

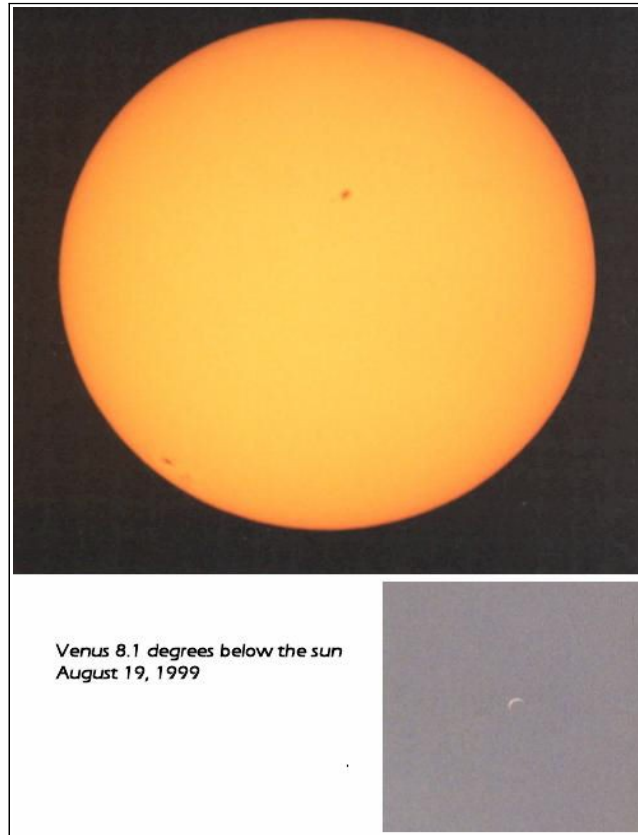
STARDUST

Newsletter of the Royal Astronomical Society of Canada
Edmonton Centre



May 2012

Volume 58 Issue 9



To whet readers' appetites for the upcoming transit of Venus, here is a daring image of our cloudy neighbour, captured in daylight, dangerously close to the Sun. Photos by Murray Paulson.

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

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New Member Advisor	Murray Paulson		
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Mailing address	RASC Edmonton Centre c/o Telus World of Science 11212 – 142 St Edmonton, AB, Canada, TM5 4A1
Centre Website	http://www.edmontonrasc.com
Observing Deck	452-9100 ext 2249
Stardust	Articles for Stardust may be submitted by email to mward@interbaun.com . 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. Do not consider your article successfully submitted unless you receive a confirmation email from the editor.

Edmonton Area Astronomy Discussions

astro@mailman.srv.ualberta.ca

To subscribe, send a blank email to:

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with the subject line:

subscribe

The above mailing list is completely independent and is not associated with RASC Edmonton Centre in any way.

Upcoming Events, Meetings, and Deadlines

MEETINGS 2012

2012	Regular	Council	Observers	New Moon	Full Moon	Observing at Blackfoot
Jan	9	23	4	23	9	20-21
Feb	13	27	6	21	7	17-18
Mar	12	26	5	22	8	16-17
Apr	16*	23	2	21	6	20-21
May	14	28	7	20	5	18-19
Jun	11	--	4	19	4	15-16
Jul	--	--	2	18	3	20-21
Aug	--	--	6	17	1, 31	17-18
Sep	10	24	3	15	29	14-15
Oct	15*	22	1	15	29	12-13
Nov	12	26	5	13	28	9-10
Dec	10	--	2	13	28	14-15

MEETING LOCATIONS 2012

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 TBA

Observers Meetings: *location varies*



* denotes a changed date for the Regular Meeting

Astronomer's Dream: Home & Astronomy income

New Large 4 bedroom house (150 meters squared – plus double garage) with separate self-contained studio accommodation business. Private spa pool. Observatory: 4 meter (school sized) observatory on front lawn housing 15" Newtonian telescope. Parking for 3+ vehicles. Established gardens including a banana grove at the rear of the property. 5 minutes walk to beautiful Baylys beach in affordable sunny Northland. 2km to golf course. 15 minutes to all the local amenities. Reluctantly selling due to a change in family circumstances and the need to relocate due to current family needs, but would prefer not to have to dismantle the observatory and shut down the business. I would love to find someone else who could carry on the *Astronomy Adventures* business.

For a video made in 2010 where Astronomy Adventures featured on Marcus Lush North check out: <http://tvnz.co.nz/north/s1-e3-video-4040460> - episode 3, first ten minutes.

Astronomy Adventures

Deborah Hambly, Skydome Observatory
28 Seaview Road, Baylys Beach
RD 7, Dargaville
New Zealand
astronomy@igrin.co.nz
<http://www.skydome.org.nz/>
Phone 09 439 1856
Mobile 0210 751 228

MONEY MOTION

Moved: that up to \$10,500.00 + GST be used from the Casino account to purchase new Planet Cards for use at public events and at the observatory. Subject to Alberta Gaming approval.

President's Report by Peter Hall

Hi everybody, couple of events coming in the near future to remind you about. On May 20th there will be an annular solar eclipse. Second big event will be the transit of Venus on June 5th also in the afternoon. To lead us into this event we have a guest speaker, Doug Hube. Doug will present at this general meeting.

Just a reminder we are still looking for volunteers for the GA in July 1st weekend. We are always looking for new

The Planets by Murray Paulson

Mercury descends from its poor, from our hemisphere, morning elongation in late April to a May 27th conjunction with the sun. It passes only 14' of arc above the sun, just days after crossing the ecliptic, a near miss to see it transit the face of the sun. We do however have the last chance of our lifetimes to see Venus transit the sun on June 5th, but I am getting ahead of myself. I have one "easy" observing challenge for the astronomical extremophiles this month. Observe Venus and Mercury 6 ½ degree from the sun. On June 1st Mercury and Venus will have their closest approach of 11.8', and they will comfortably fit into the same high power field. Venus will be an absolutely huge thin crescent on our side of the sun while Mercury will be a tiny disc on the opposite side of the sun. Their relative sizes will be 57.27" and 5.19" and magnitudes -3.8 and -1.6 respectively. Their mean surface brightness will be comparable. As I mentioned, they will also be 6 ½ degrees east of the sun. If you set up your scope and solar filter on the sun and turn the drive off, 26 minutes later, Venus and Mercury will be 1.0 degrees due north of the center of the sun. Just remove the solar filter and they should be there. Just make absolutely sure that the scope hasn't been bumped back to point at the sun!!! You will need a well placed tree or building to cast a shadow on your scope, or an incredibly well baffled scope. Use medium high power - 50 to 100 power and move your scope north in declination, not just up with an alt az scope. Once you have them, turn the drive back on. Alternatively just move the scope 6 ½ degrees east which is 26 minutes of right ascension. This is a once in a lifetime spectacle. I have never witnessed the likes of this before.

I have alluded to it in the prior paragraph, the Transit of **Venus** is upon us. Hopefully we will all have luck in our ventures to observe it. For this transit we are in the zone that gets to see all but the last minutes of it unlike the last time around when we had to head to Saskatchewan or North eastern Alberta to catch just the very last minutes of the transit. The spectacle is just amazing, a perfectly circular hole in the sun, and it is so big! Perfectly wonderful! The transit starts at 16:05:17 (16:05:00 toon) local time here in Edmonton for first contact. Venus will take 17 minutes to completely enter the sun's disc. Watch for the black drop effect at C2, and see if you can note exactly when the disc of Venus is completely on the sun. This confounded the observers in prior transits from getting that data that they so dearly wanted. The exact time of second and third contact were critical to the refinement of the Astronomical Unit. The AU of that day was the most important cosmological constant, a key to the distances of the local universe that they could deduce from

volunteers for the observatory deck. It involves lots of interaction with the general public, interesting stories to listen to and questions that will stretch your knowledge of astronomy, perhaps leading to research and answers for your own benefit. If you are interested in helping on the observation deck or the GA, contact Cornelia Blunck or Howard Gibbins.

astronomical parallax. Up until this time, no one knew how far the Earth was from the sun. The transit would give them this data, but the notorious Black Drop effect confounded the precision of the measurement. There are some modern programs to revive the measurement with new principles, so you can reenact the efforts of our forbearers. Just check it out on the web. The sun sets at 22:05 and the transit officially is over at 22:48, well after sunset. If you want to see it all you have to go to Hawaii and east or north to the Yukon. Good luck!

Mars is still a fine object to turn a telescope toward. Over Astronomy day, it showed the public a nice polar cap and a hint of some features on the notoriously blank side. Many of the public did manage to see the diminutive polar cap and some convinced themselves that they had seen some of the Maria. At the beginning of May, Mars shines at magnitude 0.0 and will show you a slightly gibbous 9.44" disc in the eyepiece. It will shrink as it moves on and by the time Venus passes in transit, it will shrink to 7.6" and will fade to magnitude 0.5. It has lost that fire that I love to see in the twilight sky and is a fading ember. It still holds interesting details to the devoted observer who is willing to tease them out with high magnifications and the patience to wait out for those steady nights.

Jupiter is in conjunction with the sun on May 13th, so we will not see it again until the late summer star parties in the hours before dawn.

Saturn was a great over Astronomy days. A bit low, but everyone got a chance to see the rings and marvel at them. This month starts off with Saturn shining a magnitude 0.3 and you can see the 18.9" disc in the eyepiece. The rings are tipped up at 13.1 degrees and are just a treat. Look for the C ring at the innermost edge of the B ring. It is just the subtlest thing, a slight lightening of the blackness in the ansae of the rings. It is easier seen against the ball of the planet, a slight gray band above the rings where they pass in front of the planet. Give it a whirl. By the beginning of June, Saturn will have faded slightly to magnitude 0.5 and it will shrink imperceptibly to 18.3". If you wish to give yourself a challenge, besides seeing the innermost moon Enceladus at magnitude 11.8 in the harsh glare of Saturn, look for Hyperion. It shines at magnitude 14.3 and orbits Saturn in 21.3 days. Look for it at its extreme elongations with high power to exclude Saturn, a clean eyepiece and a chart made up for the night you are out hunting for it.

Good luck on your observing challenges and hopefully we will have the fine weather needed for the transit.

GA in the final stretch by Howard Gibbins

The GA is fast approaching, and it is interesting to note that many Edmonton Centre members have not registered. As GA Chair I'd like to remind you that a good attendance by the hosting centre is expected by all the visiting delegates, after all we are the ones who are putting this thing on for the organization. So far we haven't been notified of any members who wish to put on displays of their work, but if you are interested then there is still some time before the cut off for this (cut off is June 1). We will also be running a photo competition, and so far all the entries are

from outside Edmonton, which is a little strange seeing as how we have so many excellent photographers.

The next registration fee increase is midnight on May 31, when it goes up to \$150. Online registration also closes as of June 18, so after this time you will have to register at the door. In addition we have to let the caterers know final numbers between 48 and 72 hours before the event so if you want to eat with the rest of the gang register early.

CASINO VOLUNTEER FORMS PAGES 6 and 7

Volunteers are needed for the July 9 & 10 casino of the Edmonton Space and Sciences Foundation.

- The first form (page 6) for Gaming is only required for senior positions like Cashiers, Managers, Bankers the Count Room Supervisors.
- As usual free food from a good menu is available and great conversations about the astronomical world had by all.
- Send completed forms to **Franklin Loehde**
 - by email at franklinloehde@yahoo.com, or
 - by postal letter, 11107- 63 Street, Edmonton, AB, or
 - left at the Telus World of Science Edmonton, or
 - give them to any of the Council members at the regular or Council meetings.

These forms are also available from the RASC website:

<http://edmontonrasc.com/public/download/2012%20Casino%20Volunteer%20Shift%20Form.pdf>

<http://edmontonrasc.com/public/download/2012%20Casino%20Vol%20Gaming%20Worker%20Application%20Form.pdf>

Editor's note: the PDFs above are likely better than the versions on the following pages; some manipulation was required to make them fit, which caused a corresponding reduction in quality.

CASINO VOLUNTEER BOOKING FORM

Casino Coordinator: Use this form to recruit your volunteers, build a volunteer data base, assign your volunteers to a casino shift and confirm your volunteers. Fill in your name and contact information before sending this form to your volunteers.

VOLUNTEERS: FILL OUT THIS FORM AND SEND IT TO YOUR CASINO COORDINATOR BELOW.

Your Volunteer Coordinator	FRANKLIN LOEHOE		
Volunteer Coordinator Contact Information	e-mail: feloehoe@telusplanet.net.		
ORGANIZATION:	EDMONTON SPACE & SCIENCE FAN.		
CASINO DATES:	JULY 9-10, 2012		
VOLUNTEER NAME:			
VOLUNTEER ADDRESS:		POSTAL CODE:	
VOLUNTEER CONTACT INFORMATION & NUMBERS:		DAY:	EVENING:
E-MAIL:		FAX:	CELL:

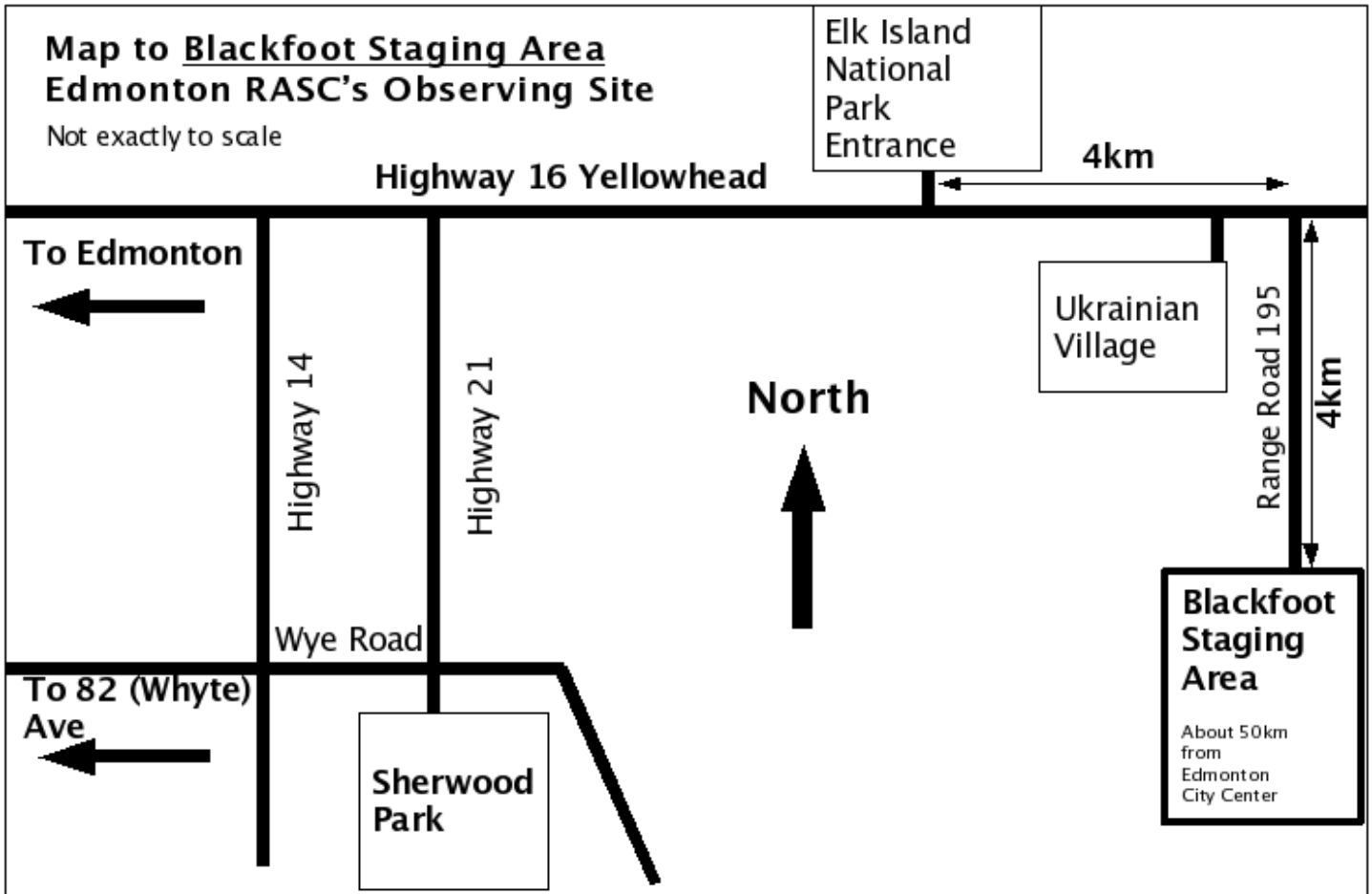
Please indicate the preference for position and date of time to work in the casino:

SHIFT PREFERENCE: <i>Please indicate when you are available to work</i>			POSITION PREFERENCE <i>Indicate your preference or past experience</i>		
DATE			Preference	Past Experience	
DAY OF THE WEEK	first day	second day			
10:30 am to 7:00 pm <small>General Managers & Bankers only</small>					General Manager (admin, helping banker, cashiers) (same as Alternate General Manager)
6:15 pm to 2:30 am <small>General Managers & Bankers only (later on Day 2)</small>					Banker (helping cashiers, chip filling, computer, Gen Mgr provides breaks)
11:15 am to 7:15 pm <small>Cashiers and Chip Runners</small>					Cashier (Castes out the players' chips, makes change, does not sell chips. Always supervised and monitored.)
6:30 pm to 2:15 am <small>Cashiers and Chip Runners</small>					Chip Runner (carry chips to games)
9:30 pm to 2:30 am <small>Count Room Supervisor</small>					Count Room Supervisor (admin, computer)
9:30 pm to 2:30 am <small>Count Room workers</small>					Count Room Workers (sort money, run money counters, computer)

VOLUNTEER ORGANIZATION SECTION		
Use the section below for notes and a record of your confirmation of the volunteer's shift		
NOTES		
Volunteer Needs A Ride: Yes / No	DATE VOLUNTEER NOTIFIED OF SHIFT(S)	FINAL CONFIRMATION & Photo ID Reminder

Courtesy of your Casino Advisor: Donald Patterson
Phone 780.469.4155, FAX 780.465.0402, e-Mail: donald.patterson@telus.net

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