

Canadian Atmospheric Science Community Workshop

The Future of Canadian Atmospheric Science from Space

Telecon 3 – Wednesday 8 November

Please sign in by sending an email to info@csa-asac.ca

Agenda

- Plans for Workshop
- Review of Agenda
- Content for Consortia Presentations
- Discussion Areas / Questions for Longer-term Planning
- Q&A
- Workshop Reminders

Plans to Workshop

- Goal for workshop is to provide a “menu” of options to CSA that have been endorsed by the community for their planning
 - Range of ideas on different themes and with estimates of cost/effort/impact magnitude
 - Proactive approach so that options are readily available to CSA when opportunities arise
- Need to get new atmospheric projects into the federal government budget exercise for this and coming years
 - Want to provide input as soon as possible – hence the workshop next week

CSA Perspective

Definitions for Workshop

- Goal to **develop** both short- and longer-term strategies for **Canadian atmospheric measurements from space**
- These will include, but not restricted to, ideas for:
 - Missions
 - Instruments
 - Observing systems
 - International collaborations
 - Other mission-related concepts (e.g. data assimilation systems, validation sites and instruments, etc.)

Definitions for Workshop

- Time scale definitions
 - **What can we do now?** (short-term ~0-5 years)
 - Some work has already been done on instrumentation or mission development
 - **Where do we want to go?** (longer-term ~5-20 years)
 - New ideas or concepts that need development
 - Have added a separate time-scale for **Infrastructure**
 - This is the infrastructure needed to support mission development, validation and operations
 - This must be factored into mission / instrument planning rather than assuming that it will exist!

Agenda – Day 1

16 November 2017 – Focus on short-term ideas – “What can we do now?”

- 08:00-08:30 **Registration and gathering**
- 08:30-09:00 Vision for workshop and short-term discussions
- 09:00-09:15 Welcome from CSA
- 09:15-10:40 Presentations by consortia (Raven, CH₄-SHS, AIM-North)
- 10:40-11:10 **Break**
- 11:10-12:30 Presentations by consortia (CASS, TICFIRE, CanACT)
- 12:30-13:30 **Lunch**
- 13:30-14:20 Presentations by consortia (Ozone/Dynamics, SHAW)
- 14:20-15:30 Discussion of ideas for short-term
- 15:30-16:00 **Break**
- 16:00-16:30 Finish discussions
- 16:30-17:00 CSA presentation
- 17:00-17:30 Summary of discussions and consensus recommendations
- 18:00 **End of day**
- 19:00 Meeting dinner – location TBA

Agenda – Day 2

17 November 2017 – Focus on longer-term/infrastructure ideas – “What do we want to do?”

- 08:00-08:30 **Registration and gathering**
- 08:30-09:00 Vision for longer-term and infrastructure discussions
- 09:00-10:40 Presentations by consortia
(CASSAVA, CODAAC, HAWC, Raven-EE10)
- 10:40-11:10 **Break**
- 11:10-12:30 Discussion about longer-term direction and opportunities
- 12:30-13:30 **Lunch**
- 13:30-15:00 Discussion continues
- 15:00-15:30 **Break**
- 15:30-16:00 CSA perspectives on workshop
- 16:00-17:00 Summary and next steps
- 17:00 **End of Workshop**

List of Consortia – Short-term Ideas

AIM-North – The Atmospheric Imaging Mission for Northern regions

(PoC: Ray Nassar, ECCCC)

CanACT – Canadian Association of CATS + TEMPO

(PoC: Chris McLinden, ECCCC)

CASS – The Chemical and Aerosol Sounding Satellite

(PoC: Kaley Walker, University of Toronto)

CH₄-SHS – A miniaturized, low-mass payload to probe tropospheric and stratospheric composition

(PoC: Chris Sioris, ECCCC)

List of Consortia – Short-term Ideas (cont.)

Ozone/Dynamics Mission

(PoC: William Ward, University of New Brunswick)

The **Raven** Mission

(PoC: Doug Degenstein, University of Saskatchewan)

SHAW - Satellite High Altitude Winds

(PoC: Richard Lachance, Bluefield /GPI Canada Inc.)

TICFIRE – Thin Ice Clouds in Far IR Experiment

(PoC: Jean-Pierre Blanchet, UQAM)

List of Consortia – Infrastructure/Longer-term

CASSAVA – Canadian Anchor Sites for SAteellite Validation

(PoC: Kimberly Strong, University of Toronto)

CODAAC – A Canadian OSSE Data Assimilation facility for Atmospheric Composition satellite missions

(PoC: Dylan Jones, University of Toronto)

HAWC – High-resolution Aerosol, Water and Cloud

(PoC: Jean-Pierre Blanchet, UQAM)

The **Raven EE-10** Mission

(PoC: Doug Degenstein, University of Saskatchewan)

Consortium Presentation Contents

- The presentations of **no more than 25 minutes including 5 minutes for questions**. They can have one or multiple presenters.
- **All consortia** are to cover these topics but the discussion can be balanced as each consortium wishes:
 - Title of Consortium, Present Membership/Roles
 - Science Questions/Goals, Instrumentation/Implementation
 - Outcomes, Timeline/Mission Duration
 - Relevance to Government Department(s), Relevance Internationally
 - ROM/WAG Budget Breakdown (e.g., instrument(s), spacecraft, launch, ground segment, science; including assumptions made, e.g., contingency etc.)
 - Readiness, Heritage, Team Experience
 - Relevant Studies, Papers and Reports, References
- In addition, the **longer-term/infrastructure consortia** should include Development Needs in their discussion

Discussion

- We have planned for discussion of both the short-term and infrastructure/longer-term ideas during the workshop
- For the short-term ideas, a “menu” of ideas will be created that has the endorsement of the community
 - These will have a range of themes and funding levels required for the CSA to use for upcoming opportunities
 - **We will not be providing a list of priorities to CSA**

Some Short-term Questions

- Would this mission make a significant contribution to our understanding of the atmosphere?
 - E.g., air quality, climate change, ozone recovery
- Is this idea really short-term?
- Is it mature enough to begin implementation (of all components)?
- What is missing (e.g., component, concept)?
- What is the relevance of this idea to the Government of Canada? Is there support for it?

Longer-term/Infrastructure Discussion Themes

For the longer-term and infrastructure discussion, we are going to add these questions to the discussion:

- What should Canada be doing in space for atmospheric science?
- How do we ensure that Canada is 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?

Questions?

Reminders for Workshop

- Remember to sign in for this meeting by sending an email to info@csa-asac.ca
- You should have received an email confirming your registration for the meeting on Friday 3 November
 - Contact us at info@csa-asac.ca if you did not!
- Remember to bring your government issued identification for security at CSA (on the first day you arrive)
 - Keep in mind that this may take some time for all attendees so plan accordingly!
- See you next week in Saint-Hubert!
 - If your plans change, let us know as soon as possible