

# Update to the 2020 STSAC Roadmap

[https://aurora.phys.ucalgary.ca/doc/Canadian\\_Solar-Terrestrial\\_Science\\_Roadmap\\_2020.pdf](https://aurora.phys.ucalgary.ca/doc/Canadian_Solar-Terrestrial_Science_Roadmap_2020.pdf)

# Introduction

- The Solar-Terrestrial Science Advisory Committee (STSAC) has been asked by the CSA to develop an update to the 2020 Solar Terrestrial Science Roadmap, on behalf of the DASP community.
- STSAC was reminded by representatives of the CSA of the importance of an up to date Roadmap for guiding CSA investments.
- STSAC was advised by the CSA that updating section 6 of the Roadmap which describes the communities priorities, to reflect updated opportunities and any new or revised funding priorities since 2020. Updates to section “6.3 Strategic Investments” is especially important and especially useful.
- DASP community requested to provide advice and input to the STSAC to support the roadmap update.

# Proposed Process and Timelines

- Community Workshop during DASP 2014 (this meeting).
- Community input of white papers/quad charts highlighting new opportunities and priorities (deadline Friday March 15, 2024 – 3 weeks).
- STSAC consideration of community input (week beg. March 25<sup>th</sup>)
- STSAC draft of revised Roadmap circulated to community (middle of May 2024)
- STSAC submits final Roadmap to CSA – early June 2024.

# Existing Priorities in Section 6.3 of Roadmap: Progress and Future Prospective

- **Immediate:**
- (1) Commit to a Foundational Level of CSA Funding for GO Canada of at least \$1.5M annually.
  - Current status – CSA funding (including GO Canada core site maintenance contract) is \$1.3M
  - Noting that CSA GO Awards removed funding from a number of projects previously funded by GO.
- (2) Support the development to flight of the RADICALS satellite mission.
  - Current status – CSA funding allocated as required for the match to CFI, in addition to GoA funding, as well as allocation of CSA staff engineering time.

# Existing Priorities in Section 6.3 of Roadmap: Progress and Future Prospective

- **Ongoing and Future Strategic Programmatic Initiatives.**

*[Should we be more specific about Immediate, Medium (e.g., 2 year) and Longer (e.g., 5 year) priorities?]*

- a. Maintain and enhance an integrated multi-instrument ground-based program.
- b. Leverage opportunities for the flight of Canadian solar-terrestrial instrumentation in lunar orbit.
- c. Instigate an integrated mission and instrument development program: standing instrument development program; new micro-satellite mission concept studies; nano-satellite research program; suborbital research program; new micro-satellite mission concept studies

# Existing Priorities in Section 6.3 of Roadmap: Progress and Future Prospective

- **Ongoing and Future Strategic Programmatic Initiatives.**

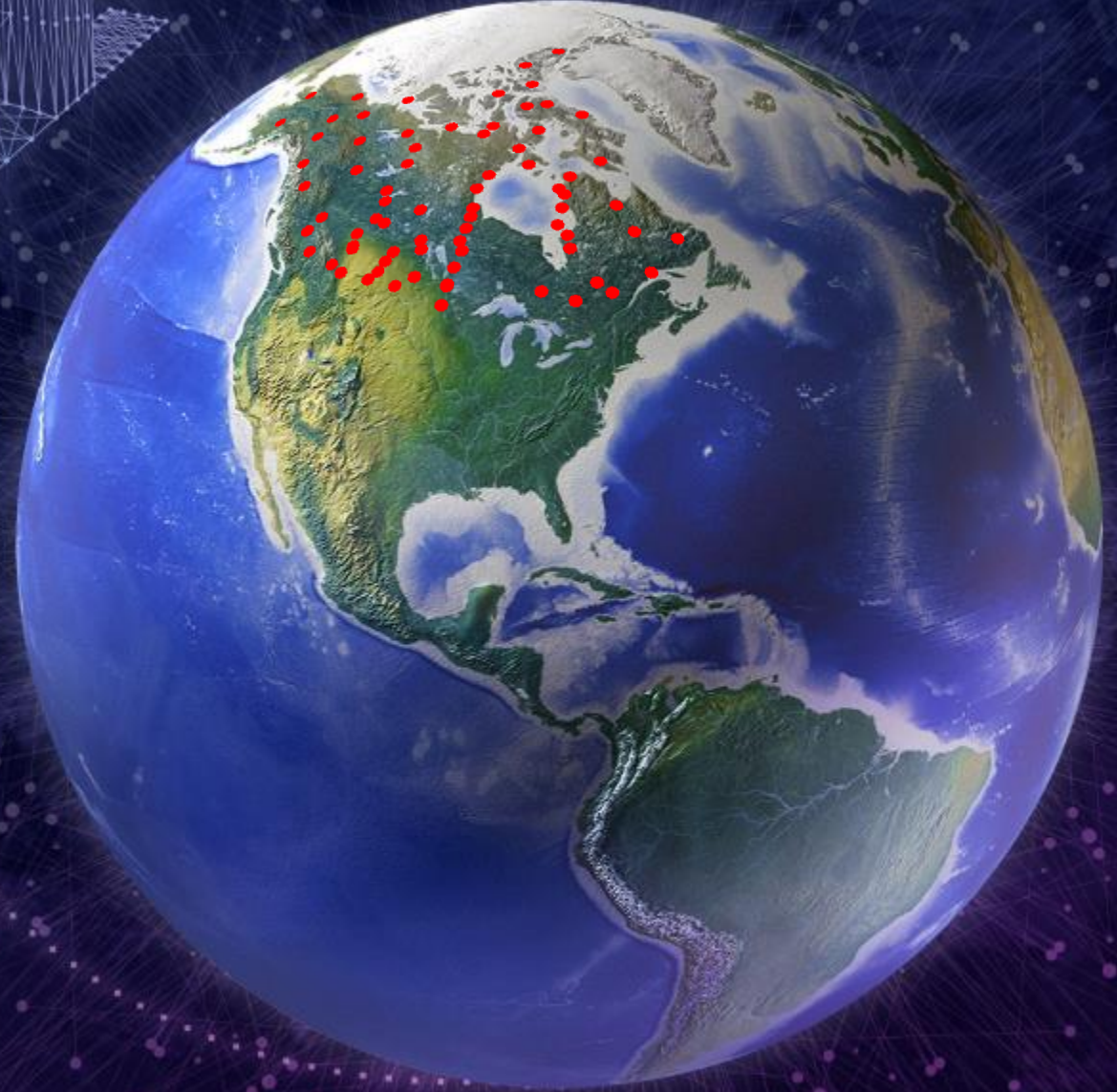
*[Should we be more specific about Immediate, Medium (e.g., 2 year) and Longer (e.g., 5 year) priorities?]*

- d. Develop a robust data analysis, data assimilation and modelling program.
  - data analysis program (comment on funding reduction for ROSS?)
  - national model of the coupled whole atmosphere/ionosphere
- e. Exploit multidisciplinary opportunities in space research to deliver innovative training of HQP.



# 2020 Solar-Terrestrial Science Roadmap

John Manuel  
CSA Solar-Terrestrial Sciences



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Canadian Space  
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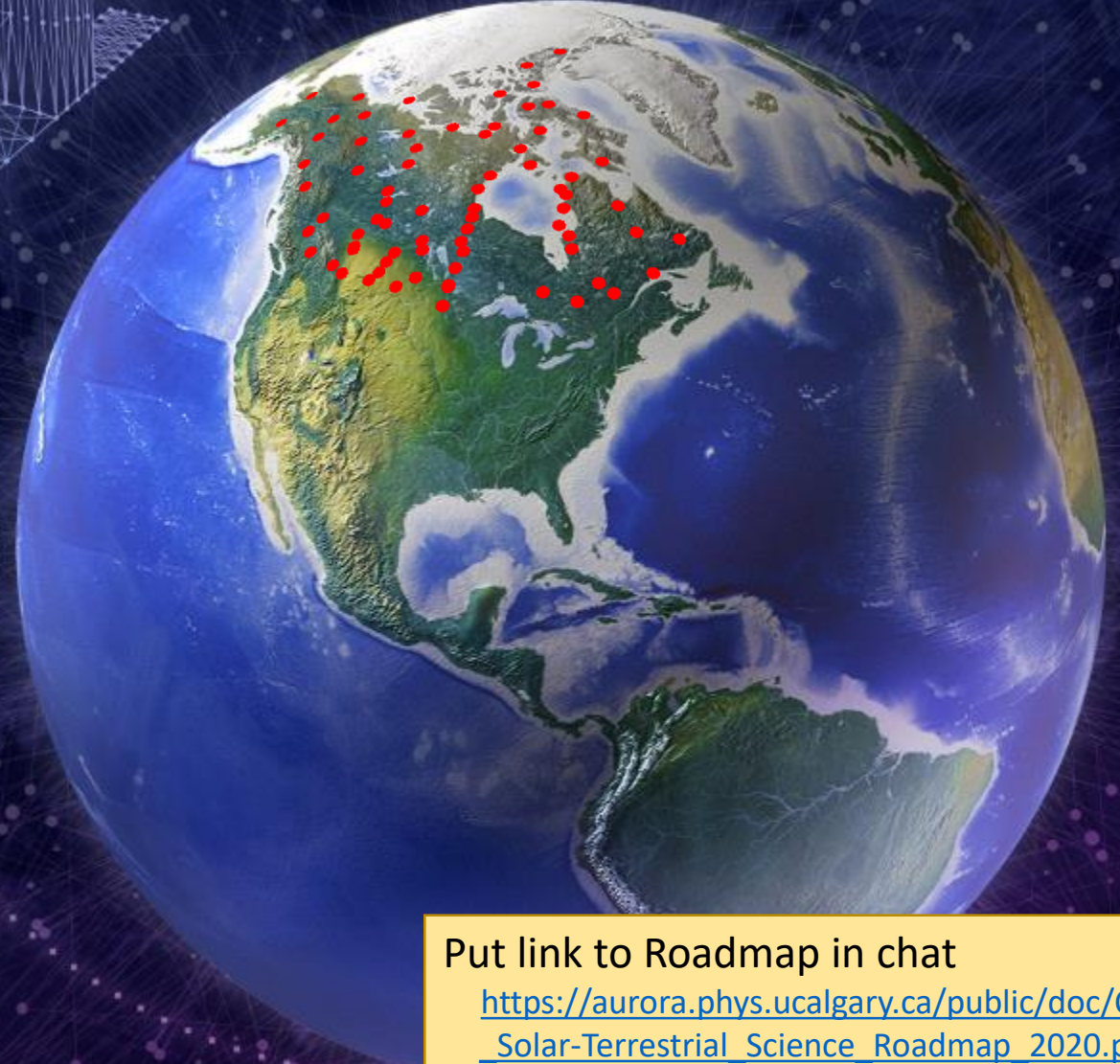
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Canada



# 2020 Solar-Terrestrial Science Roadmap

John Manuel  
CSA Solar-Terrestrial Sciences



Put link to Roadmap in chat

[https://aurora.phys.ucalgary.ca/public/doc/Canadian\\_Solar-Terrestrial\\_Science\\_Roadmap\\_2020.pdf](https://aurora.phys.ucalgary.ca/public/doc/Canadian_Solar-Terrestrial_Science_Roadmap_2020.pdf)



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# Progress on Roadmap's Strategic Investments and Initiatives

1. Commit to a foundational level of CSA funding for GO Canada of at least \$1.5M annually.	<b>In progress:</b> GO Canada contributions total \$1.3M annually (excludes THEMIS, SMILE-ASI)
2. Support the development to flight of the RADICALS satellite mission.	<b>Done.</b>
3. Maintain and enhance an integrated multi-instrument ground-based program.	<b>In progress:</b> Exploring GO Canada program
4. Leverage opportunities for the flight of Canadian solar-terrestrial instrumentation in lunar orbit.	<b>In progress:</b> SWEPT project continues
5. Instigate an integrated mission and instrument development program.	<b>In progress:</b> Biennial FAST AO
6. Develop a robust data analysis, data assimilation and modelling program.	<b>In progress:</b> Annual ROSS AO
7. Exploit multidisciplinary opportunities in space research to deliver innovative training of HQP.	<b>In progress:</b> Annual ROSS AO, Biennial FAST AO, Student Conferences AO, CaNoRock?

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Canadian Space Agency

# Relation to Planetary Space Environment Topical Team report

- Planetary Space Environment Topical Team report submitted to the CSA by Prof. Clinton Groth, TT Chair (report circulated to the community).
- Community has the opportunity to concur with the TT report recommendations and/or science targets as part of the roadmap update. Perhaps to incorporate them explicitly and/or revise etc.
- Space environment science in the lunar vicinity is likely to be a major area of upcoming opportunity through activities associated with the Lunar Gateway, and the Artemis program returning astronauts to the moon.
- To exploit this opportunity requires the Roadmap to be updated to reflect the communities interest in this area.

# Contributions from the Community

- Powerpoint presentations addressing potential updates to the roadmap and/or new opportunities and/or new science.
- Target 3 slides maximum.
- STSAC also solicits community written submissions ideally using a template “quad” chart or any other format which the author chooses. Could also be the powerpoint slides above.
- Can be submitted to online repository at <https://dasp.spacephysics.ca/roadmap>
- Username: dasp2024
- Password: edmontonAB

# XXX Opportunity/Science Target/Project NAME XXX

## Overview of Opportunity/Science Target/Project:

*BULLET 1.*

*BULLET 2.*

*BULLET 3.*

*etc*

## Is this aligned with existing 2020 Roadmap?.

*If so which section: Eg. 6.3 TITLE*

*What needs to be added/included/updated?*

## Implementation Timescale (pick one):

*Immediate or Near Term (2+ yrs) or Medium Term (5+ yrs)*

## PROPOSED IMPLEMENTATION:

- *DETAILS*
- *DETAILS.*
- *DETAILS*

## PROPOSED ACTIONS:

*What needs to be done?*

*Canadian partnerships?*

*International Space Agency partnerships?*

*International Mission partnerships?*

*Others etc*

## PRIMARY OUTCOMES ARISING FROM PROJECT :

- *Research?*
- *HQP Training?*
- *Enabling and Enhancing Space Technology?*
- *Maintaining Canadian Capacity?*
- *Niche Canadian area of expertise?*
- *International Impact?*
- *Other?*

## CONNECTION TO CANADIAN SPACE STRATEGY:

- *DETAILS*

## Cost:

*DETAILS*

**BANG BOX TEXT HIGHLIGHTING IMPACT IF IMPLEMENTED**