

# STARDUST

Newsletter of the Royal Astronomical Society of Canada  
Edmonton Centre



June 2010

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*M42, by Franklin Loehde and SLOOH. See article, page 5.*

## *Inside this Issue*

Contact Information.....	page 2
Upcoming Events, Meetings, Deadlines, Announcements.....	page 3
EXPENDITURE PROPOSALS.....	page 4
President's Report.....	page 4
The Planets.....	page 4
An Invitation to SLOOH (slew) the Heavens.....	page 5

Telephone numbers should be preceded by **780** unless otherwise indicated.

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<b>Observing Deck</b>	452-9100 ext 2249
<b>Stardust</b>	Articles for Stardust may be submitted by email to <a href="mailto:mward@interbaun.com">mward@interbaun.com</a> . Submission deadline is the last day of the previous month (e.g. for the May issue submit by 30 Apr). Submit in any standard document format (MSOffice, OpenOffice, AbiWord, plain text). TimesNewRoman 10pt single-spaced is preferred. Don't bother with fancy formatting, odd spacing, strange fonts, etc.; it will only be discarded. Graphics (GIF or JPG please) may be submitted as separate files, and clearly identified.

**Edmonton Area Astronomy Discussions**

[astro@mailman.srv.ualberta.ca](mailto:astro@mailman.srv.ualberta.ca)

**To subscribe send a blank email to:  
with the subject line:**

[astro-request@mailman.srv.ualberta.ca](mailto:astro-request@mailman.srv.ualberta.ca)  
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*The above mailing list is completely independent and is not associated with RASC Edmonton Centre in any way.*

## Upcoming Events, Meetings, Deadlines, Announcements

### MEETINGS 2010

	General	Council	Observers	NewMoon	FullMoon	Blackfoot
Jan	11	25	4	15	30	15-16
Feb	8	22	1	13	28	12-13
Mar	8	22	1, 29	15	29	12-13
Apr	12	26	28	14	28	16-17
May	10	24	24	13	27	14-15
Jun	14	28	28	12	26	
Jul			26	11	25	
Aug			23	9	24	6-7
Sep	13	27	20	8	23	3-4
Oct	18	25	20	7	22	8-9
Nov	8	22	17	6	21	5-6
Dec	13		20	5	21	3-4

### MEETING LOCATIONS 2010

**Regular General Meetings** are at 7:30pm in Telus World of Science, 11211 – 142 St. *follow the signs, from the main entrance*

**Council Meetings** are at 7:15 pm in the ATA Building, 142 St & 111 Ave. *follow the signs, from the main entrance*

**Observers Meetings:** *location varies*

### WE'RE IN THE MONEY! USE IT OR LOSE IT!

We have money to spend! The revenue we made from the last Casino needs to be spent. Presently we have about **\$80,000** to spend **between now and August 2011**. If you have any ideas on how to spend the money, submit an expenditure proposal to Council.

### CALL FOR ARCHIVAL MATERIAL

Do you have documents or photographs relating to RASC Edmonton Centre's activities, history, personalities, events, or anything? Donate them to the archives! Contact **Roxy Garstad** at garstadr@macewan.ca or see the web site for contact information.



## The 2010 Star-B-Q Public event - Open to Everyone!

Eccles Ranch Observatory  
Caroline, Alberta  
July 9-11, 2010

**Astronomical fun for the whole family!**

The Eccles Ranch Observatory site is just north of Caroline in beautiful west-central Alberta. We look forward to you joining us for some good times and great viewing under wonderfully dark skies!

<http://www.calgary.rasc.ca/starbq.htm>

[abstarbq@shaw.ca](mailto:abstarbq@shaw.ca)

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## EXPENDTURE PROPOSALS

Moved that \$1500.00 from the general account be allocated to assist in the preparations for the 2012 General Assembly, to be used for deposits on venues, etc. (Published for information purposes only.)

Moved that \$1500.00 from the casino account be donated to the Friends of Cypress Hills for the Cypress Hills Observatory and Open Air Planetarium Project in Cypress Hills Centre Block, Saskatchewan, subject to Gaming Commission approval.

Moved that up to \$32,000 USD from the casino account be used to purchase a Planewave 17" CDK Telescope for the Observatory, including accessories, duty, shipping and handling, subject to Gaming Commission approval.

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## BYLAWS COMMITTEE

Are you dissatisfied with the way things are? Is there something you've thought that could be better but then realized there was nothing you could do about it? Have you ever thought *there oughta be a law*?

If you've answered "yes" to any of the above questions, perhaps we can help.

The By-Laws Committee needs to update the Edmonton Centre Bylaws following recent changes to the National By-Law No. 1. Along with these updates, the Committee will consider suggestions for other changes.

The By-Laws Committee is asking for your help. If you would like to suggest changes to the current By-Laws (they can be found in the Downloads section of [edmontonrasc.com](http://edmontonrasc.com)), please send your suggestions to one of the members of the committee (in alphabetical order: **Peter Hall** at [780\[dot\]hall\[at\]gmail\[dot\]com](mailto:780[dot]hall[at]gmail[dot]com); **Krista Stefan** at [astrovoyageur\[at\]yahoo\[dot\]ca](mailto:astrovoyageur[at]yahoo[dot]ca); or **Luca Vanzella** at [luca\[at\]vanzella\[dot\]com](mailto:luca[at]vanzella[dot]com)) by July 31, 2010.

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## President's Report by Sherry Campbell

This is our last meeting before the summer break. There has been a wide and varied programme of speakers this spring and I hope you enjoyed them all. We will have more guest speakers in the fall as well as a mix of member's nights.

Although perpetual twilight is upon us that does not mean that you should pack away your scope for the summer. There is still plenty to observe from planets, a partial lunar eclipse on

June 26<sup>th</sup> that you will have to get up very early for, variable stars, noctilucent clouds and if you are really stuck, there is always the Moon.

If you are really craving dark skies, check out one or more of the summer star parties. In case you missed the dates, here they are again:

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Star-B-Que	July 9-11, 2010
Saskatchewan Summer Star Party	August 12-15, 2010
Mt. Kobau Star Party	August 7-15, 2010
Alberta Star Party	September 11-12, 2010
Northern Prairie Star Party	September 7-12, 2010

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There are a couple of expenditures posted in this issue of Stardust. We will be voting on them at the September general meeting. Have a look over them and if you have any questions, please contact me and I can answer them for you or find someone that can.

Since we must re-open the bylaws to make changes to accommodate the changes done at the National level, we will also be taking another look at our current bylaws and adjusting them accordingly. If anyone has an interest in helping out the

Bylaw Committee with this arduous task, please contact me. Also, if anyone that has previously served on Council has any suggestions on changes to the by-laws, please contact Krista Stefan. A copy of our current bylaws can be found on our website.

I hope you have a great summer of observing and a safe one for you and your family while travelling on holidays.

Clear skies!

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## The Planets by Murray Paulson

**Mercury** is coming out of a greatest western elongation and will head for its date with the sun on June 28<sup>th</sup>. Dates to watch for over the summer are; August 6<sup>th</sup> when Mercury will be at Greatest Eastern elongation. It will shine at magnitude 0.3 and show a 7.6" 49% illuminated disk in the eyepiece. This is a good time to have a look to see if you can see details on it in the daytime. It will decline from its 27 degree distance from the sun to a September 3<sup>rd</sup> inferior conjunction with the sun.

**Venus** starts off the month up by Castor and Pollux in Gemini. At this time it shines at magnitude -3.9 and will show a

13.5" gibbous disk in the eyepiece. Venus will continue on its way out from the far side of the sun and will grow in the eyepiece. By the beginning of July, Venus will expand to 16.2" and shines at magnitude -4.0. It now sits at 41 degrees from the sun and sits high in the evening sky. On August 19<sup>th</sup>, Venus comes to its greatest eastern elongation, 46 degrees from the sun and it now shines at an amazing magnitude -4.3. In the eyepiece you will see Venus at 24.3" and 48.8% illuminated. It will pick up speed from here on in to its conjunction with the sun later in the year. Some interesting dates over the summer are, Aug 8

when Venus is in conjunction with Saturn and they are 2.7° apart. Exactly 10 days later on Aug 18, Venus and Mars will be in conjunction where they will be separated by 1.9°.

**Mars** started off the month in conjunction with Regulus on the 6<sup>th</sup> of June. Mars shines at magnitude 1.1 at the time while Regulus shines at magnitude 1.4. Mars shows a 5.8" disk in the eyepiece, and yes, Regulus will only show an Airy disc. Mars continues to dim and shrink in size over the summer. On July 30, Mars will pass 1.8 degrees below Saturn. At the time it will be at magnitude 1.4 and in the eyepiece it will have a 4.7" disk.

**Jupiter** starts off the month in a close conjunction with Uranus and on the morning of June 8. it will pass only 26 seconds of arc below Uranus. At this time, Jupiter will rise 2 ½ hours before the sun. Over the month, the morning twilight will chase Jupiter up the sky. By the end of the month, Jupiter will now rise at 1 am, and shines at magnitude -2.4. In the eyepiece Jupiter presents a 41.5" disk. By August and the summer star parties, Jupiter will rise at a more opportune time of 10 pm and now shows a 47.6" disk in the eyepiece. It now shines at magnitude -2.8 and sits prominently below the circlet of Pisces. It will be the planet of the Summer star parties.

**Saturn** left its stationary point of its western retrograde on June 1<sup>st</sup>. At the beginning of the month, Saturn shines at magnitude 1.0 and the disc subtends 17.9". We are leaving Saturn behind in its orbit, and it will continue to slide into the west. By early July, Saturn sets at 1: am with the NLC rising in the north. At this time, Saturn shines at magnitude 1.1 and shows a 17 second disk in the eyepiece. You will notice that Saturn's rings are now tipping back up.

Jupiter and **Uranus** have been in a dance over the last while, and they will stick close together for the balance of the summer. If you go to the south east corner of the circlet of Pisces and look with binoculars, you will see a sprinkling of 5 to 6 magnitude stars. On a star atlas, you can locate 19, 22, 25 and 21 Pisces. Uranus is located along the line connecting 19 Pisces thru 25 Psc and continue another 3.5 degrees to the south. You should be

able to locate the stars in the Handbook finder chart with Binoculars. Uranus shines at magnitude 5.8 and will show a 3.5" disk in the eyepiece. It will move around its eastern retrograde position on June 30<sup>th</sup>, then head back west over the summer. (slowly that is) Uranus is always nice to hunt down at the summer star parties, that hard edged blue disk that pops out in the eyepiece. If you get a particularly transparent night, look for its largest moons, Titania (Mag 13.9), Oberon (Mag 14.1), Ariel (mag 14.4), and if you have aperture, Umbriel (mag15.0). Make up some finder charts before you go, or take your laptop to the field with a sheet of Ruby Lith. (Red filter material) Make drawings so you can check the moons positions from night to night.

**Neptune** comes to opposition around the time of the star parties, so it is definitely worth the trouble to find it as well. This year Neptune made it into a new constellation!!! It crossed the border into Aquarius in April and will cross back into Capricorn in mid August. Around Opposition, Neptune shines at magnitude 7.8 and will show you a 2.4" blue-green disk in the eyepiece. While you are there, look for Neptune's moon Triton. It shines at magnitude 13.4 and is fairly easy to see on a clear transparent night. The planet Neptune is much dimmer than Uranus, and it's moon is brighter, so this challenge is much easier to observe. Good luck.

The planet **Pluto** is at opposition on June 25<sup>th</sup>, but summer twilight will interfere with it's hunt. I will wait till the summer star parties to start my hunt. Pluto is a faint magnitude 14.0 mote in the eyepiece. This year it will be interesting. Pluto just happens to be transiting the M24 star cloud, so there will be numerous stars to try and distinguish it from. Of particular note is that Pluto crosses Barnard 92 over the week from July 3<sup>rd</sup> to 9<sup>th</sup>. It will make the hunt much easier and be a pleasure to see it cross that inky blackness of B92.

Enjoy the summer! See you under a dark sky somewhere.

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### **An Invitation to SLOOH (slew) the Heavens** by *Franklin Loehde*

Edmonton Centre members are able to take their own photographs of the heavens from three different locations around the world, namely the Canary Islands off Africa, in Chile nestled against the Andes and in Australia north of Melbourne with 14"(0.35m) Celestron Schimdt-Cassegrains at their beck and call. For those requiring wide-angle windows, excellent 77 mm to 90 mm apochromatic refractors are available simultaneously.

Using our Casino Funds the Centre has taken out a membership in SLOOH so as to allow our members to access to rather good quality telescopes in locations with superb seeing conditions without having to personally lay out a great deal of money for instrumentation or endure our brisk Canadian winter air. And....have a window on those delicious southern skies as well!

You must understand that I am personally a rank amateur in astrophotography so while I can take simple shots of sky objects it is the magic of photo-processing in tools like Photoshop that will really bring out the fine details in your raw images.

To illustrate what is possible to accomplish with this opportunity, I took two separate photographs of the Orion Nebula, M42, the one taken from Chile on December 19, 2009 with a 5 minute exposure exposing a significant amount of detail

in the outer regions but 'burning out' the central Trapezium area of the nebula. The second photograph was taken on February 20 of this year with a 35 second exposure that reveals detail in the Trapezium but little in the fainter outer regions. One of our many photo experts and avid user of Photoshop etc., **Massimo Torri**, showed how it was possible to combine the two images to produce a pleasing combination shot. The detailed process is available at "Catching the Light" by Jerry Lodriguss at

[http://www.astropix.com/HTML/J\\_DIGIT/LAYMASK.HTM](http://www.astropix.com/HTML/J_DIGIT/LAYMASK.HTM)

Of course, you can not beat the fine detail visible in the live-at-the-telescope views offered by the likes of Larry Wood, and other fellow enthusiasts but if you are a allergic to a little cold or don't have the proper telescope or camera, what the heck? Go for it. The photographs below are best seen at our web-site at

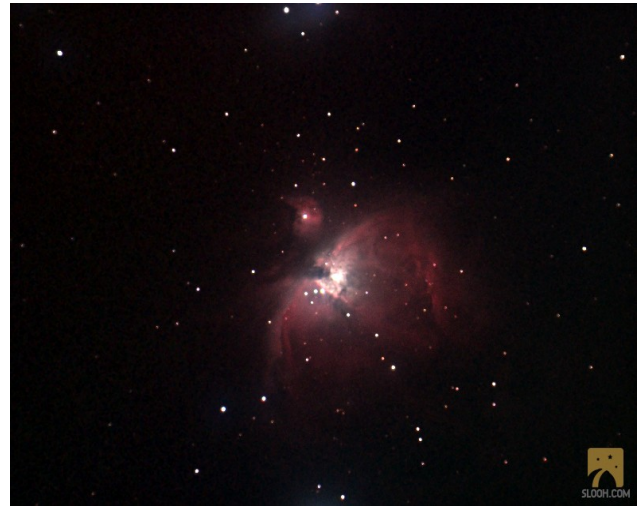
<http://edmontonrasc.com/public/stardust.html>

in their full colour because the B&W renderings fail to show all the detail of the originals.

For your attempt at astronomical photography around the world you can contact me or President Sherry Campbell at the meetings or via email (see contact info. Page 2).



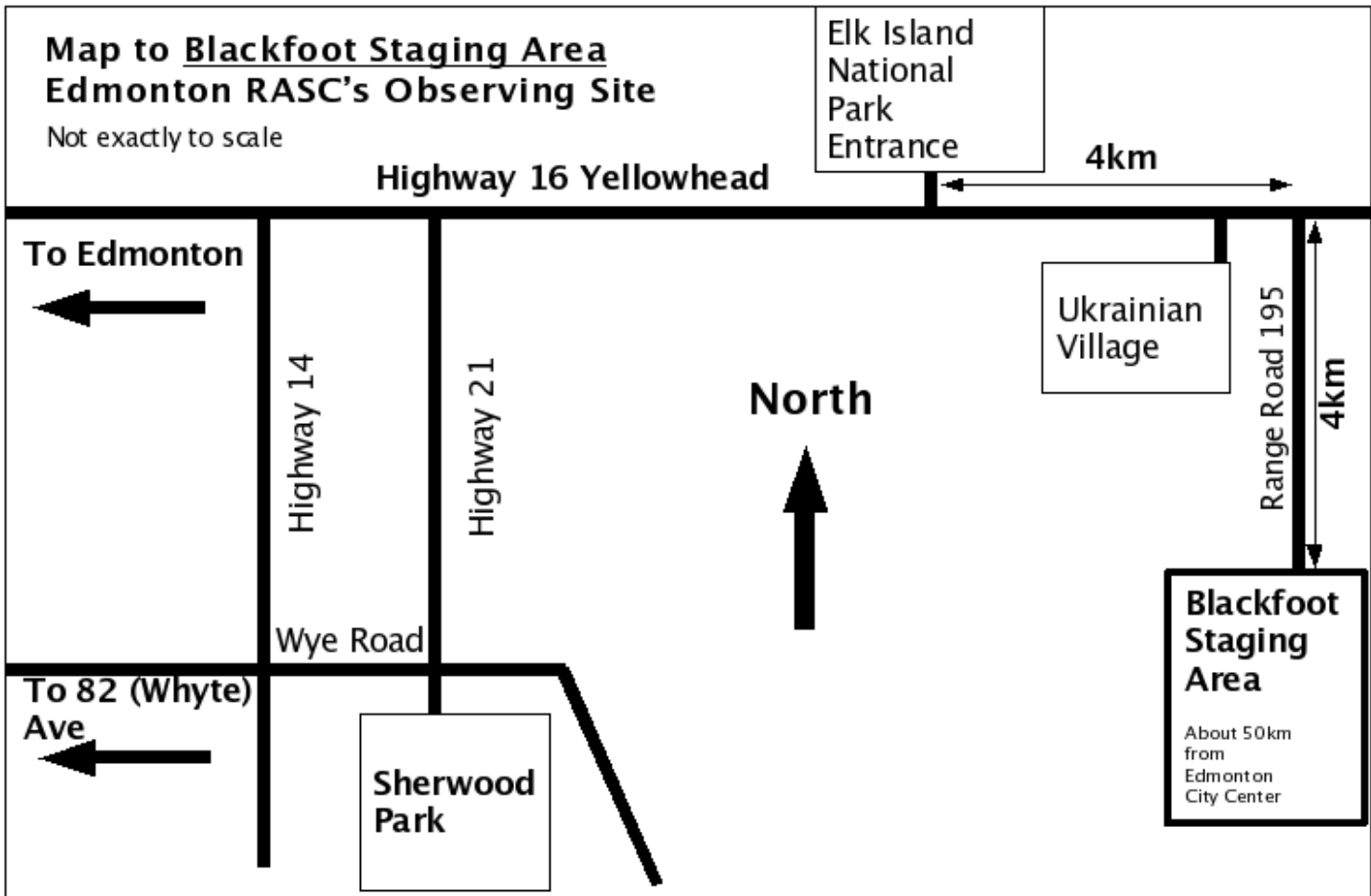
*The original December 17/09, 5 minute exposure.*



*The February 20/10 35 second exposure.*



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