

## LRPIC report to CASCA January 2014

### Committee

The LRPIC membership is currently as follows (from left to right on the map):

Hutchings, Stairs, McNamara, Balogh, Murray, Dobbs.

The list of observers includes Fahlman, Ferrarese, Brooks, Barmby, Wilson, Parker, Seaquist, Ouellet

The committee has had occasional email exchanges, mainly to keep everyone informed on current issues and developments. The period has largely been one of waiting for such developments, such as preparation for TMT funding request to government, CFHT decisions on future instruments, decisions on UKIRT and JCMT. We are in touch with the TMT via its planning committee (Hutchings and McNamara being members), and with other projects via personal connections or email from project leaders, such as Fich (CCAT), P.Cote (ngCFHT), S.Cote (Gemini), Fahlman (CFHT), and Halpern (CHIME). We also have members involved in Astro-H, Euclid, WFIRST, CASTOR, CHIME, ngCFHT, as well as ongoing projects JWST and Astrosat. We have and maintain close association with the JCSA, GAC, and Gemini STAC and Board.

The LRPIC held a telecon in December 2013, including CASCA observers noted above. A full set of LRP projects and issues was reviewed, supported by summaries of most of them. No immediate LRPIC actions were proposed, but we note various issues and concerns below.

### Space

I requested and arranged a meeting with the new CSA president, which Laura Parker and I attended in October. The discussion was broad, but positive, and I believe we have his interest and attention on space priorities in the LRP. He has called a meeting of `all major space stakeholders from industry, academia, provinces and territories to the first **Canadian Space Conference** held on Tuesday, February 25th, 2014 to

Brief you on the Space Policy Framework and the new Governance;

Provide an overview on the space strategies of key Government of Canada departments;

Introduce and get feedback on CSA's Draft Strategy;

Discuss ways to better work together to advance Canada's Space Program.'

He has close ties with the PMO, and I believe this is an important opportunity to be heard (or ignored if we don't respond). I will attend on behalf of the LRP.

The newly-formed NASA-WFIRST Science Definition Team invited Canada (via CSA) to appoint a representative. The selection was Mike Hudson, in concert with the JCSA. This ensures we have a place at the table and a chance to see opportunities for partnership, as they arise - in contrast to the unsuccessful attempts to join the ESA Euclid project long after it was defined. CSA have funded technology studies for detectors and that would be needed for the CASTOR mission, and there is hope for a phase 0 study contract next FY. This is in accord with the CSA president's idea to keep ambitious projects alive until significant new funding is possible from the government, beyond 2015. There are also ongoing discussions of CASTOR partnering with a CNES group who have similar ideas, and ISRO.

Our future in space via CSA is still very uncertain, but it is certain that no major new initiatives will happen before a year or two from now.

### Ground-based

The LRPIC has monitored all ground-based projects, with some members participating in teams and committees.

Our principal issue is the status of Canadian participation in TMT. The CASCA website and monthly news has included various updates. The government (Industry Canada) are aware and well informed of the status, and have asked for clarification on a number of contractual and administrative matters. Following this, it was expected that IC would ask NRC to prepare a Memorandum to Cabinet (MC) in time for the 2014 budget. NRC has received a full briefing to support this, from ACURA. Because MCs are 'secret', NRC has not revealed whether this is happening, but the timescale suggests that it may not be done in time in any case. As construction is due to begin in April 2014, this raises serious concerns over our continued partnership. LRPIC awaits news, but has no inside information. The TMT planning committee, chaired by Seaquist, has been inactive over this period of activity.

A second issue that has been awaiting action is the future of the CFHT. This involves proposals for instruments – pending and upgrades, the setting up of a ngCFHT office, together with future scenarios for UKIRT and JCMT. While general announcements have been made, many details are still unclear or in process. LRPIC has already stated a position on the relative priorities of CFHT future and large surveys.

Other developments, mainly positive, have been followed on CHIME, SKA, CCAT. LRPIC is also following developments with SPICA, WISH, Athena, Astro-H, and the Arctic. We append my summary chart and Greg Fahlman's chart for ground-based facilities. CASCA board may want to consider how much of this report should be posted publically.

What	When	Who	New \$C	Share	Funds	Notes
TMT	2013-2020	20% partner	~\$300M	20%	2014 budget	MC for 2014 budget ?
SKA	2016-2024	Partner	\$<30M	10%?	Current	+\$150M? to complete in 2024
CASTOR	2012-2020	CSA + XSA	\$100m ?	33%?	CSA	Tech + science studies; partners
CFHT	2013-20??	CFH	--	42%	Current	Short-term improvements
ngCFHT	2013-2022?	~6 partners	\$34m?	20%	Current +	Partnership needed
CCAT	2013-	Consortium	\$21-35M	15-25%	Current +	University funds, CFI?
CHIME	2013-	UBC,UT,Mc G	\$10M	100%	CFI	DRAO site start 2013
Arctic	2012-2020	Canada	?	<=100%	Univ + NRC	Still exploratory, poss partners?
SPICA	2013-2022	JAXA	\$6-20M	?	? (CSA)	Hardware for upper price
Astro-H	2012-2015	JAXA	\$5M	5%	Current	Underway
WFIRST	2014 - ?	NASA +	?	?	? (CSA)	Canadian on SDT
Euclid	2016-	ESA	?	?	CFHT, CADC	Ground survey only
Balloon, Microsat	2012-2020	CSA, CNES	\$10M	100%	Current	Continuing

Funds indicated all spread over several years – details differ.  
 Amounts secured or in present budgets. Space and Ground-based