STARDUST

Newsletter of the Royal Astronomical Society of Canada
Edmonton Centre

March 2009 **Volume 54 Issue 7**

Two domes of the Astronomical Society of South Australia's facility near Stockport, South Australia. See story, page 7. Photo courtesy of the ASSA, 2009.

Inside this Issue

RASC Edmonton Centre Contact Information - *for a complete list see http://www.edmontonrasc.com/councilcontacts.html*

Council Positions			
President	Sherry Campbell		
Past-president	Krista Stefan		
Vice-president	Orla Aaquist		
General Secretary	Donna-Lee May		
Treasurer	Mark MacDonald		
Co-National Council Rep	Alister Ling		
Co-National Council Rep			
Public Education Director (PED)			
Fund Raising Coordinator	Franklin Loehde		
Councillor	Bruce McCurdy		
Councillor	Mike Noble		
Councillor	Sheldon Helbert		
Councillor	Harris Christian		
Councillor	Peter Hall		
Internal Communications Officer	Ross Sinclair		
Observers' Group Director			
Membership Secretary	Massimo Torri		
New Member Advisor	Murray Paulson		
Appointed Officers & Others			
Editor	Michael Ward		
Web Site Coordinator	Ross Sinclair		
Library Coordinator	Wally Anhorn		
Equipment Coordinator	Ross Sinclair		
Dark Sky Preserve Coordinator	Sherrilyn Jahrig		
Light Pollution Chair	Bruce McCurdy		

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.
Stardust On-line	http://www.edmontonrasc.com/stardust.html (PDFs, 1954 – present, not complete) http://www.ece.ualberta.ca/~mpward/stardust/ (HTML, 1954 – 1998, not complete)

Edmonton Area Astronomy Discussions:	astro@mailman.srv.ualberta.ca
To subscribe send a blank email to:	astro-request@mailman.srv.ualberta.ca
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, Deadlines, Announcements

MEETINGS 2009

	General	Council	Observers	NewMoon	FullMoon
Mar	9	23	2	26	10
Apr	13	27	6	24	9
May	11	25	4	24	9
Jun	8		1	22	7
Jul			6	21	7
Aug			5	20	5
Sep	14	28	2	18	4
Oct	19	26	5	18	4
Nov	9	23	2	16	2
Dec	14		7	16	2

MEETING LOCATIONS 2009

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*

President's Report *by Sherry Campbell*

Thank you to everyone that volunteered at the Winter Light Festivals at Elk Island and Coronation Park. Without your contribution, these events would not be success they are. Our next big event is the 100 Hours of Astronomy taking place at the Strathcona Wilderness Centre, from April 2-5th. If you would like to volunteer for this event, please see Pat Earl or Massimo Torri.

Our first workshop will be on March 21 and will be "Sketching at the Eyepiece". It will take place at the Alberta Teachers Association starting at 1 p.m. You must sign up for these workshops in case there is a change in venue or time so we can notify you. A sign-up sheet will be available at the meeting. There will also be a workshop in April, but we are still working on the details.

I will be giving the workshop in March and it is aimed at those of us that don't image the heavens but still want to record what we see. I will teach you how to make accurate representations at the eyepiece with only a pencil, paper and practice.

Tonight was the deadline for expenditure proposals. I hope you all submitted your expenditures. We will be voting on those expenditures at the May general meeting.

We have a Casino coming up August 3-4th. We will need many volunteers for this event, so please see Franklin Loehde for the form he needs you to fill out. I have worked at many other Casinos for the club and they are a lot of fun. These Casinos supply us with the operating funds we require for the next two years as well as permit us to buy the toys of astronomy we all want, so please consider donating your time to this worthwhile cause.

April is StarBust; so if you come across something astronomically hilarious, please share it with the rest of us by submitting it to Michael Ward, our editor, for Stardust. April is also members' night. If you would like to do a 10-minute presentation, please contact me.

March is galaxy month! Hopefully the weather will co-operate for us to see all those galaxies in Virgo. I hope to see many of you at the dark site this month. I would love to see a galaxy through your scope. Clear skies!

Gas Dynamos: Uranus and Neptune *by Dave Cleary, the sixth article in this series*

Uranus and Neptune are sometimes referred to as the ice giants of the solar system. Although consisting principally of hydrogen and helium, they have higher percentages of water, ammonia, and methane than do Jupiter and Saturn. Like the two larger planets, they have ring structures and large numbers of moons.

Uranus

Uranus is unusual in that its axis of rotation is aligned only 8 degrees from the plane of the ecliptic. Its moons and rings circle the planet perpendicular to the spin axis setting the whole system at approximately 90 degrees to most other orbital arrangements in the solar system.

Voyager 2 was the first to detect a magnetic field at the planet when in Dec 1985 and Jan 1986 it detected a strong burst of polarized radio signals. As odd as the spin rotation of the planet is, its magnetic field proved even stranger, with a magnetic source originating about one third of the planet's radius towards the south rotational pole. Not only that, but the magnetic axis of the source was tilted 59 degrees from the planet's spin axis.

At the time of the first Voyager observation of Uranus it was thought that rather than being related to the circulation of an iron core or of liquid helium, Uranus had a magnetic field generated at shallower depths in the ammonia-water ocean. Subsequent evidence has left the exact source something of a mystery but is assumed to be the same as for all other native magnetic fields – induction due to the circulation of molten, conducting material in the planet's interior.

The planet's magnetotail is corkscrew shaped due to the peculiar orientation of the magnetic poles 59% from the axis of rotation. It extends approximately 10 million kilometers beyond the planet as measured by Voyager 2. The strength of Uranus' magnetic field at the surface of the planet is roughly the same as Earth's at 0.25 gauss.

The moons of Uranus pass through the magnetosphere creating gaps in the particle content of that structure and apparently are the source of space weathering. An intense radiation belt exists at the planet as well causing the darkening of methane on the surfaces of the inner moons. This gives rise to the dark appearance of the moons and Uranus' rings as well.

Neptune

Neptune was also presumed to have a magnetic field like the

other gas giants which was found to be the case. Voyager 2 was the first to actually detect it during its flyby in 1989. The planet's spin axis is similar to most other planets at 29° relative to its orbital plane, but like that of Uranus, Neptune's magnetic axis is set 47° from the rotational axis. Neptune's dynamo is also like Uranus in that it is not located at the core but set instead at half way between the centre and surface of the planet.

Neptune's bow shock was encountered by Voyager 2 at a distance of 35 planetary radii from the centre of the planet and the magnetotail extends to at least a distance of 72 radii beyond the planet.

Based on the evidence at Uranus, it was postulated that the large offset of the dynamo from the centre of the planet had been caused by an impact that set the planet on its side or alternatively that it was suffering a magnetic pole reversal similar to those that occur on the Earth every 750,000 years or so. When Neptune was found to rotate similarly to other planets it eliminated the impact theory for explaining the large dynamo offset. And it was highly unlikely that both Neptune and Uranus would be experiencing a pole reversal at the same time.

It was expected that Neptune would have a stronger magnetic field than Uranus because Neptune was known to have a strong internal heat source. Scientists surmised this would cause a high level of convection giving rise to a more intense magnetic field. Estimates based on Voyager's observations put the magnetic field strength at the equatorial cloud top level at about 0.15 gauss, about one third that of the Earth's and smaller than the field at Uranus. This mystery further clouded an explanation of the dynamo.

Measurements of the field show that the dynamo is not a simple dipole like those known to exist at Earth, Jupiter, and Saturn but exhibits multiple polar components like the arrangement of many bar magnets on a table. Although the complexity of the magnetosphere may be explained by convection of conducting material near the surface of the planet, the source of magnetic fields at both Uranus and Neptune remain unknown.

Next month's issue of Stardust will have a table featuring characteristics of magnetospheres found in the solar system.

Crescents and Full Moon Photo-Ops *by Alister Ling*

The past month has been frustrating weather-wise. There have been quite a few clear evenings and mornings, just not on the days required for the events! Hopefully this spring will be better.

It occurred to me that I need to yet again open up a different category of event with near-full Moon rise/sets. If I am going for an aesthetic picture that balances subject and surroundings, then I need near equal illumination, hence Moon above horizon when the Sun is, and a wider field of view is needed to capture solar reflections. However, if I want to concentrate just a close-up on the Moon right at set/rise, then I can afford to not have full foreground illumination. This allows me to avoid losing the Moon due to extinction, but at a trade-off that the foreground is much darker and really only there for shape. Even "brightly lit" down town buildings would appear dark next to a bright nearly-full Moon, so setting into down town buildings is not as cool as one might suppose. Visually it would still be nice. There are far too many possibilities this month to publish here. The complete list and where to best see them from can be found on my website at: http://www3.telus.net/public/aling/photosite/upcomingevents.htm .

The following are the best ones; note that some are morning events:

```
yyyy/mm/dd/hh:mn     Sol Az   Alt   Lunar Az   Alt
2009 03 09 19 22 22  263.1°  0.0°   92.2°     9.7°:
 From Mackinnon Ravine good reflections and rise
 From 142St N bridge good but bridge vibrations
 From StGeorge Cres  decent reflections and buildings

2009 03 13 08 00 53   95.1°  0.4°  243.6°     1.0°:
 From Capilano bridge decent reflections
 From McNally best for low horizon moonset.

2009 03 14 07 58 28   94.4°  0.4°  231.1°     2.9°:
 From Jasper decent set into buildings   Moonset 08:27  Az 237
 From Ada Blvd sets into Telus with Sun Life reflecting
 From McNally no refl but good horizon

2009 03 22 06 48 27   78.9°  -7.1°  126.1°    4.1°:
 From StGeorge Cres Rise over river!   Rise 06:10  Az 118

2009 03 23 06 45 58   78.2°  -7.1°  114.2°    2.5°:
 From StGeorge Cres  Rise to left of river  Rise  06:23  Az 109

2009 03 24 06 43 28   77.5°  -7.1°  102.1°    0.8°:
 From StGeorge Cres Pale rise through apartment near Leg.

2009 03 27 20 46 59  285.5°  -7.5°  280.2°    9.7°:
 From Strathearn; above Telus sets past Canada Place  Set 22:02  Az 296
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Blotting out starlight: Upcoming Edmonton occultations: prime events *by Alister Ling*

Visual (low tech!) timings, even a yes/no without duration, are very much worthwhile. You never can tell when technology will fail, and if you're the only observer to provide a limiting observation, then you have played a key role! So please consider giving these asteroid occultations a try.

There are 2 worthwhile asteroid events this month, with the best being Thursday evening 2009 Apr 4-5 at 10:05 pm MDT, the asteroid 980 Anacostia will cause a 11.9 mag star to drop 2 magnitudes for up to 4.0s with a ranking of 91!

On Wednesday night Mar 25-26 01h:23m MDT asteroid 342 Endymion will occult a mag 10.1 star for up to 10.4 seconds. This is a rank 84 event which means there is a **very** good chance of seeing this.

Let me know if you are interested in joining in, if just to watch it.

Details on the web are here:
http://www.asteroidoccultation.com/2009_03/0326_342_17384.htm) (342) Endymion
http://www.asteroidoccultation.com/2009_04/0405_980_17409.htm (980) Anacostia

Lunar-wise: There is a decent opportunity to see a graze of a mag 5.4 star Mon eve Mar 30-31, 10:37 pm across a very rugged north limb, should be fantastic multiple events, with the Moon at altitude 26 deg. Details can be found here: http://www3.telus.net/public/aling/grazes/20090331graze/graze.html. Closest intercepts are Carrot Creek and Ponoka.

The best occultation should be a lovely step-wise double!

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day  Time               Star     Mag  CA   Times are MDT
 y   m  d  h  m s                 v    o
09 Apr  3 23:33:02 D theta Cancri 5.3  42S theta Cancri is triple:
      AB  6.4  6.4 sep 0.10" PA 100.0 and  AB  5.3 10.0 sep 72" PA 62.5
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More detailed info on my website: http://www3.telus.net/public/aling/total_occultations/Edmonton%20Total%20Occultations.html

Other grazes on deck for this year are: Thu eve June 25-26 10:41 pm mag 5 star, Sat eve Nov 7-8 11:21 pm, mag 6.3, and Tue eve Nov 24-25, 7:53 pm mag 5.9. Good observing!

The Planets *by Murray Paulson*

March is the month for inner planet conjunctions. **Mercury** will come from a rather poor Greatest Western Elongation to Superior Conjunction on March 30th. **Venus** will beat it to the punch with a spectacular Inferior conjunction on March 27th. You will be able to watch Mercury as it closes in on the sun over the month. It will brighten from magnitude -0.1 at the beginning of the month to magnitude -2.0 by the time of the conjunction. Mercury will pass only 50 minutes of arc below the sun, and will be too close for comfort to apply eye to telescope. You may be able to catch it in the week afterwards as it moves away from the sun. The week beforehand it will precede the sun, and if you are not careful, the sun will end up shining into an eyepiece. So for safety's sake, pass on the pre-conjunction week. As always, be very cautious when observing near the sun. You can't afford to make a mistake.

Venus on the other hand will give us one of its better shows as it sails 8.16 degrees above the center of the sun on March 27th. At the beginning of March, Venus sits 34 degrees from the sun and shines at magnitude -4.5. In the eyepiece you will see a 46" crescent, signs of things to come. Back to the conjunction. You may be able to catch Venus on the evening before hand where it sets 24 minutes after the sun, 8:31 pm, and again the next morning when it rises 54 minutes before the sun at 6:16 am (Daylight savings time!). It will shine at magnitude -4.0 at this time and the thin crescent subtends 59.3". There is nothing quite like the view of Venus in Superior conjunction. The razor thin crescent is beautiful, and you will actually see more than 180 degrees of it wrapping around the disk because of Venus's thick atmosphere backlit by the sun. Very cool, but once again, you are using a telescope near the sun, and it is potentially dangerous if the aperture accidentally catches the sun.

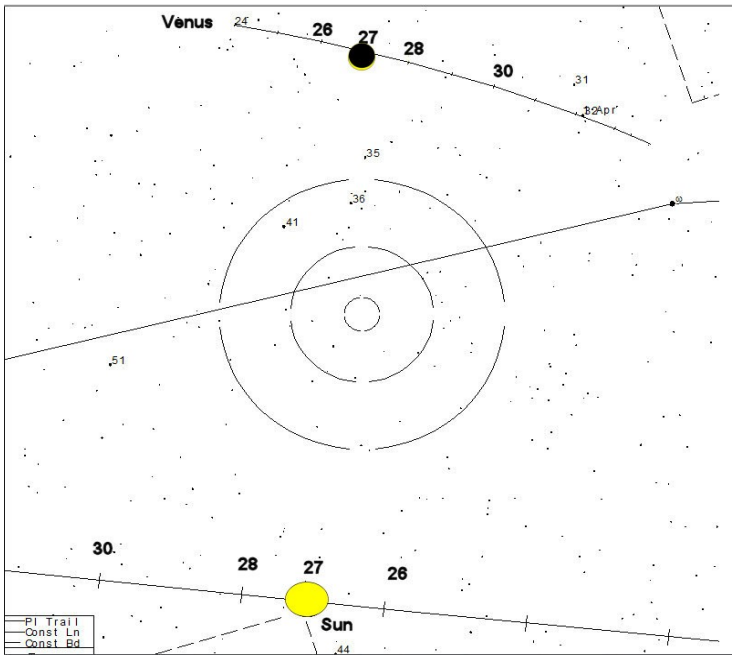
The way to find Venus in the day time is to use a scope with GOTO capabilities/ setting circles, or use dead reckoning and common sense. My preferred instrument is a refractor, but a reflector with an off axis mask will work quite well. It is nice if you can set up in the shade of a building, but the heat turbulence can be a problem. The most important issue is having a good focus on your scope before you attempt to find Venus. I usually do this by using a solar filter and getting a good focus on the sun beforehand. Lock the focuser, or be careful not to change it. If you do this at noon, Venus is directly above the sun, so raise the telescope the 8.15 degrees to where Venus should be, and then and only then take the solar filter off of the telescope. Do this with a moderate field of view eyepiece, i.e. 2 degrees or so. Do not try this at high powers because you will never find Venus. You must make sure that the sun is not shining into the eyepiece before you look through it. Put a piece of paper up to the eyepiece, or your hand and look for brightness, then have a peek to see if Venus is in the field of view. If it is not there, pan left or right, but do not move the scope downward toward the sun. I have included a graphic courtesy of Guide that shows the relative position of Venus and the sun over the week surrounding the closest approach at 12:00 noon. If you search at other times of day, you will need to rotate the chart 15 degrees per hour clockwise for later in the day, or the converse for earlier. Note; the sun moves 1 degree per day to the left in this chart, (major ticks are 2 day increments) Venus moves 0.6 degrees per day to the right on this chart, (1 day increments on its line). For those of you who like the challenge, stand in the shade behind a building and use binoculars to find Venus, then see if you can spot it naked eye. Good luck!

March 8 is **Saturn's** opposition, so the planet will really start to be visible in the evening skies. The month starts out with Saturn shining at magnitude 0.4 and the disk will subtend 19.8" The rings are now tilted up at -2.6 degrees, and they will continue to tilt upward, ending the month at -3.4 degrees. The

moons also orbit at this same inclination, so it is interesting to see them lined up much like Jupiter's moons. I had sent out a listing of Titan satellite events for the next few months in the last issue, and by now there is only one Titan transit event left on the list. (note 1) I have been clouded out on all the prior events, so this is it until the month of July. Fingers crossed! I have also been noting how prominent the belt systems on appear this apparition. It may be a function of less glare from the rings, or that I am hunting for details.

Uranus in Conjunction with the Sun on March 12th, so it will be hidden from view. **Neptune** is now in the morning sky, but is lost in the glare of the twilight glare for the next few months.

[1] If you would like to get a copy of the Titan Events chart, go to http://www.edmontonrasc.com and click on Observing and there is link on the right hand side of the page to it.



International Year of Astronomy Events *by Orla Aaquist*

http://www.edmontonrasc.com/iya.html

100 Hours of Astronomy, April 2 to 5

This is an around-the-clock, worldwide event with 100 continuous hours of a wide range of activities and public outreach events including live webcasts, observing events, star parties and other specialized activities. It is likely to be the highest-profile event of the International Year of Astronomy. Locally, 100 Hours of Astronomy, is being hosted locally by Cosmic Journey Inc. (http://www.cosmicjourney.net/) at the Strathcona Wilderness Centre. Cosmic Journey, working with its partners (including the Edmonton Centre) and sponsors, is hosting a marathon in the same spirit intended by the IYA organizers to host a free to the public experience under the protected skies at the Strathcona Wilderness Centre. The marathon event is exactly that, Cosmic Journey will be engaged in activities day and night between midnight April 2 to 11:59pm April 5, 2009. Cosmic Journey has slotted in four time blocks into the marathon for the field trip experience for classes. Their unique on-site school visits to enhance sky and space science programs will be available the Wilderness Centre during the marathon. Each slot offers space for 40-50 students. If you are a teacher looking for the opportunity for your students to participate in the Marathon in a unique way contact Patrick Earl at 780-893-9777 or at patrick@cosmicjourney.net. With only four blocks available these will fill up quickly. Please contact Patrick for details and visit the event website at http://www.cosmicjourney.net/marathon.html.

International Sidewalk Astronomy Night, April 3 and 4

The 100 Hours of Astronomy coincides with International Sidewalk Astronomy Night (ISAN). Free observing with telescopes will be offered 8:00 PM - 11:00 PM at the following locations in the Edmonton area:

- The Promenade overlooking Victoria Park - South side of 100 Avenue west of 119 Street
- Gazebo Park in Old Strathcona - Between 83 and 84 Avenues and 103 and 104 Streets
- Concourse behind St. Albert Place - 5 St. Anne Street, St. Albert
- Strathcona Wilderness Centre, located 20 minutes east of Sherwood Park on Township Road 530 (Baseline Road) and Range Road 212

Luca Vanzella is coordinating this event. Contact him for details at luca@vanzella.com.

ASTRONOMY DAY 2009, May 2

As usual, Astronomy Day 2009 will be celebrated at the Telus World of Science with telescope displays, information booths, children's activities, and astronomy talks. As part or our Astronomy Day activities this year we plan to collect in one place 400 telescopes to celebrate 400 years of Galileo's first astronomical observation with a telescope. We are hoping to get all members with telescopes participating with this event. More to follow in April's Stardust.

VOLUNTEERS Needed for RASC Casino, AUGUST 3rd, 4th 2009 - *from Franklin Loehde, Fundraising Chair*

On August 3rd and 4th the Edmonton Centre will be conducting its next casinos so that the fine work of the Centre members can continue. Therefore, volunteers are needed to step forward to help with the easy-to-learn jobs required by Alberta Gaming that allow charitable groups such as ours to provide services that eventually find their way to promoting astronomy to the general public.

Much of our regular annual budget is covered by Gaming funds as are all our expenditures for the fine observational equipment that we buy for our members and the general public. If you want this to continue, do sign up in one of the following ways:

1. Go to the Edmonton Centre website at http://www.edmontonrasc.com/councilcontacts.html and proceed to the Downloads section on the left side and then download the TWO required volunteer forms.
2. Email me the completed forms at <fcloehde@telusplanet.net>, mail them to me at 11107- 63 Street, Edmonton, AB, T5W 4E3 or hand them to me at the next regular meeting you attend.
3. I hope to have forms available at the meetings themselves.

Because the casino is held deep in the holiday period and well after our last scheduled meeting in June, it is imperative that you act quickly on this issue and not hold off until later. Thank you for your help.

Australia's Night Sky *by Sheldon Helbert*

I just returned from a great vacation in Australia with my wife Kelly. I would like to share a brief narrative about Australian hospitality and their night sky.

Before leaving for Australia I contacted the Astronomy Society of Western Australia (ASWA) http://aswa.info/index.html centered in the region of Perth and the Astronomical Society of South Australia (ASSA) http://www.assa.org.au, centered in Adelaide. I sent a brief humble request to the ASWA and the ASSA and to my delight had very generous offers to do some deep sky viewing with local members. I could not believe the generosity of the offers made. Hillary Upshot and Ivan Semmler were the first to extend their own hospitality and that of the ASWA. They also forwarded my e-mail to two club members 3-4 hours drive SE of Perth under very dark skies and within a short drive of where I planned to be visiting close friends for x-mas and new years. One gentleman, Len Drew, lives in a rural area west of the Sterling Ranges near Kendenup (WA), offered us accommodations for the whole family. I could then view the night unencumbered about the thought of night driving on country roads frequented by kangaroos (think bottom heavy deer in headlights). In the end we were unable to take advantage of a night of viewing with Len. Instead we were most fortunate to be the guests of Jim Gifford of Bridgestown, 20 minutes from my friends in Manjimup. Jim with his life long interest in comets was glad to have a night's distraction by a cannuck wishing to view deep sky objects.

By the time we arrived in Perth we had been in Australia about 3 weeks. To quench my celestial thirst for those first weeks I brought my 15 x 70mm binoculars and camera tripod. With the purchase of, "The Southern Sky Guide" (D. Ellyard & W. Tirion, 3rd ed., Cambridge Univ Press, 2008) in Sydney, I had time to orient myself and prepare a deep sky wish list for when I arrived in WA and SA. Those first nights camping in Atherton Tablelands along the shores of Lake Tinaroo and under the Savannah sky of the Undarra Lava Tubes National Park were spectacular. My first impressions of southern constellations are difficult to describe and with a sky full of glittering lights were also slow to find. Tucane, Hydrus, Mensa. Puppis, Dorado, Reticulum, Carina, Chamaeleon and Crux were a few of the constellations I was becoming familiar with as I searched the sky for incidental finds of star clusters, nebulae and galaxies. As I progressed I learned that many of my bino discoveries were lovely fuzzes you can also see with the naked eye! This is how I would spend time late at night when camping in the drier regions of Queensland and Northern Territory, slowly learning the skies, what rises when and producing my x-mas view list in anticipation of WA and SA.

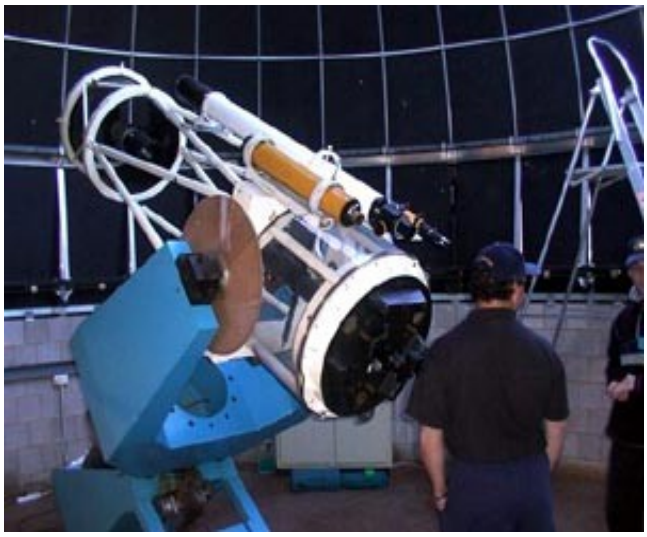
Back in WA on December 27, I arrived on Jim Gifford's farm with Kelly, my friends Rich, Esther and their daughter Maddie in tow. We found our way with enough time to tour his small observatory and set up his 16" dob before darkness. In all the excitement I forgot to snap a few photos of Jim and his observatory. We finally began our sky tour with very dark and still skies, and thanks to the suggestion of Alistair Ling the OIII filter I brought along made quite a difference with some of the emission nebulae. We started with a number of objects in the southeast, the globular cluster 47 Tuc (Tucanae), the Tarantula nebulae, the Eta Carinae nebulae (N3372), three nice open clusters (Theta Carinae I2602, Pearl N3766, Jewel Box N4755), a large elliptical galaxy, Centaurus A (N5128), with two well-defined arms. The final object we managed to squeeze in before clouds obscured our view is the famous globular cluster Omega Centauri. Like a myriad of sparkling jewels, something like M13 but much larger, maybe as large as the full moon with hundreds of thousands of stars, I gazed almost hypnotized in wonder. I also gained a good appreciation for the utility of an O III filter where under these very dark skies, the Tarantula, Eta Carinae and the upside-down Orion nebulae appeared with amazing clarity. The contrast was so well-defined Jim insisted that he was going to purchase an O III the first chance he had. After it began to cloud over we waited and chatted for an hour or so taking advantage of a few large sucker holes. Finally, the clouds put an end to our night missing a few late rising objects in Lupus / eastern Centaurus, Triangulum Australe and Corona Australis; well all good things must come to an end.

Our next opportunity for viewing was at the dark sky site used by the ASSA in the small town of Stockport, SA. This site is about a 90 minute drive from Adelaide and Dean Davidson (President of ASSA) told us it was an excellent dark site until about 3 – 5 years ago and has just become a little too light saturated to be truly dark. The site was donated by one of the club members and has all the infrastructure in place including two dome buildings (Photo 1) with the larger dome supporting a 20" Newtonian-Cassegrain (Photo 2), a smaller observatory with an 18-inch Newtonian reflector (Photo 1), a small scope shelter that houses the 15" Newtonian we used (Photo 3). The site also has a substantial overnight duo of Atco style trailers for members convenience and a number of concrete pads for members to set

up on. This night the moon was out and so we did more socializing than viewing. Nonetheless, we had an enjoyable viewing session, shared light pollution, hemispheric sky viewing and club stories. Like our parting with Jim Gifford, after many thanks for a memorable evening I left them each with a 2009 RASC calendar, a small token of my appreciation.

If you ever have the opportunity to spend time in a different part of the world with moderately dark skies I encourage you to search out local clubs, introduce yourself and ask if someone would like to host a viewing session with you. I think you will be glad you did.

Cover photo: *The small dome housing the 18" in the foreground and the large one housing the 20 inch in the background. The overnight accommodations are right of photo. (source: courtesy of ASSA, 2009)*

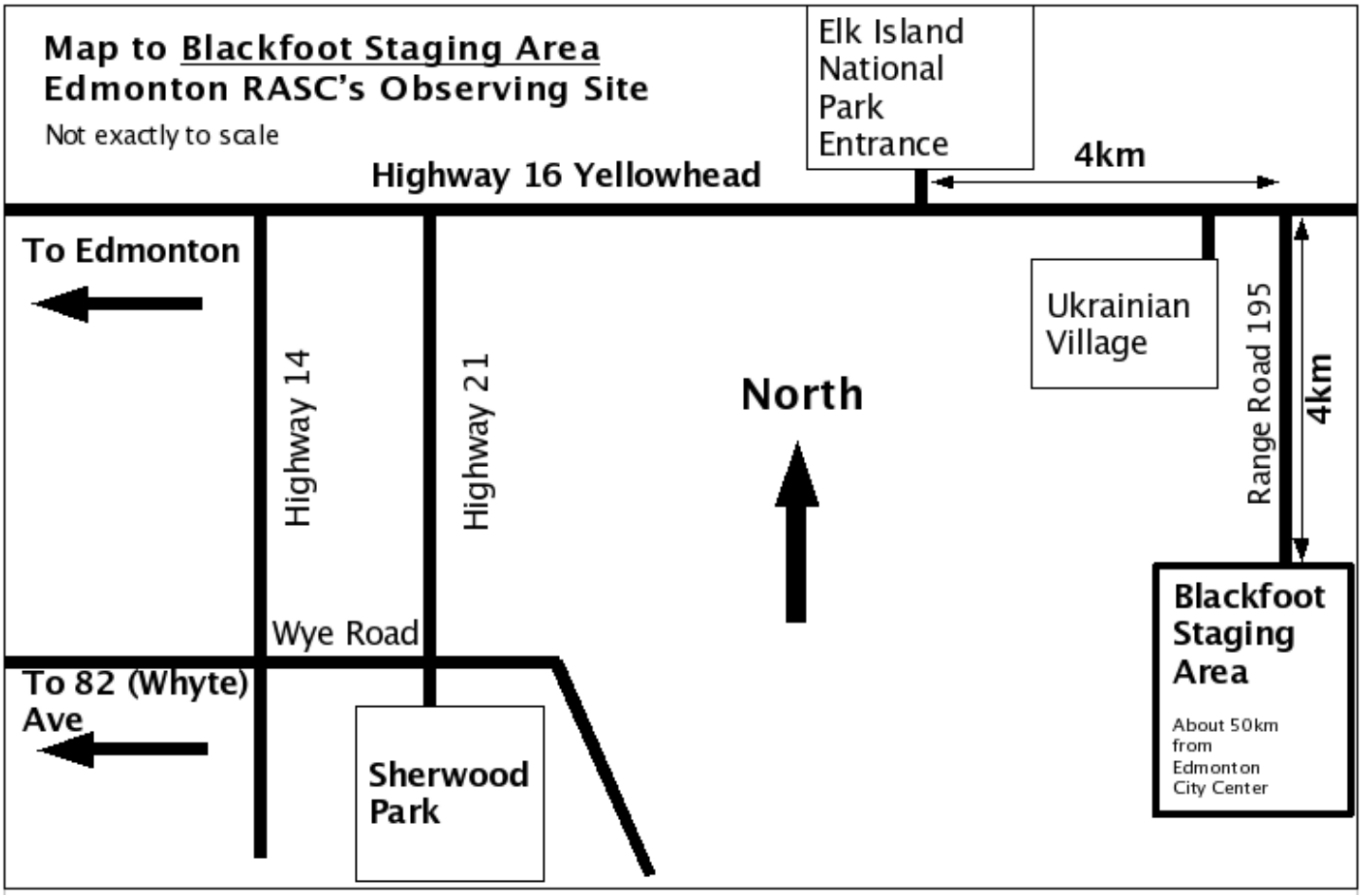


The 20 inch Newtonian-Cassegrain built by the club. Unfortunately we did not use it the night we were there as it was undergoing a regular maintenance overhaul. (source: courtesy of ASSA, 2009)

The 15 inch Newtonian we used the night of our visit that is housed in a small roll off track (seen to the left). Dean Davidson (President of ASSA) and my wife Kelly at the scope.

The March 9, 1939 Regular Meeting

On March 9, 1939, Professor John A. Allan, of the Department of Geology at the University of Alberta, addressed the monthly meeting of the Edmonton Centre of the Royal Astronomical Society of Canada. The topic of his lecture was "Meteorites." He began with a brief discussion of the origin and probable age of the earth, then gave a detailed description of the appearance and characteristics of meteorites. Finally he exhibited the Edmonton meteorite which he was then engaged in examining. This, then, was the public and scientific debut of the Edmonton meteorite. It was also the beginning of the Edmonton Centre's long involvement with meteoritic science, an association that continues to the present day.


Map to Blackfoot Staging Area
Edmonton RASC's Observing Site
Not exactly to scale
Elk Island National Park Entrance
4km
Highway 16 Yellowhead
To Edmonton
Highway 14
Highway 21
North
Ukrainian Village
Range Road 195
4km
Wye Road
To 82 (Whyte) Ave
Sherwood Park
Blackfoot Staging Area
About 50km from Edmonton City Center