



# CSA activities of relevance to the CEOS virtual Atmospheric Composition Constellation



# Current Missions

## Support Science Operations of

- MOPITT on Terra (1999 to present) (University of Toronto)
- OSIRIS on Odin (2001 to present)
  - <http://osirus.usask.ca/>  
enabling use of OSIRIS vertical profile measurements of O<sub>3</sub>, aerosols, NO<sub>2</sub>, BrO for generation of Essential Climate Variable data sets and assessment reports
- SCISAT/ACE (Atmospheric Chemistry Experiment) (2003 to present)
  - <http://www.ace.uwaterloo.ca/index.html>

# Potential Future Missions

## Limb Sounding

- Atmospheric Limb Sounding Satellite (ALISS) feasibility study is being performed in collaboration with the Swedish National Space Board:
  - STEAMR (microwave)
  - CATS (UV-Vis)
  - SHOW (NIR for water vapour)

## Solar Occultation – payload seeks platform

- ACE-FTS follow-on with improved vertical resolution



# Validation, Modeling, Data Use

- Ground-based observations at PEARL (80N - NDACC, TCCON)
- Ongoing validation of SCISAT/ACE through arctic sunrise campaigns at PEARL
- Validation of GOSAT products
- CMAM-30: Canadian Middle Atmosphere Model reanalyses 1980-2010 (completed)
- Canadian – Ionosphere Atmosphere Model (C-IAM)
- Support SPARC and related activities (e.g. SPARC Data Initiative, assessment reports)
- Support Environment Canada in developing the EC-Carbon Assimilation System
- Grants for research at Canadian universities: data exploitation, FTIR techniques, balloon-borne experiments

