

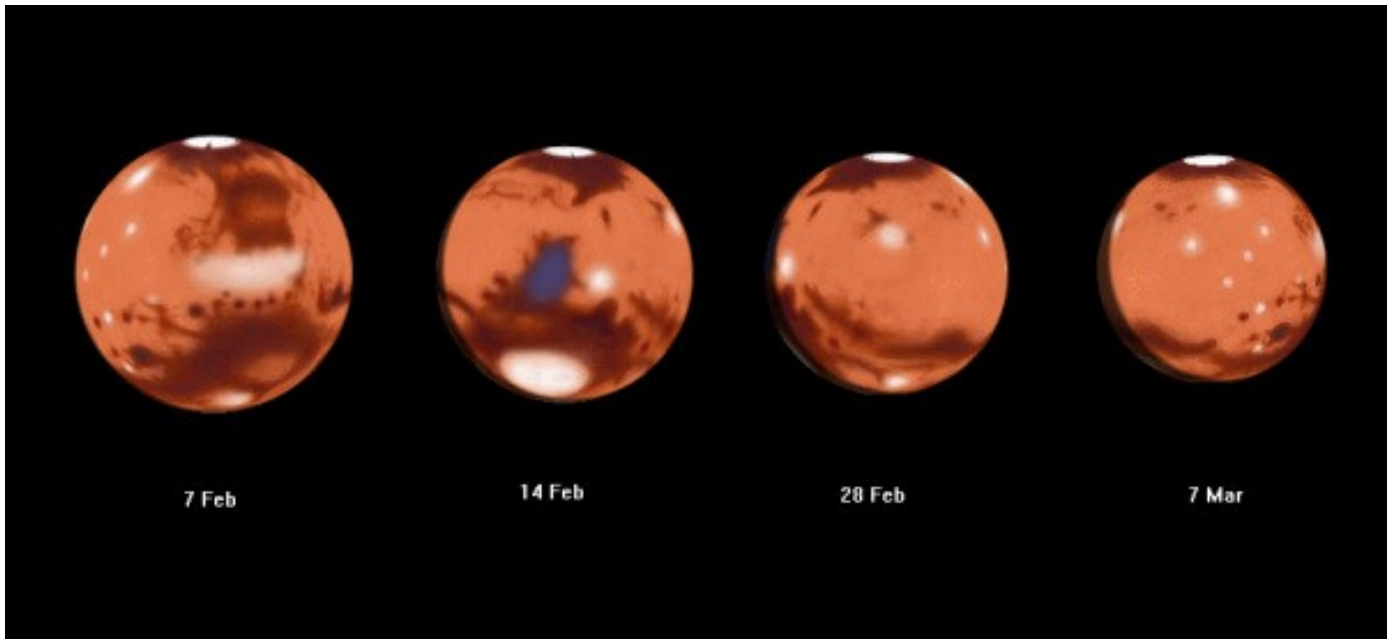
# STARDUST

Newsletter of the Royal Astronomical Society of Canada  
Edmonton Centre



February 2010

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*Mars continues to be in a good viewing position, although it is shrinking noticeably since reaching opposition Jan. 29. See The Planets, page 3.*

### *Inside this Issue*

Contact Information.....	page 2
Upcoming Events, Meetings, Deadlines, Announcements.....	page 3
The Planets.....	page 3
Greek Mythology.....	page 4
President's Report.....	page 4
The International Year of Astronomy 2009 in Edmonton.....	page 5

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

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<b>Mailing address</b>	RASC Edmonton Centre c/o Telus World of Science 11212 – 142 St Edmonton, AB, Canada, TM5 4A1
<b>Centre Website</b>	<a href="http://www.edmontonrasc.com">http://www.edmontonrasc.com</a>
<b>Observing Deck</b>	452-9100 ext 2249
<b>Stardust</b>	Articles for Stardust may be submitted by email to <b>mward@interbaun.com</b> . 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:**

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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*

## 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 at macewan.ca or see the web site for contact information.

## The Planets by Murray Paulson

Last month **Mercury** sped between its conjunction with the sun and the western elongation in an incredible 22 days. That elongation is long gone, and the chance to see it in the twilight as well. The return trip from the elongation to the next conjunction with the sun will take twice as long. Mercury will be at superior conjunction in mid March. If you would like to see it this month, it will have to be a daytime search with setting circles or a computer go to scope.

**Venus** is slowly coming out of conjunction with the sun this month and will not emerge into visibility in the evening sky until sometime late in February. Venus shines at magnitude -3.9 and will show a 10." disk in the eyepiece. On March 3<sup>rd</sup>, Venus passes 37' below Uranus which shines at magnitude 5.9. Uranus will be 3.35" at the time. Note Uranus is 21 AU away from us while Venus is only 1.65 AU distant. They will set about an hour after sunset and this shouldn't be too difficult a hunt.

Have you been watching **Mars**? There has been the occasional great night where the seeing has cooperated. The polar cap is big and dominates the view and on one occasion, Syrtus Major dominated the view. The month started off with Mars shining at magnitude -1.2 and showing a 13.8" disk. That disk is certainly small, but because Mars has such high brightness and contrast, when the seeing holds, you can dial up dizzying magnifications. I routinely use 375 power if the seeing

is "ok" and I wait for the better moments to come along. If the seeing is truly great, the sky is the limit! I have included a graphic that I generated using Guide to show the features you should be able to see over the 4 weeks of this month. Note the diagrams are with North up and not mirror reversed. If you check with the ALPO Mars section, you can see the latest observing alerts for Mars. There is a dust streak across the North Polar Cap, and some amateurs have captured the sand storm billowing over that cap. Very cool indeed. By the beginning of next month, you will notice that Mars is starting to shrink in the eyepiece, 11.4" and magnitude -0.4, so get it while it is close.

**Jupiter** has a date with the sun this month on Feb 28, and will disappear into the evening twilight fairly quickly this month. It shines at magnitude -2.0 and shows a 33.2" disk at the beginning of the month.

**Saturn** now rises at 9:30 pm and sits in the constellation of Virgo just above  $\eta$  Virginis. It shines at magnitude 0.7 at the beginning of the month and will show a 19" disk in the eyepiece. The rings start off the month tipped down at 4.5 degrees. Over the month, the rings will tip down to 3.6 degrees as the earth moves our vantage point a little closer to opposition. By the first week of March, Saturn will shine at magnitude 0.5 and the disk will expand to 19.5". Opposition will be in late March, so we will have two good planets to look forward to!

## Greek Mythology: Gemini the Twins by Michael Ward

*Geminus* is the Latin word for *twin*, and *gemini* is the plural. The Greeks knew them as the *Dioscuri*, which means *Zeus's boys* (not twins). [1] Like us, the Romans knew them as Castor and Pollux, the Greeks, Castor and Polydeuces. [2] They have two fathers, Zeus and Tyndareus, but one mother, Leda, wife of the latter. A peculiar situation, biologically speaking.

Zeus wished to sleep with the beautiful Leda, and seduced her in the guise of a swan. The same night, Leda lay with her husband. At length, Leda gave birth to twins, that is, two eggs, because Zeus was a swan at the time. [3] The Greeks thought a woman could be pregnant by two men at the same time. A set of twins emerged from each egg: Castor and Clytemnestra (from Tyndareus) and Helen and Pollux (from Zeus – the explanation for Helen's stunning beauty, incidentally).

There are numerous stories about Castor and Pollux, far too many to put in this article. Castor was famed as a horse tamer, Pollux an accomplished boxer. Together they were skilled cattle thieves. [4] Of the four, it is odd that only Pollux was immortal, although Helen, Castor and Clytemnestra [5] were exceptional in their own ways. Eventually Castor got to share his brother's immortality.

Castor and Pollux joined forces with two other brothers, Idas and Lynceus, for the purpose of cattle raiding. After the raid, a disagreement arose about how to divide the spoils. It got nasty, came to blows, and Castor and Lynceus died. Idas was blasted with a thunderbolt by Zeus. As Castor lay dying, mortally wounded, Pollux begged Zeus to allow him (Pollux) to die with his beloved brother. Zeus made an interesting arrangement for

**Sources:** Homer, *Iliad* 3.235f, *Odyssey* 11.298f; Hyginus *Astronomica* 22; Pindar, *Nemean Ode* 10; (Pseudo-Homer) *Homeric Hymn* 17, 33.

## President's Report by Sherry Campbell

Well it seems the weather is trying to cooperate with us this winter, in terms of temperature. I was able to get out observing in January. The skies were not that great at Blackfoot with the snow on the ground reflecting back up, but it was warm. Hopefully the temperatures will continue like this. The older I get, the less I am willing to observe in temperatures of -20.

If you are staying at home enjoying a night of armchair astronomy, why not check out the National RASC website. They now offer the choice of renewing your membership on-line. Just click on Membership, and on the left side bar there is a link called Apply/Renew RASC Membership. This link will take you to an on-line form. Just fill in the information, letting National know if you want electronic versions of the publications, and you can even make a donation to the RASC on this form. Much more convenient than remembering to mail in your application before National sends you several reminders, as is always my case.

**Roxy Garstad** has agreed to be our Archive Liaison this year. Her job is to archive all of the old minutes, financial reports and material a club of our size can generate. I know several of you probably have an old box full of paper from the RASC that you just don't know what to do with, but never wanted to throw it out. Now is the time to find that box again and get it archived. Right now Roxy is asking for anyone with material to contact her. She can be reached at garstadr at macewan.ca.

Once again it is time to spend some money! The deadline for

them: Pollux could share death with Castor, and Castor could share immortality with Pollux. They spend alternate days on Mount Olympus, and in the realm of Hades. [6] They were also placed among the stars by Zeus, being such an inspiring model of love and loyalty. [7] It is curious that while Pollux was immortal, Helen, apparently, was not.

[1] Shortened from *Dioskoroi*, the plural of *Dioskoros*, from *Dios* (an alternate form of Zeus) and *koros*, meaning *boy* or *lad* (Δίος, κόρος); Zeus's boys.

[2] I'll stick with Pollux, it being shorter and easier to remember, and spell.

[3] It made perfect sense to the Greeks.

[4] Stealing your neighbour's cattle was a common pastime, if the surviving stories have any truth to them.

[5] Famous for marrying Agamemnon, king of Mycenae and supreme commander of the Greeks in the Trojan War. Helen married Agamemnon's brother Menelaus, king of Sparta, whence she was lured to Troy by Paris.

[6] In the *Iliad* 3.235f, Helen wonders why her brothers are not with the Greek army; unknown to her, they are already "under the earth". Odysseus saw Leda in the underworld, *Odyssey* 11.298f.

[7] The Greeks, and other ancient peoples, saw no problem with this: they could be in more than one place. Likewise, part of Heracles was immortal and on Mount Olympus, and part of him was in the underworld, as Odysseus reports in the *Odyssey* 11.601f

the spring round of expenditures is the March general meeting, March 8<sup>th</sup>. Submissions of expenditures can be sent to either myself, Peter Hall at 780.hall at gmail.com or Sheldon Helbert at 7shelbert7 at gmail.com An expenditure form must be filled in completely. Expenditure forms are available on the website in the Downloads section. Anyone submitting an expenditure will be asked to do a presentation at the March Council meeting on March 22<sup>nd</sup> to Council detailing the expenditure and answering any questions Council may have. Council will be devoting the March Council meeting to expenditures only, which means the expenditures will be presented and voted on at the same meeting.

I am very pleased to announce that our guest speaker for March will be **Dr. Alan Hildebrandt**. Murray Paulson was kind enough to arrange for Alan to come up to Edmonton. Alan will be talking about his speciality, meteorites, and no doubt talking about his experiences with the Buzzard Coulee meteorite fall. We will be having a dinner for Alan at Tony Roma's at Westmount Mall right before the meeting. You are more than welcome to join us for an informal discussion over dinner. If you would like to attend, please let me know so I know how many to make the reservation for.

Until then, clear skies, and let's hope we don't get our usual March deep freeze. I would like to get out observing at Blackfoot in March since it's galaxy season!

The International Year of Astronomy 2009 (IYA) was a global celebration of astronomy and its contributions to society and culture. It marked the 400th anniversary of the first use of an astronomical telescope by Galileo Galilei and the first two laws of planetary motion by Johannes Kepler. The aim of the IYA was to stimulate worldwide interest, especially among young people, in astronomy and science under the central theme "The Universe, Yours to Discover". The Royal Astronomical Society of Canada worked with the Canadian Astronomical Society and the Federation des Astronomes Amateurs du Quebec to develop Canadian IYA activities.

The RASC Edmonton Centre, and its astronomy partners including Telus World of Science Edmonton, University of Alberta, MacEwan College, Beaver Hills Dark Sky Preserve, and Cosmic Journey, delivered over 250 astronomy events in the Edmonton area. The events included star parties, public lectures, sidewalk astronomy, observing nights, raising public awareness, and helping science teachers teach astronomy. These events were attended by some 25,000 people over the year, helping to achieve the national goal of 1 million Canadians experiencing a Galileo Moment - an engaging astronomy experience. What follows are highlights of the IYA events in Edmonton and area.

Throughout the year: Volunteers at the Telus World of Science Observing Deck and the University of Alberta's Campus Observatory offered over 7500 visitors views of many astronomical objects through a wide variety of optical instruments. Groups of sidewalk astronomers brought astronomy to the streets by setting up telescopes on sidewalks and offering passersby that chance to experience with their own eyes some of the marvellous objects in the heavens. Over 1300 people enjoyed views of the big three - Moon, Saturn, and Jupiter - in various locations including Fort Saskatchewan, The Promenade in Edmonton, Windsor Park Community League and Aspen Gardens Community League. RASC Edmonton Centre members delivered over 25 public talks to over 2200 people at schools, libraries, museums, and parks all around Edmonton and even as far away as Ft. McMurray and Yellowknife. The RASC Edmonton Centre held 10 meetings, all open to the public that included invited speakers giving presentations on astronomy topics.

The IYA began with three kickoff events. Sherwood Park was among the first to bring in IYA with their 2008 New Year's Eve Celebrations. Astronomy partner Cosmic Journey made an IYA ice sculpture for the event. The IYA was officially kicked-off on January 10 at the Telus World of Science Edmonton with a media event, astronomy presentations, telescope displays, and observing at the TWOSE Observatory. Galileo himself made a surprise visit and welcomed the attendees. The Woodcroft Library hosted a month-long IYA display in January prepared by the RASC.

Edmonton's first-annual Winterlight Festival included two star parties, February 28 at Elk Island National Park and March 7 at Coronation Park. These were exceptional opportunities for about 1000 people to sky gaze with local astronomers, enjoy talks by celestial experts, enjoy family-friendly adventures stories, and participate in lantern parades and moonlight serenades.

Spring-time brought the popular annual events in which the RASC showcases the night sky to the public. Earth Hour (March 28), International Sidewalk Astronomy Night (April 3-4) and International Astronomy Day (May 2) offered Galileo Moments to over 900 people. An additional event for IYA was the 100 Hours of Astronomy Marathon, produced by Cosmic Journey, at the Strathcona Wilderness Centre (April 2-5) which included open forum discussions on astronomy, astronomy webcasts from around the world, local artists capturing twilight and the dark sky on canvas, public viewing through telescopes, astronomy workshops and talks (about 500 people participated).

On May 8-9, the Edmonton Symphony Orchestra performed "A Space Odyssey", three magnificent orchestra showcases compiled into one unforgettable evening of music that celebrated the heavenly bodies. NASA images and video were projected during the performance. The RASC was there with a display and telescopes. On the second night the skies cleared and concert-goers were treated to live views of Saturn after having just heard Holst's *The Planets*.

On July 18 astronomy was a central theme of Parks Day events hosted by Pigeon Lake and Miquelon Lake Provincial Parks. Some 500 people took part in solar observing or attending an astronomy-themed musical presentation. As with most events throughout the year, much IYA promotional material was handed out, including trading cards, star finders, children's books and more.

Elk Island National Park hosted the third anniversary of the Beaver Hills Dark Sky Preserve with the Party Under the Stars on September 6. About 500 people listened to talks on preserving the night sky, scotobiology, and astronomy topics, joined in story-telling sessions and constellation walks, and observed under dark skies, courtesy of RASC Edmonton Centre member telescopes. The keynote speaker was Pete Strasser, Managing Director of the International Dark-Sky Association (IDA).

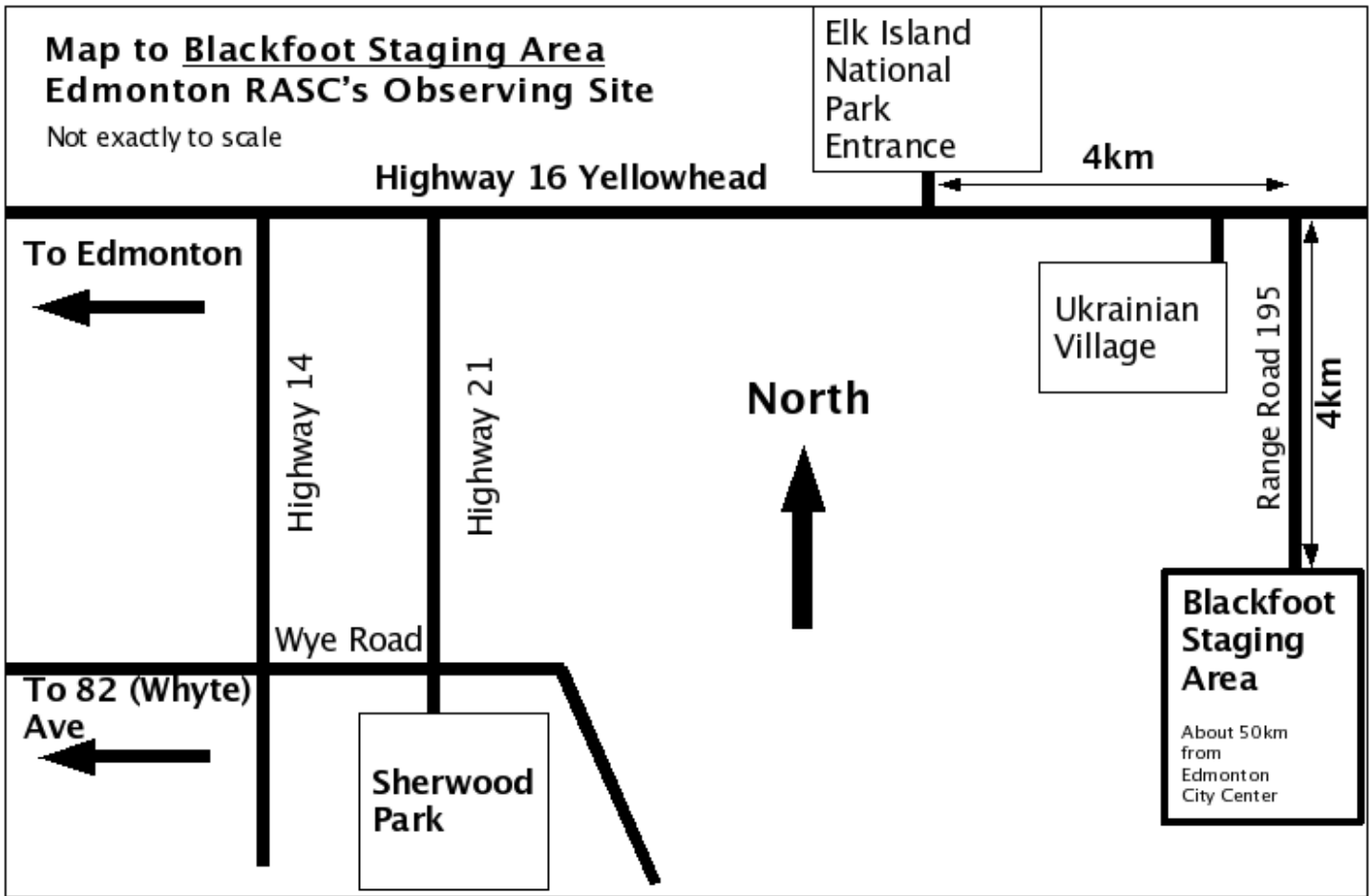
Edmonton was fortunate to be accepted for a Galileo Lecture during IYA. On September 16, Dr. Laura Ferrarese, from the Herzberg Institute of Astrophysics, gave a public lecture at MacEwan College titled "Black Holes: A Ninety-Year Journey", to over 200 people.

In September, the RASC Edmonton Centre was pleased to donate Galileoscope telescope kits to all Grade 9 Science teachers in Edmonton. The Galileoscope is an easy-to-assemble and easy-to-use telescope that can be used by teachers in delivering the astronomy portion of the science curriculum. This simple telescope kit enables people to build and observe with a telescope that is similar to Galileo's.

IYA closed out with two observing sessions marking the 400th anniversaries of Galileo's first lunar sketch on November 30, and of his discovery of the satellites of Jupiter on January 7, 2010. Full details of the IYA in Edmonton may be found on the web at

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

I'd like to thank the large number of volunteers for making IYA such a success, and a special thank you to those on the local IYA committee and our astronomy partners. We should all be very proud of what we accomplished together.



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