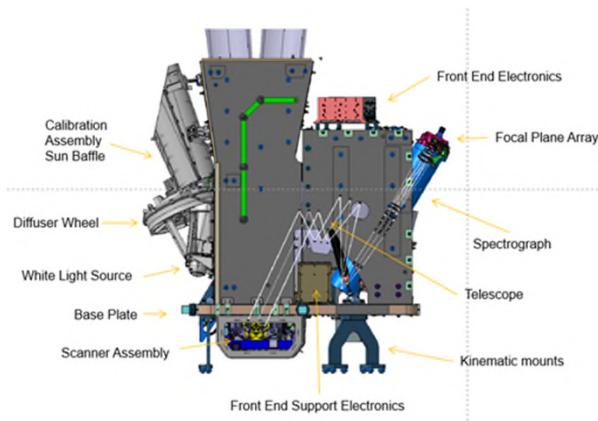
Hourly  $\text{CO}_2$ ,  $\text{CH}_4$ ,  $\text{CO}$  and Solar Induced Fluorescence (SIF) over cloud-free, Arctic & Boreal land ( $\sim 42\text{-}80^\circ\text{N}$ ), during daylight



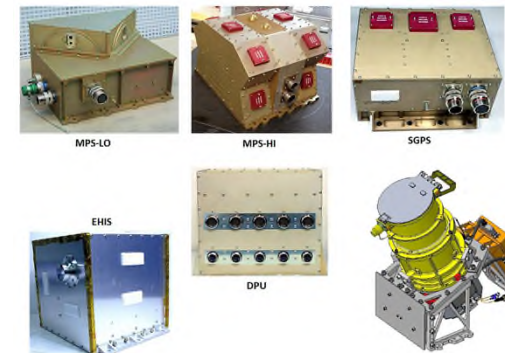
~164 kg



## UV-Vis Air Quality Imaging Spectrometer



## Space Weather: In situ instruments and UV Auroral Imaging



~70 kg