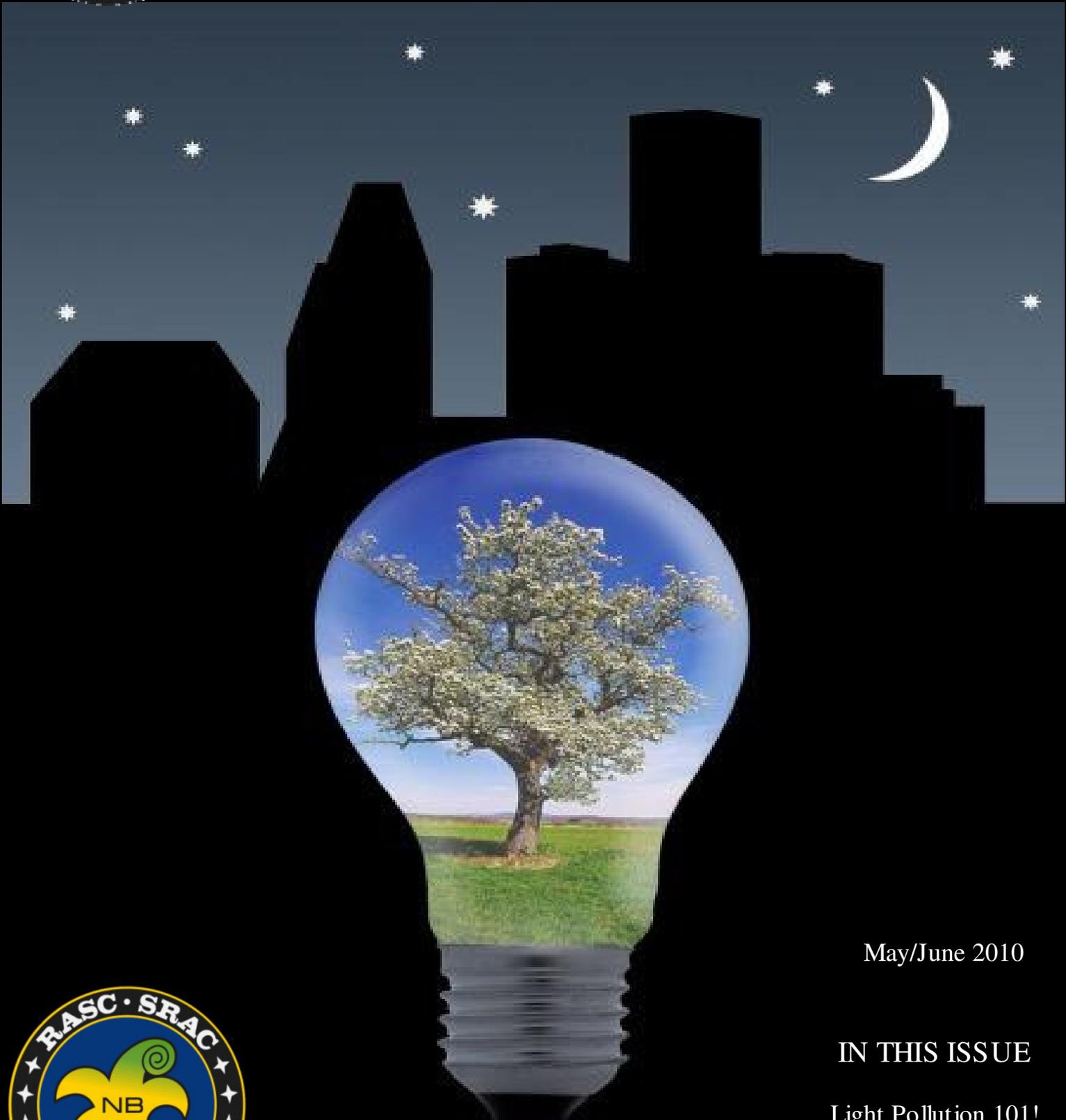




H O R I Z O N

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



May/June 2010

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2010 GA Update

LIGHTS OUT



SRAC/RASC Centre du NB Centre
Réunion / Meetings

Event: General Meeting
When: May 15, 2010 at 1:00pm
Where: Miramichi , NBCC
Enter side door from parking lot and sign in at Security Desk and proceed to room.

Event: Monthly Meeting / Annual Meeting
When: June 19, 2010
Where: Fredericton, NB
UNB Fredericton Campus
Forestry and Geology Bldg
Room 209
1pm-4pm

William Brydone-Jack Unit (Fredericton)

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

When: May 11, 2010 at 7:00pm and
June 8, 2010 at 7:00pm
Where: Fredericton, UNB Campus
2 Bailey Drive, Room 209
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 Ask the Astronomer.

When: June 5, 2010 at 7:00pm
Where: To Be Announced
<http://sjacnb.tripod.com/>

Beauséjour Astronomy Unit (Moncton)

The Beauséjour Astronomy Unit is a observing unit of the RASC New Brunswick Centre. We meet various times monthly for observations. Our various observing sites include dark sky locations in the Indian Mountain area, Memramcook, Riverview and Barachois. We promote understanding of astronomy through public education and observing for the hobbyist and the public. For more information or call us at (506) 852-4567 or (506) 386-1516

www.geocities.com/beausejournb

Inside this issue :

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January Meeting Report
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6. **Observer's Score Card / Centre Contact Info**

Editor's Report

By Paul Gray

Well here is the third issue of Horizon for 2010, pretty much on time at the first of May. Keeping Horizon back on schedule will take a bit of effort this spring as many of us including myself are very busy planning the General Assembly. Remember this is your newsletter so feel free to send what you want as I will consider anything related in some way to astronomy for entry.

Look for the next issue of Horizon in mid July as early July will be busy with the General Assembly.

Clear skies!

Light Pollution 101

by Chris Weadick

In the next few Horizon newsletters we will explore the impact of the miniature suns on our planet... the lights we all complain about when observing... but find it so challenging to find someone to listen or assist.

Most of us are aware of the frustration that lights can cause. The picture shows examples of the different LPA classifications and examples. Although the example shown is a representative street light or dusk to dawn like fixture, the example issues are valid for all lighting options including but not limited to street lights, dusk to dawn, porch, 'security', yard lights, and aesthetic lighting.

Lighting issues are also compounded by weather, same as our observing is impacted by humidity, temperature,

seeing, transparency, etc the light impact can be additionally disruptive because of atmospheric conditions. If there is more moisture in the air or high level 'whisps' of clouds the light will be redirected and scattered more causing additional sky glow. Light reflected off wet surfaces or snow/ice collected on the ground will reflect more light upward when compared to grass and soil or gravel.

Our goal is to help educate the public and especially neighbours regarding lighting issues and that it is not just a matter of mounting a light fixture properly but to be aware there are considerations even if the light is properly installed. Glare from open bulbs (bulb is visible when approaching the fixture vs the bulb being recessed into the fixture), lights height may cause the spill light onto neighbouring property including windows (causing sleep and health disorders), leaving the garage lights on even after loved ones have returned home.

The basics of lighting is:

Use the minimum amount of light required for the purpose.
Only light what needs to be lit

If you don't need it... turn it off

Motion activated if you need some semblance of a security light

It is cheaper to install your own light (\$150 savings per year – can save even more if you use a lower wattage bulb... save more again if it is also a motion activated light if you need that vs turning the light off at night) versus a dusk to dawn rental

Use full cut off lighting options (can not see the bulb when looking at the light fixture)

In the next article we will discuss the good the bad and the ugly reasons we require lights and some possible methods of making the situations a 'win-win' for everyone.

RASC NB LIBRARY BOOKS

Available to members in good standing.

SRAC NB LIVRES DE LIBRAIRIE

disponible aux membres.

A Walk Through the Heavens

Milton D. Heifetz and Wil Tirion

A guide to stars and constellations and their legends

Agenda Celeste editor Damien Lemay

Douze mois de decouverte du ciel au Quebec,
mai 2004 - avril 2005 Softcover

Atlas of the Moon by Antonin Rukl

Hardcover , 224 pages

Discovering the Universe

Neil F. Comins and William J. Kaufmann III

480 Pages, with CD

Explorons l'astronomie by Mary Lou Whitehome

(Skyways, en français)

Looking Up by R. Peter Broughton

A History of the Royal Astronomy of Canada

Hard Cover , 288 pages

Many Moons by Diana Brueton

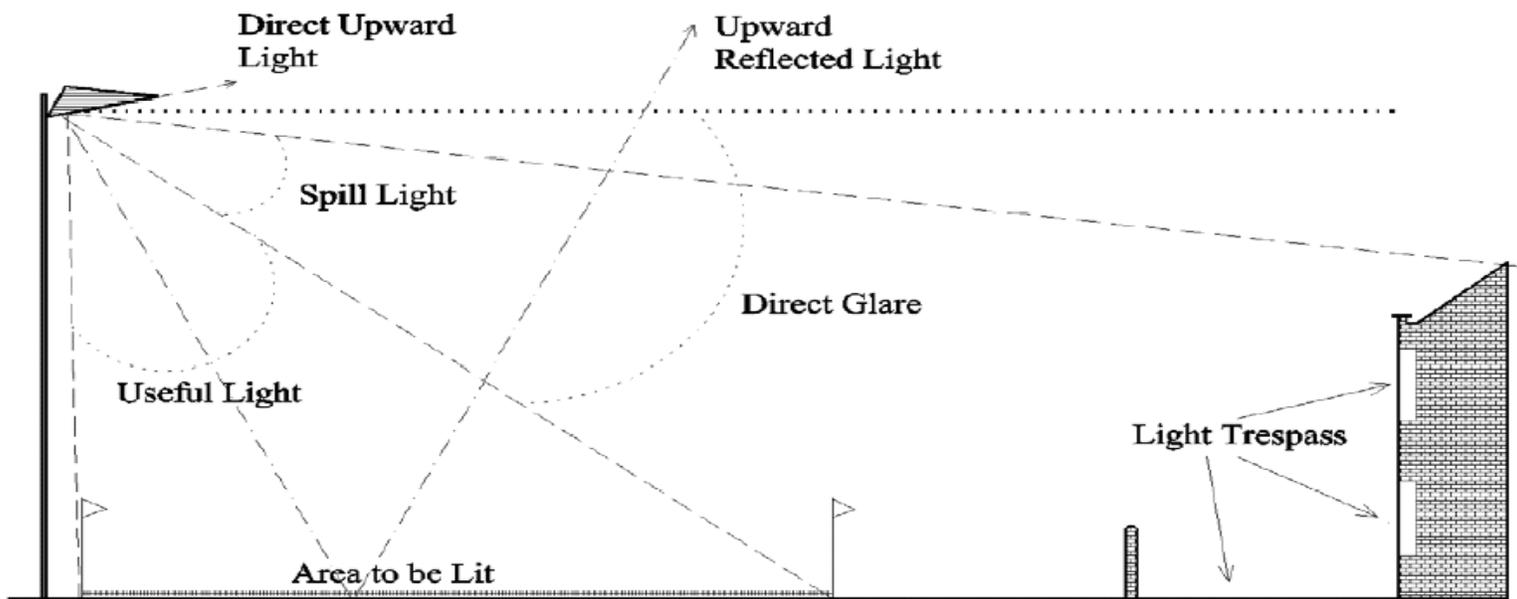
The Myth and Magic, Fact and Fantasy of

our Nearest Heavenly Body - 256 pages, soft cover

Seeing in the Dark by Timothy Ferris

How Backyard Stargazers are Probing Deep Space
and Guarding Earth from Interplanetary Peril

Hardcover, 379 pages



February Meeting Report

By June MacDonald

President Peter Jensen gave a brief overview of astronomy news and updated the RASC New Brunswick schedule for the year. The next meeting will be in Fredericton, Mar. 20. Due to the GA being held here this year, the COW (Camping Observing Weekend) in Mactaquac will just be an observing weekend – no work entailed. The date for the COW is July 17. An observing weekend is planned for Kouchibouguac on July 17, as well. Mt. Carleton is Aug. 6-8 & the Annual Meeting will be held in Saint John, Oct. 16. Earth Hour is Mar. 27. Peter also reminded everyone this is an election year, so consider putting your name forward for one of the executive positions or the council. Peter talked briefly about laser pointer usage and highlighted 2 websites called “Global Astronomy Month” and “Astronomers without Borders”.

“What’s Up” – Curt Nason reported that the “Sun is back”. (editor’s note: I never knew it was gone?) The last few days, there were sunspots to be seen, some of which were large. This increased solar activity caused some auroral activity as well – Tues., Feb. 16, you could see aurora across the country. In Saint John, of course, it was cloudy. Jupiter’s almost gone from view. At 10pm, Saturn is high enough to get a decent view & Feb. 21 is in the early morning (6am) sky. The rings are tilted at 3.2° & will close to 1.7° by late May. The full moon, also called a “snow moon” this month is on Feb. 28 & the moon is near M45 Mar. 20. Mercury is in superior conjunction Mar. 14 & in the first week of April, is side by side with Venus. Venus begins an 8 month evening show, when in the evening sky, is known as Hesper or Vesper. Mars is a distinct orange & close (directly above) to the Beehive cluster (M44) later in March. 4Vesta is the only asteroid one can see naked eye, at magnitude 4.8.

Show & Tell – Adrien Bordage showed everyone his CCD camera, Tim showed the group some of his astrophotos of the moon. He is experimenting with programs to do a 3D effect. He used a software filter to enhance the appearance of the lunar craters. One photo included the “lunar X”. Tim feels the cost of \$50.00 for the software is worthwhile, as it clears away the colour gradient that comes with stacking using software algorithms. It was mentioned that Richard Bourque has the Sky Quality Light meter.

Constellation of the Month - Emma gave a talk on the constellation Monoceros. There’s lots of good objects to be seen in this constellation, which is directly East of Orion. It is a star-poor region – Procyon to the East & Sirius to the South. It is not as old as the surrounding constellations – the first

mention of it was in 1664. Some of the deep sky objects to be seen in Monoceros: Rosette Nebula, Christmas Tree nebula, Cone Nebula, Fox Fir Nebula, IC 216, Hubble variable nebula NGC 2661, V383 – the brightest star for a brief time in the Milky Way in 2002 – faded quickly.

Ted did a talk on apodizing filters & showed his own version. This tool improves contrast, therefore improving diffraction. It is used to split double stars. This filter was first suggested by William Herschel. Light waves hit the mirror & produce a curved wave that reflects back out - but a curved wave comes from each edge of the mirror & the bouncing waves collide with each other & cause aberrations in the image. A gradual neutral density filter works better than a solid one. Ted had made a fly screen apodizing mask. He used the 2003 April issue of the RASC Journal for geometry calculations to make it.

Paul Gray gave an update on the GA plans. Registration is to start Mar. 1. The pin design was discussed – the log of the combined shape of the fiddlehead & the star will be on the pin. We still need a name for the logo. GA volunteers will pay a reduced cost for registration - \$60.00, which is a special fee for members who are on the committee or are volunteering their assistance for the GA. Anyone else in RASC-N.B. will pay the regular fee. The volunteers/committee members will use a special link to register. The university rooms will be \$36.16 with tax for a single, a double will be \$24.00 per person.

After the meeting some of us went out for supper to Skipper Jacks. Always a nice way to end the meetings.

RASC NB LIBRARY BOOKS cont.
Available to members in good standing.

SRAC NB LIVRES DE
LIBRAIRIE
disponible aux membres.

Sky Atlas Companion

Softcover, 281 pages

Descriptions and data for all 2700 deep sky objects
Atlas 2000. Second edition. Softcover

Skyways by Mary Lou Whitehorne

Astronomy Handbook for Teachers
Softcover, 114 pages

The Meteorites of Alberta by Anthony J. Whyte

Softcover, 290 pages

Descriptions and stories about Alberta Meteorite Falls
First edition. Softcover



Moon Shot!

By Mike Powell

photo of the moon taken through a William Optics ZS 80 II APO with a 2X barlow. The camera used is a Olympus E420 DSLR. Exposure time was 1/125 sec @ 800 ISO. Single shot.



M81 and M82 Images by Paul Gray, Processing by Tim Doucette.

The images were collected by Paul Gray using a Astro Tech 8" F4 imaging reflector on a Skywatcher HEQ5 mount with un-modded Canon Xsi guided by a Qwik guider auto guider. The images were obtained on 2 separate nights using 5 min exposures at ISO 800 for a total of 2 hrs and 30 mins of exposure time.

Tim Doucette processed them using the following:

Nebulosity - stack darks - subtract each dark from lights - demosaic each light (convert to color) - manually align and stack

Iris- load tiff and crop - normalize offset to 0 - select a part of the background and run black command to adjust RGB balance - perform asinh stretching - after playing i decided on 0.03 90 as parameters

Photoshop - adjusted levels individually R,G,B - use gradient exterminator to remove uneven background, used 3 iterations - selected galaxies and did a selective sharpen - adjusted curves to reduce background brightness. - use small noise reduction - Pete's actions: remove blue/violet halos - adjusted image size. - save as JPG

OBSERVERS' SCORECARD

	Explore the Universe	Messier	Finest	I. Williamson Lunar	Deep Sky Challenge	Dark Nebulae	Herschel 400	Levy Deep Sky Gems	Caldwell	Arp Galaxies	Abell Galaxy Clusters	Hickson
Gerry Allian	101	93										
James Ayles	37											
Adrien Bordage	100											
Bob Crossman		110	28									
Charles Doucete	110	110	110				65					
Ted Dunphy	102	110	110	51	10	8	265					
Colette Fortier	87	28										
Paul Gray	97	110	110	46	31	20	238					
Peter Jensen	12	73										
Don Kelly	110	110										
Mark Laflamme	106	30	2									
Danny LeBlanc		110	110				127		8	21	21	9
Emma MacPhee	78	110	110	5								
Curt Nason		110	110									
Mike Powell	70											
Detlef Rudolph	41											
Chris Weadick	71	26										

This section is intended to inspire our members to get out observing by promoting a friendly competition. The left column includes our members who have reported their successes to the scorekeeper, Paul Gray. To be included please contact Paul Gray at: editor@nb.rasc.ca

SRAC/RASC Centre du NB Centre Executive / Exécutif

<i>President/Président</i>	Peter Jensen	president@nb.rasc.ca	
<i>1st Vice-President/-Président</i>	Curt Nason	firstvicep@nb.rasc.ca	506-659-6507
<i>2nd Vice-President/-Président</i>	Mark Arsenaull	secondvicep@nb.rasc.ca	
<i>Secretary/Secrétaire</i>	June MacDonald	secretary@nb.rasc.ca	
<i>Treasurer/Trésorier</i>	Emma MacPhee	treasurer@nb.rasc.ca	506-386-1516
<i>Past Pres./Président sortant</i>	Paul Gray	pastpresident@nb.rasc.ca	506-472-6978
<i>Councillors /Conseillers</i>	Gerry Allain		
	James Ayles		
	Ted Dunphy		
	Chris Weadick	chris.weadick@gmail.com	506-457-0774
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<i>Newsletter Editor</i>	Paul Gray		506-472-6978
<i>Light Pollution Chair</i>	Chris Weadick		
<i>Equipment Chair</i>	Eldon Rogers		
<i>Library Chair</i>	Ted Dunphy		
<i>Education Chair</i>	Don Kelly		

Newsletter Submissions

Deadline for the next issue is April 21st.
Submit by email: snpgray at nb.sympatico.ca
1068 Kingsley Road, Birdton, NB. E3A 6G4

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www.nb.rasc.ca

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