

Vol. 15 Issue 4

Autumn 2014

# H O R I Z O N

LA SOCIÉTÉ ROYALE D'ASTRONOMIE DU CANADA  
New Brunswick Centre du Nouveau-Brunswick  
THE ROYAL ASTRONOMICAL SOCIETY OF CANADA



Not so long ago, professional astronomers at the largest observatories would have been proud to obtain such a photo with their equipment. Meet our own Paul Owen on pages 5-6, who took this photo of the Andromeda Galaxy (M31) and its companions M32 and M110 from his backyard in Hampton.

A Policy Manual has been posted to the Library section of our Centre Web site to provide guidelines for Council and members. This document is maintained by Council, who make revisions or additions when required. Topics include:

- Centre Membership Fees
- Rapid Purchase (for Council to buy things on short notice)
- Reimbursement for Outreach Travel Expenses
- Reimbursement for NAC Rep GA Travel Expenses
- Privacy of Personal Information in Centre Membership Lists
- Removal of Centre Membership
- Centre Telescope Use (borrowing Centre equipment)
- Centre Committees and Positions
- Reporting Outreach Events (to the Society Web site)
- Use and Maintenance of Centre Email Lists

## EVENT HORIZON

### Astronomy in New Brunswick

#### SRAC/RASC Centre du NB Centre Réunion / Meetings

**When: January 17, 2015 13:00**

**Where: Rockwood Park Interpretation Centre, Saint John**

**When: February 21, 2015 13:00**

**Where: Moncton High School  
Room: TBA**

**When: March 21, 2015 13:00**

**Where: UNB Fredericton  
Forestry-Earth Science Building  
2 Bailey Drive, Room 203**

The meeting date for March is tentative. All members are reminded of meeting dates and locations by email approximately one week prior. In addition, they are posted on our Web site and updated when necessary.

[www.nb.rasc.ca](http://www.nb.rasc.ca)

#### NB Astronomy Clubs Réunion / Meetings

#### **William Brydone-Jack Astronomy Club (Fredericton)**

A local group of members meet in Fredericton monthly for meetings and observing.

**When: Second Tuesday of the month**

**Where: Fredericton, UNB Campus  
Forestry-Earth Science Building  
2 Bailey Drive, Room 203**

[www.frederictonastronomy.ca](http://www.frederictonastronomy.ca)

#### **Saint John Astronomy Club**

Meetings consist of talks on constellations, the solar system and other astronomical topics, as well as Show & Tell, observing reports and maybe observing.

**When: First Saturday of the month**

**Where: Rockwood Park Interpretation Centre**

[www.sjastronomy.ca](http://www.sjastronomy.ca)

## Outreach Opportunities

**March 28 at 20:30 Earth Hour**

**April 20 - 26 Astronomy Week**

**April 25 Astronomy Day**

**Sept 19 International Observe the Moon Night (tentative)**

## Star Parties 2015

**Kouchibouguac National Park  
May 22 - 24**

**COW Mactaquac Provincial Park  
July 17 - 19**

**Mount Carleton Provincial Park  
August 14 - 16**

**Fundy National Park  
September 4 - 6**

## Ex-President's Report - by Curt Nason

As the Winter Solstice approaches our Centre membership stands at 78, an increase of 20% since February. I bid welcome to our new Family Members, Stephen and Tyler Ferguson in Sackville! It is just as important to retain members as it is to attract new ones, and I thank the following for renewing recently: Marc Arsenault, David Beaudin, Adrien Bordage (a 15 year member), Bob Bowser, Bruce Boyd, Donald Clendenning, Charles Doucet, Greg Gilmore, Don Kelly, Chris LeMesurier, June MacDonald, Emma MacPhee, Doug Margison, Eldon Rogers, David Ross and François Theriault.

For the second consecutive year Centre members have organized or participated in more than 100 public outreach events. Centre outreach events recorded since the last issue of Horizon include:

- Sept 26, observing for 12 people at Maison Richelieu in Bathurst
- Sept 28, observing for 40 UNBSJ students at Rockwood Park, Saint John
- Oct 3, public observing for 80 at the Irving Nature Park (INP), Saint John
- Oct 12, solar and evening observing for 34 at INP

- Oct 14, presentation for 14 at the WBJAC meeting at UNB Fredericton
- Oct 17, presentation to 20 CCNB students in Bathurst
- Oct 25, Tech Trek exhibition attended by 600 in Dieppe
- Nov 8, Hobby Fair exhibition visited by 160 at Market Square in Saint John
- Nov 10, presentation for 30 Guides in New Maryland
- Nov 13, Science East STEM exhibition for 160 in Oromocto
- Nov 20, Science East STEM exhibition visited by 78 in Riverview
- Nov 20, observatory tour for 40 at the WBJ Observatory in Fredericton
- Nov 20, observatory tour for 40 at the UNBF Physics observatory
- Nov 27, Tafelmusik concert, observing for 211 at the Fredericton Playhouse
- Nov 28, solar and evening observing for 21 at INP
- Dec 1, presentation for 18 Cubs in New Maryland
- Dec 2, 4 presentations to 91 Grade 11-12 students at Fredericton High School
- Dec 8, Science East STEM exhibition visited by 60 in Grand Bay-Westfield
- Dec 15, Science East STEM exhibition visited by 160 in Fredericton
- Dec 20, presentation for 35 people at a solstice celebration in Saint John.

Thank you to all members who have participated in outreach events this year. Special recognition goes to two members. Chris Curwin has performed solo public observing more than 20 times in Saint John and participated about one third of our events, and Holy Ayles has stepped up to organize and participate in several events in Fredericton.

Our Annual Meeting, held in Saint John on October 18, was highlighted by afternoon presentations from Adrien Bordage, Mike Powell and Matt West. The general business meeting was held in the morning. Unfortunately, and disappointingly, a quorum of 12 members was not present so any business conducted was not valid, as per our Centre By-Laws.

Fortunately, a quorum was present for a short notice make-up meeting on November 1, prior to the SJ Astronomy Club meeting. The election for Centre Council and National Advisory Council Rep was held, and the revision to the Centre By-Law was approved. See the last page of this newsletter for election results. The By-Law may be viewed in the Library section of the Centre Web site: [www.nb.rasc.ca](http://www.nb.rasc.ca).

**TAFELMUSIK**  
***The Galileo Project –***  
***Music of the Spheres***  
**- by Don Kelly**

On Thursday, November 27<sup>th</sup>, 2014 the internationally acclaimed Tafelmusik Baroque Orchestra performed a musical program to approximately 700 Fredericton Playhouse patrons. Tafelmusik is German and means ‘table music’ or ‘music for the feast.’ The orchestra performed *The Galileo Project: Music of the Spheres*, a program created by their violone and double bass player Alison Mackay. Canadian astronomer John Percy served as Astronomical Consultant to the group.

Our RASC New Brunswick Centre was invited to participate in the evening by providing observing and educational opportunities prior to the concert. On the evening of the concert James Ayles, Detlef Rudolph, Ted Dunphy and I met at the Playhouse several hours before show time. Despite miserable weather leading up to the concert, we had a break in the cloud cover and were able to show a 5 day old Moon to patrons arriving for the performance. Ted was located near the entrance to the Playhouse on the sidewalk beside Queen Street. One of his visitors happened

to be none other than our new President, June MacDonald! I was stationed on St. John Avenue near the stage door. As a result of my choice of location, five members of the Tafelmusik group stopped to look through my Antares 10” Dobsonian. One of them was the actor/narrator Shaun Smyth who portrayed Galileo in the concert. James demonstrated his 8” Dobsonian in the section of the Playhouse adjacent to the Green Room. Detlef exhibited his replica Galileoscope to patrons in the front lobby. In total, we interacted with 221 people.

The week prior to the concert Holly and James Ayles conducted tours of the Brydone Jack Observatory/Museum for 40 visitors. Alex Adair and Alex Nadeau opened the observatory on the roof of the Physics/Administration Building to approximately 40 visitors.

With regard to our participation, the Galileo Project creator Alison Mackay was excited to hear there would be some stargazing going on. She said, “It happens very occasionally, and it’s a huge treat for us along with the audience when it does work out. It was able to happen in Banff in the first weeks of 2009 when we performed it the first time. And it happened in Australia. It hasn’t happened very often, but it’s

always thrilling for us when it does.” It was a special privilege for us to provide the ‘huge treat’ for their Fredericton performance. Thanks to everyone who helped make it happen.

One side note: The International Astronomical Union, in recognition of *The Galileo Project: Music of the Spheres*, named an asteroid after the orchestra. Asteroid 197856 Tafelmusik moves through our solar system with our Fredericton astronomy club’s namesake 79117 Brydonejack.

To view excerpts from *The Galileo Project* see: <http://www.tafelmusik.org/media-room/galileo-project/galileo-overview>



***Tafelmusik Press Photo***  
by Glenn Davidson

**Focus on...**  
*Paul Owen*

**When and how did you become interested in astronomy?**

I had an interest in astronomy since I was a kid and always loved the pictures and always dreamed about what it would be like out there in space. I never really took the plunge until a few years ago when I got my first telescope, a Celestron AZ 70 refractor package. My first real step forward was when I took the intro to astronomy course at the community college (Curt's course). That's what really started my journey into astronomy.

**You have shared some great astrophotos. What do you have for equipment?**

I have amassed quite a bit of gear over the last few years as not knowing what I needed led me to buying anything astronomical. I spend much time researching scopes, cameras, mounts and accessories. I am almost embarrassed to list my equipment now but will list some of my favorites. My hobby started off observing but quickly shifted to imaging so here is my go to (no pun intended) set up. For planets and faint deep sky objects (DSOs) I am using a Celestron 9.25" Edge HD Schmidt Cassegrain. This gives me huge focal length and

great detail on targets close up. Next, for wide field imaging I am using an Orion 80mm CF triplet and an Orion 110ED doublet. Also, on occasion I will take out the 8" Edge HD and use the Hyperstar lens to give me an amazing F2 and huge wide field result. For observing I use a 10" Antares Dobsonian. My camera set up starts with the Canon DSLR (various), a fast frame rate Imaging Source CCD for planets and solar, and a QHY10 CD for galaxies, nebulae and wide field Milky Way images. To support these scopes I use the Skywatcher HEQ6 and HEQ5 Pro German equatorial mounts with GoTo systems.

**What astronomy goals do you have for the short and long term?**

My short term goal for astronomy is to spend more time observing in order to learn the night sky better. I recently purchased a sky atlas and Dobsonian scope so I am able to learn to star hop and learn to look for many items other than the usual bright DSOs and planets. I believe that to be a better astronomer you need to really know where to find the constellations and what they contain and the various seasons you can see them from our location.

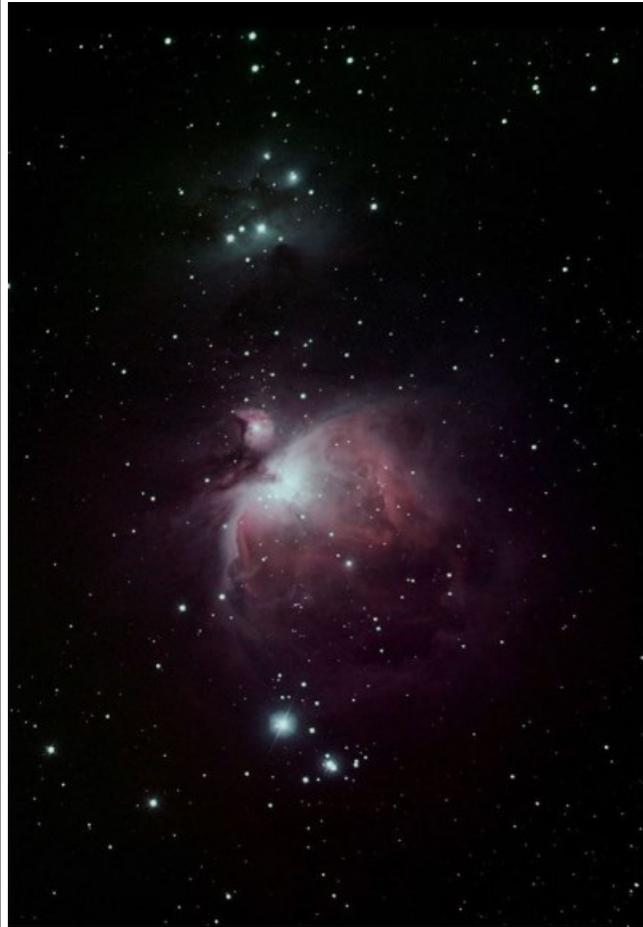


*Paul downloads some sunshine for later use.*

My long term goals include becoming more involved in our club activities and, when I am good enough, perhaps getting some people involved in imaging; maybe even teaching a class or two and incorporating imaging into our club activities. You really don't need to be an electronics or telescope expert to get started in astrophotography, just with a camera, tripod and a bit of imagination you can capture some pretty amazing photos.

**Has membership in the RASC helped you develop your skills or interest? If so, in what way?**

Being a member of RASC is a great way to meet some pretty amazing people who have the same passion for the hobby as you do and then some. Becoming involved with other astronomers and various clubs offers so much opportunity to learn so many aspects of this great hobby. If you are ever in need of having questions answered or looking for some equipment or info on how to use it, the RASC family is always there to help in any way. The people I have met in my short time in astronomy are nothing short of generous and patient and so experienced with most any aspect of astronomy, and they are very enthusiastic to share it. This is why my RASC membership will never lapse.



*What does Orion wear under his belt?*

*Paul has captured a great shot of M42, M43 and the Running Man Nebula.*

**Is there anything more our Centre can do to promote astronomy with the public or to maintain interest within our membership ?**

I think our Centre has a superb group of people with so much to offer the novice or experienced astronomer. Our outreach programs and our monthly meetings and observing sessions are always informative and many times very entertaining.

If I may propose something to help with outreach it would be to incorporate something as simple as, at our public observing events, having the people take a picture of say the Moon from one of our scopes already set up. Then, we could get their email addresses and send them the photo that "THEY" took and put them on a list for future star parties and meetings. It is an electronic age and instant gratification of an awesome pic they took would certainly go a long way in introducing a great first experience to the wonderful world of astronomy.

**From our Library**  
***The Science of***  
***Shakespeare* by Dan Falk**

Did you know that our Centre has a library of approximately 60 astronomy books? It includes such famous atlases as *Sky Atlas 2000.0* (and *Sky Atlas Companion* which gives descriptions of all 2700 deep sky objects in the atlas) and Rukl's *Atlas of the Moon*, RASC publications *Skyways* and *The Beginner's Observing Guide*, and other books of various topics and vintage. It even includes *Understanding the Universe*, 96 half-hour lectures on astronomy and astrophysics on eight DVDs.

Our library is underutilized, perhaps because many members are unaware it exists. We cannot expect Librarian Ted Dunphy to lug all the books to every meeting, so you can order books through the Centre Web site and pick them at the next meeting or make other arrangements. Select Library from the Home Page, and then Lending Library. The books are listed there, usually with a picture of the cover and a brief description. Clicking on *Request Check Out* brings up an email to Ted with the book title in the Subject line. Just fill in your name and suggested arrangements to obtain the book. Check them out.

A recent addition to our library has yet to be included on the Web site (hint). At our meeting last April we were privileged to have author Dan Falk (*Universe on a T-Shirt* and other books) describe his "hot off the press" endeavour, *The Science of Shakespeare: A New Look at the Playwright's Universe*, which was published in Canada by Goose Lane Editions in Fredericton. Dan, a native of Halifax, is a member of the RASC Toronto Centre and won the RASC Simon Newcomb Award in 2001 for his astronomy journalism.

*The Science of Shakespeare* contains 364 + xv pages, of which the final 50 include Notes, Bibliography and Index. My autographed copy sat on the shelf until recently, partly because I was expecting pages filled with lines from the Bard's plays that could have astronomical relevance if you crossed your eyes a tad. Dan revealed some interesting correlations in his presentation but they would cover only a small portion of the book. Happily, I was wrong.

The first third of the book is an excellent history of the changing face of cosmology in the 15<sup>th</sup> and early 16<sup>th</sup> centuries. In addition to the big names of Copernicus, Tycho, Galileo and Kepler, we learn of Leonard and Thomas Digges, Thomas Harriot,

Giordano Bruno and John Dee. Other than Copernicus and Leonard Digges, Shakespeare (1564-1616) was a contemporary of these astronomers / natural philosophers who supported a non-geocentric universe in whole or in part. Was Shakespeare a Copernican (a potentially unhealthy belief at that time), and could he have met some or all of these people? Did he ever look through a telescope? As an avid reader, would he have made use of the RASC NB library if he had reliable Internet access?

Yes, this book includes a great many of Shakespeare's outright or potential astronomical references, but all are interesting and require no eye crossing. In addition, Falk includes chapters on Shakespeare's references to magic, medicine and astrology. In fact, one thing I took away from this book was a greater appreciation for the inherent link between astronomy and astrology. It was during this era, the beginning of the Scientific Revolution, that the two parted ways.

I recommend giving *The Science of Shakespeare* a read, either your own autographed copy if you bought one in April, or the Centre's copy. It gave me a greater appreciation of the Bard, and I may tackle my (unautographed) copy of his works.

## OBSERVERS' SCORECARD

|                 | Explore the Universe | Messier | Finest NGC | I. William-son Lunar | Deep Sky Challenge | Dark Nebulae | Herschel 400 | Levy Deep Sky Gems | Caldwell | Arp Galaxies | Abell Galaxy Clusters | Hickson |
|-----------------|----------------------|---------|------------|----------------------|--------------------|--------------|--------------|--------------------|----------|--------------|-----------------------|---------|
| James Ayles     | 37                   |         |            |                      |                    |              |              |                    |          |              |                       |         |
| Adrien Bordage  | 100                  |         |            |                      |                    |              |              |                    |          |              |                       |         |
| Charles Doucet  | 110                  | 110     | 110        |                      |                    |              | 65           |                    |          |              |                       |         |
| Ted Dunphy      | 102                  | 110     | 110        | 51                   | 10                 | 8            | 265          |                    |          |              |                       |         |
| Colette Fortier | 87                   | 28      |            |                      |                    |              |              |                    |          |              |                       |         |
| Peter Jensen    | 12                   | 73      |            |                      |                    |              |              |                    |          |              |                       |         |
| Don Kelly       | 110                  | 110     |            |                      |                    |              |              |                    |          |              |                       |         |
| Danny LeBlanc   |                      | 110     | 110        |                      |                    |              | 127          |                    | 8        | 21           | 21                    | 9       |
| Emma MacPhee    | 78                   | 110     | 110        | 5                    |                    |              |              |                    |          |              |                       |         |
| Curt Nason      |                      | 110     | 110        |                      |                    |              |              |                    |          |              |                       |         |
| Mike Powell     | 70                   |         |            |                      |                    |              |              |                    |          |              |                       |         |
| Detlef Rudolph  | 62                   |         |            |                      |                    |              |              |                    |          |              |                       |         |
| Chris Weadick   | 71                   | 26      |            |                      |                    |              |              |                    |          |              |                       |         |

This section is intended to inspire our members to get out observing by promoting a friendly competition. To be included please contact the editor.

Submissions to the Horizon newsletter may be sent to [editor@nb.rasc.ca](mailto:editor@nb.rasc.ca).  
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*Equipment:* Adrien Bordage

*Library:* Ted Dunphy

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