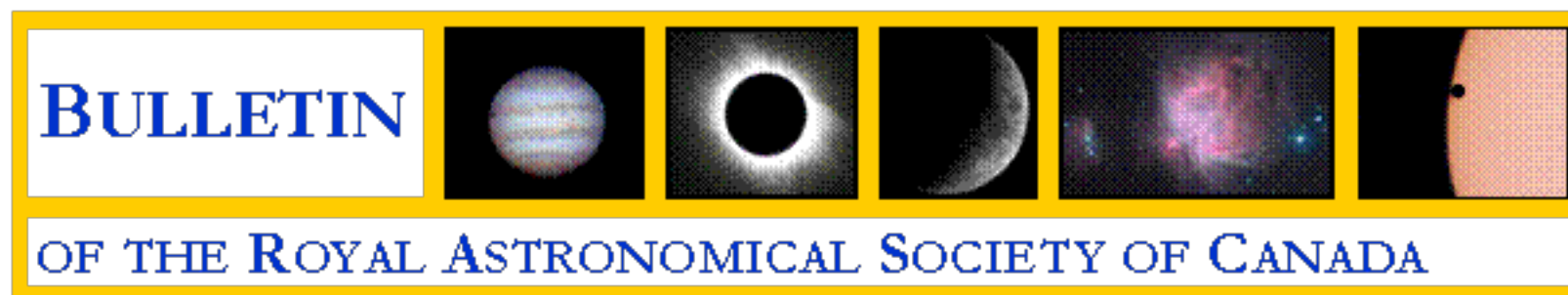


2009-12



December 2009 - Volume 4, Number 12

Ian Levstein, Editor

We welcome your comments on the *Bulletin*. Email them to the Editor at bulletin@rasc.ca [1].

► [Editor's Notebook](#)

by Ian Levstein

[Thank You for Contributing](#)

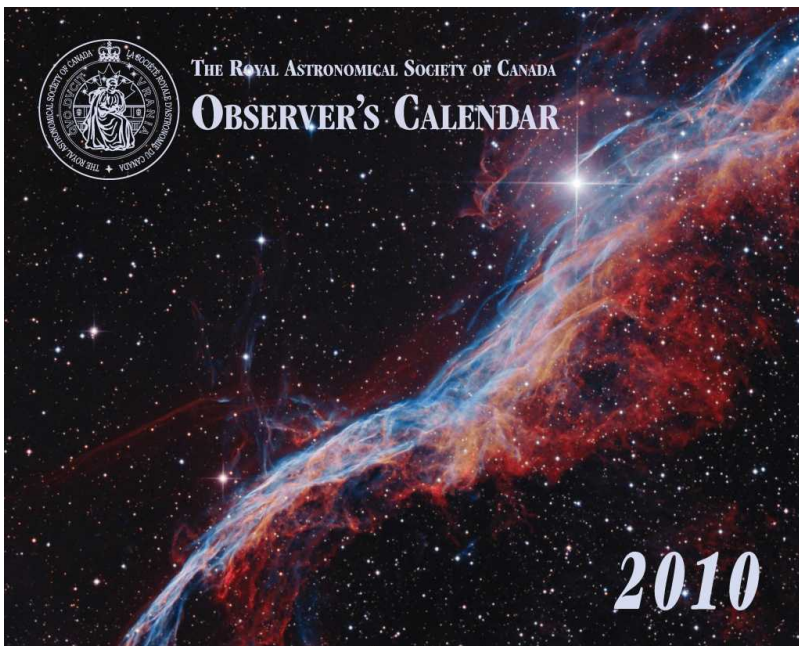
As we close out 2009, I would like to take this opportunity to thank those who contributed articles and photos during the year. With your help, the *Bulletin* has become an attractive, interesting and vibrant publication for our members.

► [News @ RASC.ca](#)

[2010 Observer's Calendar Now Available](#)

Get them while they're hot! The 2010 version of the *Observer's Calendar* is beautiful with spectacular images from our own astro-imaging members.

The monthly grids are packed with astro-info including rise and set times, planet visibility, conjunctions, eclipses, meteor showers, Moon phases, historical anniversaries, star-party dates, and more! They make great gifts for friends, family, home, office, cottage, observatory, and favourite teachers. In short, everybody should have one! For more info or to order yours, click [here](#) [2].



Donation of Meteorites to RASC Collection

by **R.A. Rosenfeld**, RASC Archivist

The RASC has a time-honoured tradition of receiving significant astronomical items from members, and others interested in the Society's work, achievements, and heritage. We owe our original Herschel letters to the generosity of RASC member **Richard H. Babbage** (unattached) in the 1940s; our autograph notebook of Rev. T.W. Webb to the generosity of **G. Parry Jenkins**, FRAS (Hamilton Centre) in 1910; and our Brewer biography of Isaac Newton with the fabulous bookplates of J.L.E. Dreyer (of NGC fame) to the largesse of **Carl Reinhart** (Toronto Centre), to name but a few. We wish we could report that we've always been responsible custodians but, in groups like ours, interest, knowledge and memory seem to ebb and flow.

The RASC Archives have recently received an anonymous gift of material to supplement its meteoritical holdings. The donor is a RASC member who wishes to remain anonymous. The first part of the gift has been detailed in JRASC 103, 5 (2009), 208-211, and since then more has been received, including:

- - fragments of the Zagami, Nigeria (1962 fall), Martian (shergottite) meteorite;
 - fragments of ALHA76009, Antarctic (1976 find), L6 (chondrite);
 - micromount of Brahin, Belarus (1810 find), Pallasite, PMG impactites;
 - slice of Sudbury black onapng, from the Sudbury impact carter (1850 ± 3 Ma);
 - shattercone of Malmian limestone, from the Steinheim impact structure (15 ± 1 Ma).

The donor intends to add other meteoritical items from time to time.

This gift vastly improves our meteorite collection, although the donor insists that the donation merely raises the RASC collection to a level "which a beginning amateur wouldn't be ashamed(!)." The collection, like everything in the Archives, is open to use by any member of the Society. Those wishing to view it should contact me. [3]



Dark-Sky Preserve / Urban Star Park Program

by **Robert Dick**, Light-Pollution Abatement Committee

Our National Council has approved the revised documents for the DSP/USP Program (Autumn Revision). They are available from the RASC LPA Web site.



The documents clarify a number of points that were not clear to applicants. Changes are marked in the margins of the documents to save you the trouble of reading them all over again. The Guidelines refer to the administrative aspects of the designations, and the Guidelines to Outdoor Lighting (GOL) documents refer to the lighting design. Both sets give the rationale for setting these requirements.

If you are thinking of nominating a park in your region, read over the documents and then contact

us if you have additional questions.

► **Across the RASC**

Looking For LCROSS



Lunar South Pole Image = single video frame - pocket digital camera
eyepiece projection at 271x - Celestron 8" SCT

Thursday 9th October.

In just 90 minutes time, NASA was to crash the lunar probe, LCROSS, into a permanently shadowed crater (Cabeus) at the Lunar South Pole. Actually, the upper stage of a Centaur rocket would hit the Moon first at 6 km per second followed 4 minutes later by the LCROSS probe itself. LCROSS was to fly through the plume sent up by the first impact and measure, hopefully, water vapour. The impact time and site were carefully chosen to allow all the big scopes - Keck, CFH, Palomar, Hale, etc., in the western part of North America to focus on the Moon with a barage

of imagers, spectrum analysers, and the like... in the hope of securing both scientific proof of water on the Moon and providing a spectacle for the public. The Result? Well, the jury is still out on that one, but it was great to know that we were watching the Lunar South Pole at the same time as most of the major observatories in western North America! My alarm went off at 3.00 a.m. and I immediately checked the sky conditions. The sky was 80% cloud covered, but the Moon was in the clear sector. I made some breakfast and checked again at 3.30 a.m. The sky was clearing quickly so it was a green light to set up the scope in the backyard. I gave my wife, Debra, the clear sky report at 3.45 a.m. Outside, at 4.00 a.m., I began aligning the ASGT mount - I didn't want the scope to drift too much when I was videoing the Moon at high power. I looked up and there was now 80% cloud cover again. The sky conditions were changing so rapidly it was hard to keep up. There was a low, fast moving cloud racing across the face of the Moon as we aimed our scopes skyward. **Editor's Note** - Read the entire story [here](#) [4].

Another RollOff Observatory for Calgary

Dr. Phil Langill, Director of the University of Calgary's Rothney Astrophysical Observatory (RAO) and **Larry McNish** of the Calgary Centre are happy to announce that another IYA2009 milestone was reached on October 20 with the completion of construction on the new RAO RollOff Observatory Building on the RAO Observation Deck, and the positioning of their Celestron C14 computer-controlled telescope inside. This is the second Calgary-area rolloff building to be completed this year, the other being at the Calgary Centre's Wilson Coulee Observatory.



Dr. Langill and the C14 just after it arrived in its new IYA home.



The building in its open position for observing - the C14 will be outside at the south end between the rails. There is still lots of space on the deck for other RAO, RASC, and TELUS World of Science volunteers and their scopes. Note the red safety lights illuminating the steel rails on the deck surface (on a dimmer). Also note that all but two of the old concrete piers

The entire building rolls away from the C14 when used for observation. It rolls back and encloses the C14 to protect it when not being used. This provides a permanent "home" for the C14 and will increase its use substantially for University Research (Solar as well as night time) and also make it available for RAO Open House nights. Previously, the C14 had to be disassembled from its stored location, relocated to the deck, reassembled

were removed to make additional space available on the deck. The University's older C8 and Meade (on the two piers), and their two larger Dobsonians will complement the C14 during open houses.

and then put away again after each observing session. Members of the Calgary Centre volunteer each month to provide

telescopes on the deck for the very popular RAO Open House nights, which are usually attended by several hundred visitors from the Calgary area.

The building contains additional 110 VAC power outlets for running other scopes on the observation deck via temporary extension cords, and special dimmable red rope lighting to outline the steel rails on which the building rolls so that the public does not trip over them in the dark. It was also designed with special anchoring devices to hold the building down to the concrete in the event of high winds. These anchors were tested almost immediately and proved very effective during two severe windstorms in late October and early November that delivered sustained winds in excess of 100 km/h.

► The Sky this Month

What's New in the Sky

Readers are encouraged to check out the **Northern Skies** [5] section of the RASC Web site. Thanks to **Gary Boyle** for keeping us all in the know!

► Dates to Remember

- - **December 2009** - Nothing reported.
 - **2010 March 27** - National Council Meeting, Toronto, ON
 - **2010 July 1-4** - **RASC General Assembly 2010** [6], Fredericton, NB
 - **2010 July 9-12** - Stargazing Manitoulin [7], Gordon's Park DSP, Manitoulin Island
 - **2010 August 6-9** - Manitoulin Star Party [7], Gordon's Park DSP, Manitoulin Island



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The *Bulletin* of the Royal Astronomical Society of Canada is a benefit of membership in the Society.

LCROSS

Looking For LCROSS

by James MacWilliam, Sunshine Coast Centre

Thursday 9th October

In just 90 minutes time, NASA was to crash the lunar probe, LCROSS, into a permanently shadowed crater (Cabeous) at the Lunar South Pole. Actually, the upper stage of a Centaur rocket would hit the Moon first at 6 km per second followed 4 minutes later by the LCROSS probe itself. LCROSS was to fly through the plume sent up by the first impact and measure, hopefully, water vapour.

The impact time and site were carefully chosen to allow all the big scopes - Keck, CFH, Palomar, Hale, etc., in the western part of N. America to focus on the Moon with a barage of imagers, spectrum analysers, and the like... in the hope of securing both scientific proof of water on the Moon and providing a spectacle for the public.

The Result? Well, the jury is still out on that one, but it was great to know that we were watching the Lunar South Pole at the same time as most of the major observatories in western N. America!

My alarm went off at 3.00 am and I immediately checked the sky conditions. The sky was 80% cloud covered, but the Moon was in the clear sector. I made some breakfast and checked again at 3.30 am. The sky was clearing quickly so it was a green light to set up the scope in the backyard.

I gave my wife, Debra, the clear sky report at 3.45 am. Outside, at 4.00 am, I began aligning the ASGT mount - I didn't want the scope to drift too much when I was videoing the Moon at high power. I looked up and there was now 80% cloud cover again. The sky conditions were changing so rapidly it was hard to keep up. There was a low, fast moving cloud racing across the face of the Moon as we aimed our scopes skyward.

At the last minute, I realised the hand controller for the C8-ASGT was missing from its case! My cell phone showed 4.25 am, and I raced into the house trying to figure out how the HC could be missing? Finally, I found it in my backpack. I had taken it to London Drugs to look for an RS232 cable to connect to the PC. I dashed back to the scope, plugged in and did a "quick align". My cell phone showed 4.29 am - time was evaporating - as I slotted in a 7.5 mm E.P. with my Pentax Optio E30 (pocket digital) attached. I zeroed in on the South Polar Region at 271x but couldn't quite decide which crater was Cabeous...

The video was running as I again glanced at my cell phone and saw 4.32 am. The Impact had happened! I stared at the 3" screen on the back of the camera as the video continued to record.

There was no sign of a plume, no flash or sign of any kind of movement. I had seen SMART-1 hit the Moon a couple of years ago - it was the briefest fleck of light - so I expected something more. I continued to video the impact area hoping a plume might develop but I later learned that even the 200" Hale Telescope saw nothing!

Finally, at around 4.45 am, I slewed away from the Moon - Orion was calling. I split the Trapezium for the first time with a C8. It was the biggest view of the Trapezium I've had and I had to remind myself the cloud in the FOV was Hydrogen and not the low, thin cloud in the sky above me. I slewed over to Mars and found a small squidgy yellow blob. I went back to the Moon and shot some video of mountains and craters near the terminator.

I Looked up once more at the Moon around 5.45 am and thought to myself, we came, we saw, errr, nothing! But, if a plume had developed, if it had been front page headlines the next day, how mad would we have been if we had missed it? I was glad to be pointing my scope along with the Hale, the Keck, and the Canada/France/Hawaii Telescope at the Moon!

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Links:

- [1] [mailto:bulletin@rasc.ca?subject=Bulletin Mail](mailto:bulletin@rasc.ca?subject=Bulletin%20Mail)
- [2] <http://www.rasc.ca/observers-calendar>
- [3] [mailto:rosenfel@chass.utoronto.ca?subject=RASC Archives](mailto:rosenfel@chass.utoronto.ca?subject=RASC%20Archives)
- [4] <https://www.rasc.ca/bulletin/2009-12/lcross>
- [5] <https://www.rasc.ca/news/northern-skies>
- [6] <https://www.rasc.ca/ga/history/2010s>
- [7] <http://gordonspark.com/astronomy-and-stargazing/>
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