

# POLARIS



## Royal Astronomical Society of Canada London Centre Newsletter December 2015

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### Why join a club? Why join RASC?

Patrick Whelan

To be or not to be. That is the question.  
To be what you ask? To be a member of the Royal  
Astronomical Society of Canada of course!

There are many reasons to join the club. You may have read or heard that memberships in clubs are diminishing. I have read and experienced that same thing. I used to be president of the London Users of ST computers club. (LUST: interesting acronym) As the years went on we experienced smaller memberships. It may have been due to the ST computer having old technology while other computers kept advancing. But it also seemed as though people just weren't joining other clubs either.

Was this because of computers themselves? Did computers and the internet keep people from joining clubs? Perhaps so. Television, computers, the internet and video gaming have certainly created a society of couch potatoes. People sit staring at a screen and all the exercise they get is moving a mouse or twiddling their fingers. (or thumbs) Telephones are ubiquitous in every house and pressed up against everyone's ear or with fingers twiddling away texting.

Clubs give something more than a 'virtual' space. They give real space. They have real people with similar interests. For all you young ones out there, this is how a club works.

First you have to get up and go somewhere. Not just anywhere, you have to go to the meeting place where everyone else is going. For us that place is in Fanshawe College in room B1073. You have to arrive on the right day at the right time. It isn't like the internet at all in this respect. I know the internet has clubs too like: Facebook or forums for motorcycles or Mercedes Benz cars or even astronomy but they are all 'virtual'.

When you get to the meeting there are all kinds of other people there too. You can shake hands and look people in the eye and talk with them.

Our hobby usually entails using physical things. This normally means telescopes but it can also mean binoculars or cameras or just your eyes. We can observe the stars, planets, deep sky objects (like galaxies or star clusters or nebula) or the sun or the moon.

Being in the club means you can experience other people's telescopes by going out in the evening with them and having them show you the sky and how their telescope works. We go out to Fingal on dark nights and other people are very welcome to join us.

I was just thinking of the first invention that created a virtual feeling. It was the telephone. You can talk to someone, but they are not really there, they are somewhere else. We take it for granted because telephones have been around for so long. The telephone was the beginning of virtual reality.

I am all for technology but humans are 'zoon politikon'. We are social animals. I really believe we need to have human contact not just virtual contact. We need to be in the presence of other people and joining a club does just that.

When you join our club you get to talk to people with years or even decades of experience in astronomy. You can try out our telescopes and even rent (at very low cost) one of our loaner telescopes! Our members can help you decide on which telescope may be best for you. Or they can help you buy one for someone else. We can help you observe the sky, explain the sky and have a lot of fun doing it. We are real people, we are passionate about our hobby and we love to show it off for others.

So get off the couch and join us for a meeting!  
You will be glad you did.

## Moon Phases



December 18 2015



December 25 2015



January 2 2016



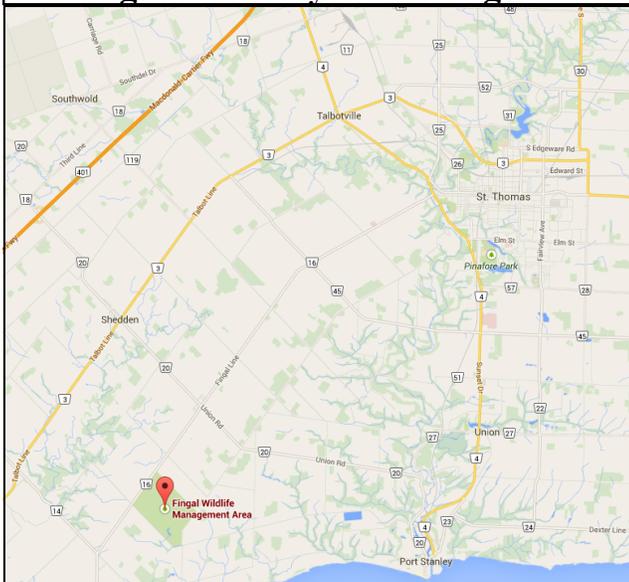
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## December Meeting

We have no scheduled speaker  
for this meeting.

Perhaps one of our members will give a  
presentation for us.

## Fingal Dark Sky Observing Site



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London RASC Website: <http://www.rasclondon.ca/>

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The ESA sent tardigrades into space in a mission they called Tardigrades in Space. For 12 days in September 2007, some 3000 water bears hitched a ride into space on ESA's orbital Foton-M3 mission. They shortened the mission name to **TARDIS!** Any Dr. Who fans present?

## Sky Events for Late December and early January

Dec 20 Uranus 1.2 N of Moon  
 Dec 21 Solstice  
 Dec 23 Aldebaran 0.6 S of Moon, occultation for east coast  
 Dec 29 Mercury greatest elongation E  
 Dec 31 Jupiter 1.5 N of Moon  
 Jan 3 Mars 1.5 S of Moon  
 Jan 4 Quadrantid meteors peak  
 Jan 7 Venus 3 S of Moon  
 Jan 7 Saturn 3 S of Moon  
 Jan 9 Venus 0.1 N of Saturn



Mercury well placed in the evening sky  
 Venus shining brightly before the rising Sun  
 Mars rises around 2:00am  
 Jupiter rises in the east in late evening  
 Saturn is in the dawn sky  
 Uranus well placed in the evening sky in Pisces  
 Neptune in the western sky in Aquarius setting in late evening



### R.A.S.C. London Centre Library Books of the Month December 2015 By Robert Duff

As always, these “Books of the Month” are available for loan to members, to be returned at the following monthly meeting. The books for December 2015 are as follows:

Foundations of Astronomy, by Michael A. Seeds. – 7th Edition, c2003.

365 Starry Nights: an Introduction to Astronomy for Every Night of the Year, text and illustrations by Chet Raymo. c1982.

Universe on a T-shirt: the Quest for the Theory of Everything, by Dan Falk. c2002.

For a complete listing of our library collection please go to the Main Menu on the left side of the RASC London Centre Web site main page and click on Club Library: <http://www.rasclondon.ca/index.php/library-and-rentals>

If there is a particular book or video you wish to borrow, please feel free to contact me by telephone at (519) 439-7504 or by e-mail at [rduff@sympatico.ca](mailto:rduff@sympatico.ca)

#### **Cronyn Observatory Exploring the Stars Events & Public Night, November 16th—December 1st, 2015** By Robert Duff

#### **Exploring the Stars, English Conversation Program Group, November 16th, 2015**

Clear hazy skies greeted 7 visitors from the English Conversation Program (ECP) for an evening of Exploring the Stars at Western University’s Cronyn Observatory, Monday, November 16th, 2015, 7:00 p.m. Graduate student Tony Martinez made a brief presentation of the digital slide presentation “Our Solar System” and then showed them stars and constellations with the software “Stellarium.” Tony followed this with the activity “Kitchen Comet,” inviting the visitors to the table set

up at the front of the lecture room where he made a comet from dry ice and other materials.

RASC London Centre member Bob Duff directed the big 25.4cm refractor (32mm Erfle eyepiece, 137X) in the dome towards the 5-day-past-new crescent Moon. He also set up the 25.4cm Dobsonian (17mm Nagler eyepiece, 66X) on the roof patio outside the dome. When everybody arrived upstairs in the dome, Bob gave a brief talk about the Cronyn Observatory and the big 25.4cm refractor, and explained the Standard and Sidereal Time clocks on the east wall. Tony showed the visitors the Moon through the big 25.4cm refractor (32mm Erfle eyepiece, 137X) and Bob showed them the yellow and blue double star Albireo in the 25.4cm Dobsonian (17mm Nagler eyepiece, 66X). Tony gave them a sky tour, pointing out the Pleiades and the Summer Triangle stars, Vega, Deneb and Al-

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tair. Bob then showed the visitors the Pleiades through the 25.4cm Dobsonian (17mm Nagler eyepiece, 66X).

When the group was back downstairs in the lecture room, Tony distributed 7 "Star Finder" planspheres, explaining how to use them and, with Bob's assistance, helping everybody assemble them with transparent adhesive tape. The visitors were gone by 9:00 p.m. after a very enjoyable evening of astronomy.

### **Exploring the Stars, 1st Salford Cubs, November 23rd, 2015**

Mostly cloudy skies with some hazy clearing later in the evening greeted 41 visitors (21 children and 20 adults) from the 1st Salford Cubs for Exploring the Stars at Western University's Cronyn Observatory, Monday, November 23rd, 2015, 6:30 p.m. Graduate student Dilini Subasinghe presented the digital slide presentation "Cub Scout Astronomy Badge" and fielded questions. Dilini followed this with the activity "Constellations" distributing 40 "Star Finder" planspheres to the group and helping everybody assemble them with transparent adhesive tape. She then showed them the slide "Reading a Star Finder," followed by 3 constellations slides, to help them practice using the planspheres.

RASC London Centre member Bob Duff made ready the big 25.4cm refractor in the dome and set up the London Centre's 25.4cm Dobsonian on the roof patio and directed both telescopes towards the 2-day-prior-to-full gibbous Moon. When everybody arrived upstairs in the dome, Bob gave a brief talk on the history of the Cronyn Observatory and some technical aspects of the big 25.4cm refractor. He then began showing visitors the Moon through the 25.4cm refractor (32mm Erfle eyepiece, 137X). Dilini soon arrived in the dome and took over supervising as the visitors viewing the Moon through the 25.4cm refractor. Bob advised everybody to split into 2 groups, with one group going outside to view through the 25.4cm Dobsonian and eventually both groups had the opportunity to view through each telescope. Bob supervised as visitors viewed the Moon through the 25.4cm Dobsonian (17mm Nagler eyepiece, 66X) on the roof patio.

Several adult visitors asked Dilini about the Standard and Sidereal Time clocks on the east wall. The Moon appeared in and out of the clouds until the clouds mostly cleared later in the evening for a reasonably good view. Everybody was gone by around 7:55 p.m. after a very enjoyable evening of astronomy.

### **Exploring the Stars, Private Group, November 25th, 2015**

Partly cloudy skies greeted 9 visitors (8 adults and 1 child) of a private group for a birthday celebration with an evening of Exploring the Stars at Western University's Cronyn Observatory, Wednesday, November 25th, 2015, 6:30 p.m. Graduate student Tony Martinez presented the digital slide presentation "Big Bang" and fielded questions. Tony followed this with the activity "Constellations," distributing 8 "Star Finder" planspheres and showing everybody how to assemble and use them.

When everybody arrived upstairs in the dome, RASC London Centre member Paul Kerans gave a talk about the history of the

Cronyn Observatory and explained the difference between a reflector and refractor telescope, pointing out the Schmidt camera piggy-backed on the big 25.4cm refractor. Tony directed the 25.4cm refractor (28mm Meade Super Wide Angle eyepiece, 157X) towards the full Moon and supervised as visitors viewed the Moon through the big telescope. On the roof patio outside the dome Paul showed the visitors the London Centre's 25.4cm Dobsonian reflector telescope and explained how it worked. Paul showed them the Moon and then the Owl Cluster (NGC457) through the 25.4cm Dobsonian (17mm Nagler eyepiece, 66X). Paul showed them an iron meteorite he had brought and there were 6 "Getting Started in Astronomy" (RASC, SkyNews [2015]) pamphlets distributed. The event was over by around 8:30 p.m. after a very enjoyable evening of astronomy.

### **Exploring the Stars, Laureate Epsilon Beta Chapter of Beta Sigma Phi International, November 26th, 2015**

Mostly cloudy skies greeted 12 visitors from the Laureate Epsilon Chapter of Beta Sigma Phi International for Exploring the Stars at Western University's Cronyn Observatory, Thursday, November 26th, 2015, 7:00 p.m. Graduate student Shannon Hicks presented the digital slide presentation "Our Solar System" and fielded questions.

RASC London Centre was represented by Dale Armstrong, Peter Jedicke, Tricia Colvin and Mark Tovey. When everybody arrived upstairs in the dome, Peter and Dale talked about the history, design and construction of the big 25.4cm refractor (including the Schmidt camera and Cassegrain reflector piggy-backed on the 25.4cm refractor) and the Observatory. There was one star seen in a tiny break in the clouds, which Dale thought was Aldebaran. Dale set up the Observatory's 8-inch (20.3cm) Meade Schmidt-Cassegrain (26mm Plossl eyepiece, 77X) and directed it towards the lights on the communications tower in south London. One or two people also got a brief glimpse of the one-day-past-full gibbous Moon in the Schmidt-Cassegrain through an opening in the clouds. Peter distributed 8 or 9 copies of the pamphlet "Getting Started in Astronomy" (RASC, SkyNews [2015]) to interested visitors. Everybody was gone by around 9:00 p.m. after an interesting and enjoyable evening of astronomy.

### **Cronyn Observatory Public Night, Saturday, November 28th, 2015**

Clear skies greeted some 75 visitors to Western University's Cronyn Observatory Public Night, Saturday, November 28th, 2015, 7:00 p.m. Graduate student Dilini Subasinghe made 2 presentations of the digital slide presentation "Mercury and Venus" and fielded questions.

RASC London Centre was represented by Dale Armstrong, Bob Duff, Tricia Colvin, Mark Tovey, Paul Kerans, Peter Jedicke and Steve Gauthier. London Centre member Richard Gibbens listened to the slide lecture. When people arrived in the dome Peter Jedicke gave a brief talk mentioning that this year the Cronyn Observatory celebrated the 75th Anniversary of its official opening, October 25th, 1940. Peter also explained some of the technical aspects of the big 25.4cm refractor.

### Exploring the Stars, Kirkton Guides, December 1st, 2015

Graduate student Tony Martinez was telescope operator for the evening with some assistance from RASC London Centre members Steve Gauthier and Tricia Colvin. Tony showed visitors the Ring Nebula (M57) in the big 25.4cm refractor, using the 52mm Erfle (84X) eyepiece and later swapped in the 32mm Erfle eyepiece (137X) for a better view. Tony later showed visitors the yellow and blue double star Albireo in the 25.4cm refractor (52mm Erfle eyepiece, 84X).

On the roof patio outside the dome Dale Armstrong operated the Observatory's 8-inch (20.3cm) Meade 2080/LX3 Schmidt-Cassegrain, showing visitors globular cluster M15, using the 15mm Sky-Watcher UltraWide eyepiece (133X); and the 3-day-past-full gibbous Moon and the Andromeda Galaxy (M31), using the 26mm Plossl (77X) eyepiece. He also showed them the orange and blue double-star Gamma Andromedae in the 8-inch (20.3cm) Schmidt-Cassegrain.

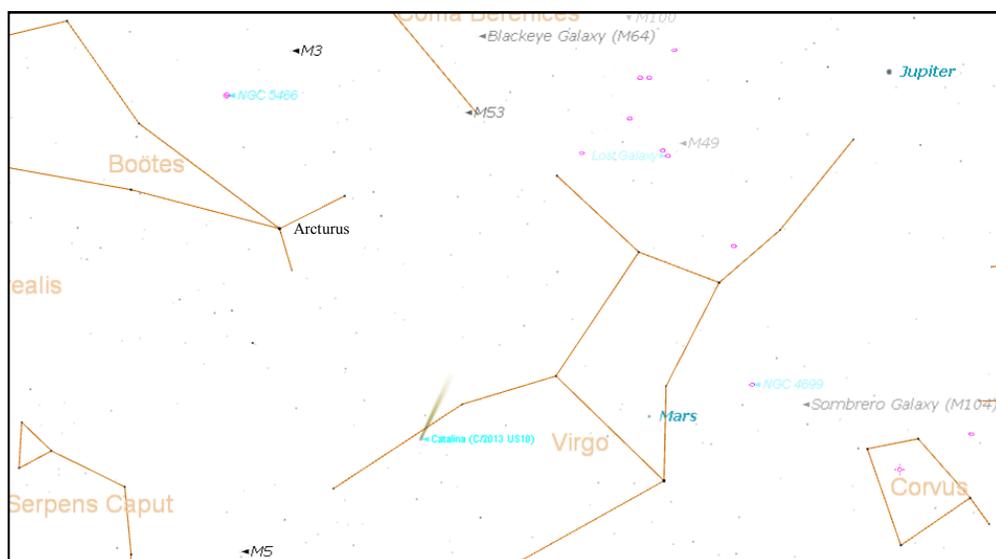
Paul Kerans showed visitors M31, the Owl Cluster (NGC457), the Moon, the Orion Nebula (M42) and the Pleiades in the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X). Paul also brought his own 31mm (36X) and 21mm (53X) Ethos eyepieces. Undergraduate student William Hyland set up his 8-inch (20.3cm) Orion SkyQuest XT8 Dobsonian and showed visitors Albireo, the Pleiades, M31 and M42. William used Paul's 21mm Ethos eyepiece (57X) as well as his own 25mm eyepiece (48X) in his 8-inch (20.3cm) Dobsonian.

There were at least 20 people in the audience when Dilini presented the slide presentation a second time at 8:05 p.m. There were an estimated 75 visitors for the evening. There were some 57 "Getting Started in Astronomy" (RASC, SkyNews [2015]) pamphlets and 2 "Secrets of the Night Sky" (CSA) posters distributed to interested visitors. The Observatory began closing down around 9:00 p.m. after a very successful evening of astronomy.

Cloudy rainy skies greeted 33 visitors, including 19 children (17 girls and 2 boys) and 14 adults (including 2 leaders) and not including one infant, from the Kirkton Guides for Exploring the Stars at Western University's Cronyn Observatory, Tuesday, December 1st, 2015, 6:00 p.m. Graduate student Kendra Kellogg presented the digital slide presentation "Girl Guide Astronomy Badge" and fielded questions. Kendra followed this with 2 activities, including the "Constellations" and "Crater Experiment" activities, since rainy weather ruled out telescope observing. She distributed 25 "Star Finder" planispheres for the "Constellations" activity to all the children, 2 leaders and several parents, and showed them how to assemble and use them. For the "Crater Experiment" activity she invited the children to the table set up at the front of the lecture room and had them take turns dropping various size balls into a pan of flour topped with chocolate powder.

RASC London Centre was represented by Paul Kerans, Charlene Kerans and Everett Clark. Paul made a short presentation on the iron nickel meteorite he had brought along with specimens of Mars and Moon rocks in 2 small display cases. Paul and Kendra answered many questions.

When everybody arrived upstairs in the dome Paul gave a talk about the history of the Cronyn Observatory and some technical aspects of the big 25.4cm refractor and the difference between a reflector and refractor telescope. Paul set up the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X) inside the dome so as to view out the door and showed the visitors the wind turbine on the Engineering building. There were 10 "Getting Started in Astronomy" (RASC, SkyNews [2015]) pamphlets distributed to interested visitors. Paul also handed out 2 "Moon Gazers' Guide" cards. Charlene and Everett (who was at the computer in the dome) helped with questions. The visitors were gone by around 8:00 after a very enjoyable evening learning about astronomy even though the dome was not opened because of the weather.



Comet Catalina is now visible. The chart at left is for 7:00am Dec 18th. Jupiter and Mars will both be very bright in the sky. The comet is moving up and to the left every night. On January 1 it is right beside Arcturus.