JCSA Meeting Report
Feb 2016

Due to budget and travel restriction issues the JCSA did not have an physical meeting in November, we continued our teleconference meeting in February 2016. The committee met via teleconference to discuss some pressing issues and will meeting again (via tele-conference) in February to discuss other less urgent issues.

The first teleconference call of the JCSA was held on Nov 30, 2015 (see separate report) and a second call was held on Feb 26, 2016.

JCSA members in attendance:

Denis Laurent (CSA, co-chair)
J.J. Kavelaars (NRC-Herzberg, co-chair)
Andrew Cummings (McGill)
Sarah Gallagher (University of Western Ontario)
Sabin Stanley (U. of Toronto)
Marcin Sawicki (St. Mary's)

Observers

James Doherty (CSA)
Jean Dupuis (CSA)
Victoria Hipkin (CSA)
Christian Lange (CSA)

No guests were invited to attend this meeting and no reports were solicited from mission/ project leads. Reports will be solicited from the May 2016 meeting.

AGENDA:

As this is a teleconference meeting and we wish to keep the time practice the agenda is quite limited:

- CSA update slides that contain:
    - Government perspective
    - CSA Org update
    - JCSA membership
    - Missions in brief
- JWST science support, CADC proposal

- NSERC
- Activities in SE (WFIRST, SPICA)
- Activities in SS&T (FAST, STDP)
- Topical Teams (and NASA STDT)
- Next meeting

CSA Introduction

Organization: The CSA is now reporting to the new Minister for Innovation, Science and Economic Development. There has been good engagement with the new Minister and the Minister for Science paid a visit to NASA in Washington (but did not tour Goddard as had been hoped). The JCSA members are encouraged to read the mandate letters of those Ministers.

Budget: Reminder to the JCSA that Budget 2015 committed the CSA to supporting the ISS through 2024. CSA has been making budget proposals to GoC for budget 2016. The information in those proposals was, in part, driven from consultations with the JCSA and other community groups. No details of those proposals are public.

Membership: A new member of the JCSA will be needed for the May 2016 meeting. Sara Ellison will join in the Fall of 2016.

Planetary: ISO-REX as been delivered (?) this is a an exoMars hardware contribution. A mission co-I has been selected for this mission

Astronomy:

MOST is still operational with the private firm operating. Also a public archive of the MOST observations acquired during the CSA period of the mission is nearly completed.

HERSCHEL/PLANCK: There is has been some support for the extended data reductions to end of this FY. That funding is now completed.

ASTRO-H: Luigi Gallo attended the launch, which was delayed but successful. Astro-H has been a great success for Neptec, although the metrology system boom has not yet been deployed. Grants to Astro-H have been extended to be $50,000 for three years to each of Sophie Heart, Luigi Gallo and Brian McNamara.

NEOSSat: Launch was in Feb 2013. The space surveillance part of the mission has been successful. Still working on improving the telescope for using NEO part of mission. the NESS project has not yet started. The PI is growing impatient. This summer the CSA will be discussing with the PI if they should continue to pursue the NESS mission or res-

cue the science plan. There is a strong feeling at CSA that they are 'A few months' from success.

AstroSat: Commissioning is proceeding. John Hutchings will be organizing a CTAC call for proposals this fall. There is a contribution agreement that is still being negotiated. CSA is working to augment the baseline $50,000 budget. The JCSA continues to see this budget level as inadequate.

The JCSA stresses to the CSA that there needs to be sufficient and effective science support available in Canada is to benefit fulling from this mission. The launch success is not the end of the road. Science support is a key requirement, with science outcomes a key measure of success of the mission.

Currently the best information on AstroSat is from Wikipedia and a U. Calgary exposure time calculator that the CSA support has provided. We can not rely on our partners to provide support, CSA will need to step in.

RECOMMENDATION

The JCSA sees the current level of support for AstroSat participation as inadequate and strongly encourages the CSA to secure the funding necessary to ensure that this mission can be successful. That funding should include both supporting the ground segment activities via a data specialist and via support of for science exploitation.

CSEW The Canadian Space Exploration Workshop will happen n the fall of 2016. Details are still being worked through. More to follow after Budget 2016.

NSERC With the encouragement of the JCSA the CSA has written to NSERC to open a discussion on how to proceed on improving the funding environment for science exploitation of CSA's space missions. The outcome of this interaction emphasized that:

- Space Science is not a focus for NSERC at this time, based on previous directions from GoC
- New funds will be needed to support this sort of program
- NSERC is interested in collaborating on delivery.

Getting a solution / program in place will take some months. Hopeful for progress by Fall 2016.

JWST - This mission is continuing at pace. No problems between now an launch. There needs to be continued support for this mission. There will be a meeting of the GTO in May (at NRC-H). A conference on JWST science is planned for Oct 24-28, 2016 (at U.d.M). CADC has proposed to provide enhanced archive services. JCSA is very supportive of this effort. There is renewed emphasis, within GoC, on evaluating success

agains science outcomes. For Space Astronomy we need to show data delivery and science usage.

Comments form the JCSA: Given a $190 million contribution this far, $300k / year is not sufficient for PDF support. Support to JWST needs to be a 'complete package' that includes instrument support, data processing support, archive support and science exportation support. Should not be approached in a piecemeal way. If Canadian scientist don't get this support then very likely that we will fail. Many examples from HST where Canadian scientist are placed in the back-seat by their better funded US and European colleges.

RECOMMENDATION:

The JCSA recommends that CSA work to provide an enhanced and comprehensive funding program for JWST. This program should include support for instrumentation groups, individual scientists acting as PIs and for the CADC acting as a community resource for data handling and processing. The JCSA recommends that some of this funding process be in the form of 'Money for Time' where successful PIs are allocated funding based on the amount of time they have been awarded. The process for Spitzer was quite straightforward and seen as a good model.

WFIRST After the concept phase completed, NASA expressed their interesest in a CSA contribution in the area of the WFI, IFU and calibration system. There is a need for the Canadian science community to get ready for this mission. NASA is rapidly moving to Phase-A. CSA can join later but must be ready to commit. The CSA contribution will need support at the Treasury Board level and thus will require support from the community. There will be a decision this summer on CSA moving forward.

JCSA emphasized that Science team members must be present during negotiation. There must be agreement on the science level that the contribution that Canada is making is worth the science payback. In particular, there should not be restrictions on the sorts of science participation that is possible for Canadians. Our hardware contribution is not seen as limiting what science area we will participate in. In particular, Science Investigation Team funding will be needed if Canadians are to be full partners.

The CSA sees the Topic Teams that they are funding as a good route for focusing Canadian participation in the WFIRST mission.

SPICA The Calgary based Safari FTS group has been given a FAST grant (2015 + 3 years) to help maintain and expand their lab. CSA has not yet decided on participation in the upcoming ESA M5 call. As a result of various de-scopes Canada's contribution would be a FP not an FTS, the FAST grant will help develop an FP where the FTS was going to go. Calgary already has the cry test facility ready to go.

CASTOR The detector characterization contract is now completed. This work identified some issues that would need to be addressed, in particular the 'Red Leak'. Solutions to this might be investigated via a future contract.

SDTP The NuVU EMCCD group has been awarded a contract to get their camera up to TRL-5. This work is targeting CSA participation in an Asteroid Rendezvous Mission. This is not currently a science mission.

Topic Teams
The CSA is now funding three astronomy related Topic Teams at $18k / year. This money is to enable the teams to meet and attend a few meetings.
- Origins of Galaxies - Mike Hudson
- Origins of Stars - Jeremy Hyle
- Origins of ExoPlanets - Nick Cowan

ATHENA Now is the time for concept development to be happening. The Topic Teams are forming. This is a high-priority area for Canadian astronomer (see the MTR) and the CSA should start moving on funding participation in topic teams.

RECOMMENDATION

CSA should contact Luigi Gallo to investigate how Canadian scientists might best participate in the Topic Teams that are forming the ATHENA concept.

NASA STDT: CSA has requested that the CSA Topic Teams chairs nominate members to serve on the NASA STDT review panel. This panel will look at missions beyond 2020, and NASA has invited CSA participation. Reports will flow from the participants to the CSA Topic Teams and then to the CSA and JCSA.

JCSA Membership:
The current CASCA co-chair (JJ Kavelaars) will be extended to after the May 2016 meeting of the JCSA. Two new members of the committee are needed. At least on of those should be planetary person. JCSA chairs will coordinate.

NEXT MEETING: will occur after the CASCA meeting in Winnipeg. May 5-6. The 2nd day will be 1/2 day and finish at Lunch.