Canadian Atmospheric Science Community Workshop

The Future of Canadian Atmospheric Science from Space

16-17 November 2017

For the longer-term and infrastructure discussion, we will be broadening the topics for discussion to include three main questions:

- What should Canada be doing in space for atmospheric science?
- How do we ensure that Canada is in an active leader in atmospheric science from space in the next 20 years?
- How do we maintain and grow the atmospheric science community to support future space-based and related activities?

Within each of these areas, we invite participants to consider the following sub-questions:

What should Canada be doing in space for atmospheric science?

- Do you see any benefit for Canada to contribute to monitoring activities from space? For example, in the areas of ozone, greenhouse gases, air quality etc.
- If opportunities present themselves, should Canada make small contributions to larger ESA/NASA/JAXA etc. missions? Do you know of any future opportunities?
- What are the main user requirements? Data assimilation (radiances in forecast models), physical/chemical processes, integrated data enhancements, retrievals of atmospheric variables, land-ocean-cryosphere interaction with the atmosphere, others?

How do we ensure that Canada is an active leader in atmospheric science from space in the next 20 years?

- How do you feel is the best way for Canada to commit its resources to ensure that in 15 years we have a leadership role in key areas associated with atmospheric science from space?
- Should Canada develop a menu of instruments for micro-sats, larger missions, constellations, cube-sats, High Altitude Pseudo Satellites, long duration balloons etc. or just focus on one or a subset of these?
- Should Canada focus resources on particular technologies/techniques (FTIR, UV-Vis, Limb, nadir, occultation etc.) or should we stay flexible and not focused?
- How important should the effort on validation and ground-based measurement integration be in future?
- In what proportion should science versus operation or commercial missions be supported?

How do we maintain and grow the atmospheric science community to support future space-based and related activities?

- Do you think an end-to-end, integrated framework for developing and advancing worthy ideas into funded missions is needed? If so, what would you view as some key elements of such a framework?
- As things currently stand, do you think that too much emphasis is placed on the degree of support a proposed mission receives from other government departments when it comes to selection? For any future mission selection process would you recommend any changes to this?
- How best can we promote the collaboration between CSA, university research and other government agencies (e.g. ECCC) in the matter of space missions?