

# POLARIS



## Royal Astronomical Society of Canada London Centre Newsletter June 2016

### Mythology and Facts of Mercury (Hermes to the Greeks)

Patrick Whelan

#### The Innermost Planet and Ancient Roman/Greek God

Mercury, the fleet footed messenger with wings on his shoes and his hat, was called Hermes by the ancient Greek. Mercury was observed by the ancients as being the fastest planet, and so it was named after the winged god. In fact the Greeks had named the planet twice! Since the planet was visible at dawn sometimes and other times at dusk, they thought it was two different planets! It was named Apollo for the evening appearances and Hermes for the morning appearances.

Mercury's name is the origin for the word 'mercredi' which is French for Wednesday. It comes from the Latin 'Mercurii dies', or Mercury's day.

Hermes was the son of Zeus and Maia. Zeus was the king of the gods and Maia was goddess of clouds and one of the Pleiades, the seven daughters of Atlas. The month of May is named after Maia. Mercury was a major god of trade, profit and commerce. Mercury has influenced the name of a number of things in a variety of scientific fields, such as the planet Mercury, the element mercury, and the plant mercury. The word mercurial is commonly used to refer to something or someone erratic, volatile or unstable, derived from Mercury's swift flights from place to place.

Mercury had a major festival associated with him. It was called the Mercuralia and was held on May 15.

Observing Mercury can be a challenge. It is the closest planet to the sun and because of this can only be observed near sunset and sunrise. Consult the 2007 Observer's handbook for dates that are the best for observing Mercury. In our northern latitudes it is even harder to see Mercury! On November 8, 2006 Mercury made a rare transit across the sun. Many people (not the author) were able to observe this. Mercury will transit the Sun next in 2016.

#### Spacecraft that have visited Mercury

Mariner 10 was the first spacecraft to have any flybys of the planet. It visited the planet three times: February and September in 1974 and March in 1975. It only saw about 45% of the planet surface. There was some speculation that ice sheets may exist in craters near the north and south poles which have never seen sunlight.

The only other spacecraft to visit the Mercury was NASA's Messenger. (MErcury Surface, Space ENvironment, Geochemistry, and Ranging). It was launched August 3, 2004 and began orbiting Mercury March 2011. This was a mapping mission and Messenger took its final image on April 30, 2015. The mission was initially only to be one year, and it lasted four. Among its many accomplishments, the MESSENGER mission determined Mercury's surface composition, revealed its geological history, discovered its internal magnetic field is offset from the planet's center, and verified its polar deposits are dominantly water ice.

Europe has one mission scheduled to go to Mercury: BepiColombo. It is an ion propelled mission scheduled to launch 2017 and arrive at Mercury in January 2024. The two components of the mission are called the Mercury Planetary Orbiter (MPO) and the Mercury Magnetospheric Orbiter (MMO).



#### Planet Facts

Discoverer: prehistoric  
Moons: none  
Diameter: 4,879KM  
Orbital period: 88 days  
Rotational Period: 58.65 days  
Day Length: 175.4 days  
Orbital Velocity: 48 +/-11 km/s  
Inclination: 2 degrees  
Max diameter: 13 arcsec  
Min diameter: 4.5 arcsec  
Max Magnitude: -1.9  
Daytime temp: 420 C  
Nighttime temp: -180 C

## Moon Phases



April 14 2016



April 22 2016



April 30 2016



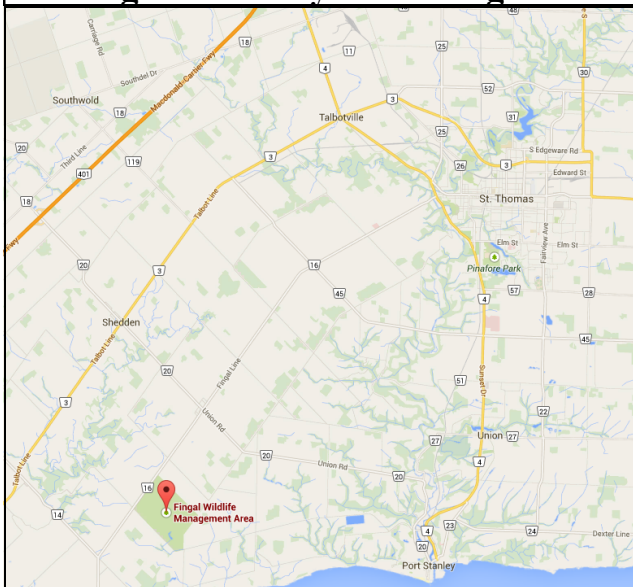
May 6 2016

## April Meeting

Are you ready for the May 9  
Mercury transit?

Are you ready for the RASC GA  
and AstroCATS?

## Fingal Dark Sky Observing Site



## London Centre Executive

### President

Rick Saunders  
email: ozzy (at) bell.net

### Vice-President and Newsletter Editor

Patrick Whelan  
email: ratman (at) rocketmail.com

### Treasurer

Bill Gardner  
email: gardner.w (at) rogers.com

### Secretary

Everett Clark  
email: Secretary (at) rasclondon.ca

### National Representative

Peter Jedicke  
email: PJedicke (at) fanshawec.ca

### Observer's Chair

Dale Armstrong  
email: observing (at) rasclondon.ca

### Honorary President and once National President

Peter Jedicke  
email: PJedicke (at) fanshawec.ca

### Past President

Public Outreach Coordinator  
Dave McCarter  
email: dmccarter (at) sympatico.ca

### Higher Education Liaison and Librarian

Robert Duff  
email: rduff (at) sympatico.ca

### ATM Chair

Mike Hanes  
email: subareau (at) gmail.com

### Observatory Committee Chair

Pete Raine  
observatory@rasclondon.ca

### Councilor at Large

John Rousom  
councilor2@rasclondon.ca

### System Administrator

Jeff Harrison  
admin@rasclondon.ca

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

The first mission of the ExoMars program, launched on March 14th 2016 and scheduled to arrive at Mars in October 2016, consists of a Trace Gas Orbiter plus an entry, descent and landing demonstrator module, known as Schiaparelli. The main objectives of this mission are to search for evidence of methane and other trace atmospheric gases.

## Sky Events for Late April and early May

April 18 Mercury greatest elongation E  
 April 25 Moon Saturn Mars Antares in group  
 April 27 Juno at opposition  
 May 6 Large tides  
 May 7 Double shadow transit on Jupiter  
 May 8 Aldeberan 0.5 S of Moon  
 May 9 **Transit of Mercury**  
 May 15 Jupiter 2.0 N of Moon



May 19-23 RASC General Assembly and AstroCATS in London  
 For more see: [rasc.ca/ga](http://rasc.ca/ga) or [astrocats.ca](http://astrocats.ca)

Mercury well placed in the evening sky  
 Venus still bright in the dawn sky  
 Mars spends most of the month in Ophiuchus  
 Jupiter well placed in evening sky  
 Saturn retrograding in Ophiuchus, rising in late evening  
 Uranus in conjunction with Sun, reappears in mid May  
 Neptune in eastern dawn sky in Aquarius



### R.A.S.C. London Centre Library Books of the Month April 2016 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 April 2016 are as follows:

The Science of Shakespeare: A New Look at the Playwright’s Universe, by Dan Falk. c2014

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

In Search of Time: Journeys Along a Curious Dimension, by Dan Falk. c2008.

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/joomla34/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 Nights, March 21st—April 9th, 2016**

**By Robert Duff**

#### **Exploring the Stars, 10th London Sparks & Brownies, March 21st, 2016**

Clear skies greeted 29 visitors (14 children and 15 adults) from the 10th London Sparks and Brownies for Exploring the Stars at Western University’s Cronyn Observatory, Monday, March 21st, 2016, 6:00 p.m. Graduate student Kendra Kellogg made

the digital slide presentation “Sparks and Brownies Astronomy Badge” and fielded questions. Kendra followed this with the activity “Kitchen Comet,” making a comet from dry ice and other materials on a table set up at the front of the lecture room.

RASC London Centre was represented by Everett Clark and Paul Kerans, with Bob Duff arriving later around 7:27 p.m. When everybody arrived upstairs in the dome, Paul gave a brief talk on some of the history of the Cronyn Observatory and explained how the big 25.4cm refractor in the dome and the London Centre’s 25.4cm Dobsonian reflector telescopes worked. He also pointed out the Schmidt camera and Casse-

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grain reflector telescope piggy-backed on the big 25.4cm refractor.

Everett directed the big 25.4cm refractor (28mm Meade Super Wide Angle eyepiece, 157X) towards the 2-day-prior-to-full gibbous Moon in the eastern sky. Kendra sat down at the top of the observing ladder and supervised as children and adults climbed the steps to view the Moon through the big 25.4cm refractor. On the roof patio outside the dome Paul showed the visitors the Moon and later Jupiter through the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X). The visitors were gone by around 8:00 p.m. after an enjoyable evening of astronomy.

### **Exploring the Stars, Best Buddies at King's, March 22nd, 2016**

Cloudy skies with occasional rain greeted 16 visitors from Best Buddies at King's College for Exploring the Stars at Western University's Cronyn Observatory, Tuesday, March 22nd, 2016, 6:00 p.m. Graduate student Shannon Hicks presented the digital slide presentation "Constellations" and followed this with the "Constellations Activity," distributing 16 "Star Finder" planispheres. She then showed the visitors the slide "Reading a Star Finder" followed by several constellations slides from the astronomy software program "Stellarium" to help them learn how to use the planispheres.

RASC London Centre was represented by Everett Clark and Paul Kerans, later joined around 6:45 p.m. by Bob Duff. When everybody arrived upstairs in the dome, Shannon gave a talk on the some of the technical aspects of the big 25.4cm refractor. Everett helped Shannon open the dome and direct the big 25.4cm refractor (32mm Erfle eyepiece, 137X) towards the communications tower in south London. Shannon sat down at the top of the observing ladder and supervised as visitors climbed the steps to view of the lights on the communications tower through the big 25.4cm refractor. Shannon also explained the Standard and Sidereal Time clocks on the east wall.

Bob supervised as visitors viewed the wind turbine on the Engineering building through the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X), set up just inside the dome door to the roof patio to avoid any rain showers. Paul showed visitors views of the Western Student Recreation Centre through his Nikon 10 X 50mm binoculars on an Orion Parallelogram Mount and tripod set up on the roof patio. Paul also showed the visitors 2 meteorites that he had brought including a stony-iron and an iron / nickel meteorite.

Shannon took the group back downstairs and showed them a second slide presentation, "Our Solar System," and fielded questions. The visitors were very appreciative and everybody was gone by around 8:00 p.m. after a very enjoyable evening learning about astronomy, despite the rainy weather.

### **Exploring the Stars, 1st St. Thomas Brownies, March 24th, 2016**

Cloudy skies and rain greeted 38 visitors (17 children and 21 adults) from the 1st St. Thomas Brownies for Exploring the Stars at Western University's Cronyn Observatory, Thursday, March 24th, 2016, 6:30 p.m. Graduate student Dilini Subasinghe made the digital slide presentation "Cub Scout Astronomy Badge" and fielded questions. Dilini followed this with the activity "Telescope Kits," with the children assembling simple telescopes from small reusable kits.

RASC London Centre was represented by Everett Clark and Paul Kerans. Since it was raining the dome remained closed. Everett and Paul cleared out and reorganized the old dark room, now used for telescope storage, and hauled out the donated Orion AstroView 6 (15cm, f/5) Newtonian equatorial reflector from its cardboard box. They found the 26mm Tele Vue Plossl eyepiece belonging to the most recently donated of the observatory's two 8-inch (20.3cm) Schmidt-Cassegrain telescopes. This eyepiece was installed in the London Centre's 25.4cm Dobsonian (26mm TeleVue Plossl eyepiece, 43X) which Everett set up just inside the dome door to the roof patio and directed towards the exhaust stack with the lightning rod on the Engineering building.

Everett set up the Orion AstroView 6 (15cm) Newtonian reflector (25mm eyepiece, 30X) on its equatorial mount right behind the 25.4cm Dobsonian so as to view out the dome door towards the Western Student Recreation Centre. Paul set up his Nikon 10 X 50mm binoculars on his Orion Parallelogram Mount and tripod behind the Orion 15cm Newtonian reflector and directed it towards the Western Student Recreation Centre. Everett also set up the 90mm Coronado H-Alpha Solar Telescope on its Sky-Watcher equatorial mount for display behind Paul's parallelogram mounted binoculars.

When the visitors arrived upstairs in the dome, Paul gave a talk on some of the history of the Cronyn Observatory and explained how the big 25.4cm refractor and the 25.4cm Dobsonian and the Orion 15cm Newtonian reflector telescopes worked. Also explained was how the 90mm Coronado H-Alpha solar telescope was used to view solar prominences and other features on the Sun's surface. The visitors enjoyed the views through the telescopes and Paul's binoculars and asked many questions. Everybody was gone by around 8:30 p.m. after a very enjoyable evening learning about astronomy and telescopes, despite the rainy weather.

### **Exploring the Stars, Private Group, March 28th, 2016**

Partly cloudy, later mostly clear skies, greeted 4 adult visitors of a private group for Exploring the Stars at Western University's Cronyn Observatory, Monday, March 28th, 2016, 7:00 p.m. Graduate student Shannon Hicks presented the digital slide presentation "Constellations" and fielded questions. Shannon followed this with the activity "Kitchen Comet," making a comet from dry ice and other materials on a table set up at the front of the lecture room.

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RASC London Centre was represented by Everett Clark, Paul Kerans and Bob Duff. Paul set up the London Centre's 25.4cm Dobsonian on the roof patio outside the dome, installing the 26mm Tele Vue Plossl eyepiece (43X) belonging to the most recently donated of the observatory's two 8-inch (20.3cm) Schmidt-Cassegrain telescopes. Paul also set up his Nikon 10 X 50mm binoculars on his Orion Parallelogram Mount and tripod. Everett set up the observatory's Orion AstroView 6 (15cm) Newtonian reflector (25mm Plossl eyepiece, 30X) on the Sky-Watcher EQ5 mount, used for the 90mm Coronado H-Alpha solar telescope.

Shannon, with some assistance from Bob, directed the big 25.4cm refractor (32mm Erfle eyepiece, 137X) to show the visitors Jupiter, later swapping in the 28mm Meade Super Wide Angle eyepiece (157X) for a better view. Paul and Bob showed visitors Jupiter through the Orion AstroView 6 (15cm) Newtonian reflector, with the 10mm Plossl eyepiece (75X) swapped in for a very nice view. Visitors also viewed Jupiter and the Orion Nebula (M42) through the 25.4cm Dobsonian (26mm Tele Vue Plossl eyepiece, 43X).

Paul showed visitors 4 meteorites that he had brought including a stony-iron and an iron / nickel meteorite, as well as samples of Moon and Mars meteorites in small display cases. Paul also showed the visitors the sky charting software "Starry Night Pro" on the dome computer. Everett reported 4 "Star Finder" planispheres and 4 "Getting Started in Astronomy" (RASC, SkyNews [2015]) distributed to visitors. The visitors were gone by around 8:53 p.m. after a very enjoyable evening of astronomy.

### Cronyn Observatory Public Night, Tuesday, March 29th, 2016

Mostly clear skies greeted an estimated 120 visitors to Western University's Cronyn Observatory Public Night, Tuesday, March 29th, 2016, 7:00 p.m. This included 34 visitors from the 1st Strathroy Scouts (25 Scouts and 9 adults / leaders) who showed up early in the evening. The visitors were welcomed by graduate student Dilini Subasinghe and, since there was no slide presentation, were directed upstairs into the dome.

RASC London Centre was represented by Everett Clark, Paul Kerans, Steve Gauthier, Tricia Colvin, Mark Tovey and Bob

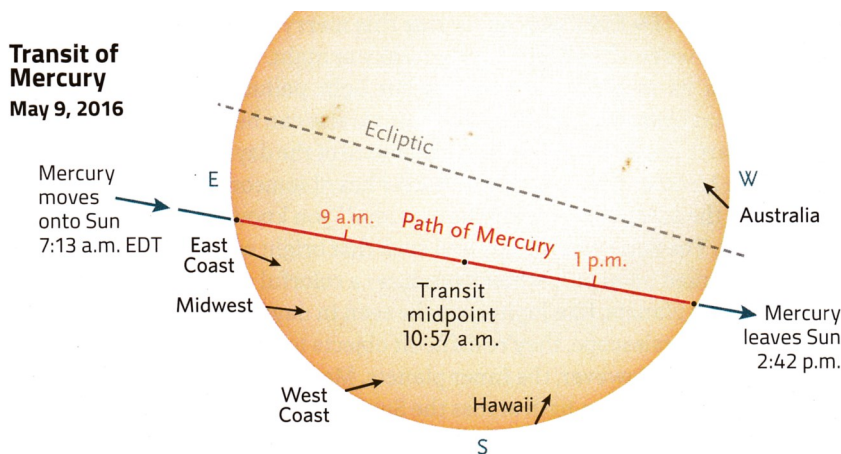
Duff. Graduate student Kendra Kellogg was telescope operator early in the evening and changed places with Dilini around 8:00 p.m. Kendra showed visitors the communications tower in south London through the big 25.4cm refractor (32mm Erfle eyepiece, 137X) and later Jupiter in the eastern sky, swapping in the 52mm Erfle eyepiece (84X) for a better view. When Dilini took over the 25.4cm refractor around 8:00 p.m., the 32mm Erfle eyepiece (137X) was reinstalled for a better view of Jupiter, now higher in the deepening twilight sky.

On the roof patio outside the dome, Steve showed visitors Jupiter through the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X), with Paul later took over and showing visitors Jupiter and the Orion Nebula (M42). Tricia and Mark and, later, Bob took turns showing visitors Jupiter through the observatory's 8-inch (20.3cm) Meade 2080/LX3 Schmidt-Cassegrain (26mm Plossl eyepiece, 77X). Bob swapped in the 12.5mm Ortho (160X) and then 20mm Plossl (100X) eyepieces to show visitors a higher magnification view of Jupiter through the 8-inch (20.3cm) Schmidt-Cassegrain telescope. Everett showed visitors Jupiter through the observatory's Orion AstroView 6 (15cm) Newtonian reflector (10mm Plossl eyepiece, 75X) set up on the Sky-Watcher EQ5 mount, used for the 90mm Coronado H-Alpha solar telescope.

Paul helped his young niece with her Celestron AstroMaster 70mm refractor (20mm eyepiece, 45X) eyepiece on its alt-azimuth mount, viewing Jupiter and M42. The visitors were mostly gone by around 9:00 p.m. after a very enjoyable evening of astronomy under mostly clear skies.

### Exploring the Stars, 2nd Strathroy Girl Guides, March 30th, 2016

Cloudy skies greeted 14 visitors, including 8 children and 6 adults (not including an infant and a small child), from the 2nd Strathroy Girl Guides for Exploring the Stars at Western University's Cronyn Observatory, Wednesday, March 30th, 2016, 6:30 p.m. Graduate student Laura Lenkic presented the digital slide presentation "Girl Guide Astronomy Badge" (title slide "The Basics") and fielded questions. Laura followed this with the activity "Telescope Kits," with the children assembling simple telescopes from small reusable kits.



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RASC London Centre was represented by Everett Clark, Paul Kerans and Bob Duff. Everett made ready the big 25.4cm refractor in the dome and, together with Paul, set up the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X) on the roof patio outside the dome. When everybody arrived upstairs in the dome, Bob gave a talk on the history of the Cronyn Observatory and some of the technical aspects of the big 25.4cm refractor, using his green laser pointer to indicate the 25.4cm objective lens and finderscopes. Bob used his green laser pointer to show them the Cassegrain reflector and Schmidt camera piggy-backed on the 25.4cm refractor and explained how a reflector telescope worked. Bob also explained the Standard and Sidereal Time clocks on the east wall.

Since cloudy skies ruled out celestial observing, Laura supervised from the top of the observing ladder as visitors climbed the steps to view of the lights on the communications tower in south London through the big 25.4cm refractor (28mm Meade Super Wide Angle eyepiece, 157X). On the roof patio Bob showed visitors the wind turbine on the roof of the Engineering building through the 25.4cm Dobsonian (17mm Nagler eyepiece, 66X). Inside the dome, Paul showed visitors his iron / nickel meteorite and samples of Moon and Mars meteorites in small display cases. The visitors were gone by around 8:20 p.m. after a very enjoyable evening learning about astronomy and telescopes, despite the cloudy sky.

#### **Exploring the Stars, Canadian Association for Girls in Science – London Chapter, March 31st, 2016**

Cloudy skies with rain later in the evening greeted 24 visitors (12 children and 12 adults) from the Canadian Association for Girls in Science – London Chapter, for Exploring the Stars at Western University's Cronyn Observatory, Thursday, March 31st, 2016, 6:00 p.m. The event began at 6:15 p.m. Graduate student Shannon Hicks presented the digital slide presentation "Girl Guide Astronomy Badge" (title slide "The Basics") and fielded questions. Shannon followed this with the activity "Kitchen Comet," inviting the visitors to the table set up at the front of the lecture room where she made a comet from dry ice and other materials.

RASC London Centre was represented by Everett Clark, Paul Kerans and Bob Duff. The dome remained closed since rain was expected. Everett set up the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X) on the roof patio, later moving it inside the dome to avoid impending rain. When everybody arrived upstairs in the dome, Bob gave a talk on the history of the Cronyn Observatory and technical aspects of the big 25.4cm refractor, using his green laser pointer to indicate the 25.4cm objective lens and finderscopes. Bob used his green laser pointer to show them the Cassegrain reflector and Schmidt camera piggy-backed on the 25.4cm refractor and explained how the 25.4cm Dobsonian reflector telescope worked. Bob also explained the Standard and Sidereal Time clocks on the east wall.

Bob supervised as the visitors viewed the wind turbine on the roof of the Engineering building through the 25.4cm Dobsonian

(17mm Nagler eyepiece, 66X), set up just inside the door to the roof patio. There were many good questions asked by the visitors. Shannon showed some of the girls and parents the "Starry Night Pro" software on the dome computer and talked about how to use it to locate stars and planets. Paul showed visitors 4 meteorites that he had brought including a stony-iron and an iron / nickel meteorite, as well as samples of Moon and Mars meteorites in small display cases.

The visitors were gone by around 8:08 p.m. after a very enjoyable evening learning about astronomy and telescopes, despite the cloudy sky.

#### **Exploring the Stars, 1st Seaforth Cubs and Scouts, April 4th, 2016**

Clear skies greeted 31 visitors (16 children and 15 adults / leaders) from the 1st Seaforth Cubs and Scouts for Exploring the Stars at Western University's Cronyn Observatory, Monday, April 4th, 2016, 7:00 p.m. Graduate student Kendra Kellogg made the digital slide presentation "Scouts and Cubs Astronomy Badge" and fielded questions. Kendra followed this with the activity "Crater Experiment," demonstrating how meteor craters are formed by dropping various size balls into a pan placed on the floor and filled with flour topped with chocolate powder. She invited the children to take turns making their own meteor craters by dropping balls into the pan of flour topped with chocolate powder.

RASC London Centre was represented by Everett Clark, Paul Kerans and Bob Duff. Everett set up the observatory's Orion AstroView 6 (15cm) Newtonian reflector (10mm Plossl eyepiece, 75X) with the Sky-Watcher EQ5 mount on the roof patio outside the dome. Everett also directed the big 25.4cm refractor in the dome towards Jupiter, high in the southeastern sky. When everybody arrived upstairs in the dome, Bob gave a talk on the history of the Cronyn Observatory and some of the technical aspects of the big 25.4cm refractor, using his green laser pointer to indicate the 25.4cm objective lens and finderscopes. Bob also used his green laser pointer to show them the Cassegrain reflector and Schmidt camera piggy-backed on the 25.4cm refractor and explained how a reflector telescope worked. Bob also explained the Standard and Sidereal Time clocks on the east wall.

Everett showed visitors Jupiter through the big 25.4cm refractor, beginning with the 52mm Erfle eyepiece (84X) and later the 32mm Erfle (137X) as seeing conditions improved. Everett also showed them the red giant star Betelgeuse through the 25.4cm refractor (32mm Erfle eyepiece, 137X). Paul took the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X) downstairs and set it up on the sidewalk on the south side of the Cronyn Observatory to show a boy in a wheelchair Jupiter. Paul then brought the 25.4cm Dobsonian back upstairs on to the roof patio where he showed visitors Jupiter, Betelgeuse and the Orion Nebula (M42). Paul also showed visitors Jupiter and M42 in the Orion AstroView 6 (15cm) Newtonian reflector (10mm Plossl eyepiece, 75X). Bob assisted showing several visitors M42 in the 25.4cm Dobsonian and later Jupiter in the Orion AstroView 6 (15cm) Newtonian reflector. Paul also showed the visitors his stony-iron meteorite and an iron / nickel meteorite, which he had brought

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with him. The visitors were mostly gone by around 9:00 p.m. after a very enjoyable evening of astronomy under clear skies.

### **Exploring the Stars, 2nd Lambeth Girl Guides, April 5th, 2016**

Clear skies with a few clouds greeted 17 visitors (12 children and 5 adults / leaders) from the 2nd Lambeth Girl Guides for Exploring the Stars at Western University's Cronyn Observatory, Tuesday, April 5th, 2016, 6:00 p.m. Graduate student Dilini Subasinghe presented the digital slide presentation "The Girl Guide Astronomy Badge" and fielded questions. Dilini followed this with the activity "Telescope Kits," with the children assembling simple telescopes from small reusable kits.

RASC London Centre was represented by Everett Clark and Bob Duff. Everett made ready the big 25.4cm refractor in the dome and set up the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X) on the dome roof patio, directing it towards the wind turbine on the Engineering building. When everybody arrived upstairs in the dome, Bob gave a talk on the history of the Cronyn Observatory and technical aspects of the big 25.4cm refractor, using his green laser pointer to indicate the 25.4cm objective lens and the finderscopes. Bob also used his green laser pointer to show them the Cassegrain reflector telescope and Schmidt camera piggy-backed on the 25.4cm refractor and briefly explained how they worked. Bob also explained the Standard and Sidereal Time clocks on the east wall.

Dilini began by showing the visitors the communications tower in south London through the big 25.4cm refractor (32mm Erfle eyepiece, 137X) and was later assisted by Everett in locating Jupiter in the bright eastern sky. They swapped in the 28mm Meade Super Wide Angle eyepiece (157X) to show the visitors an impressive view of Jupiter in the 25.4cm refractor. Bob showed the visitors the wind turbine on the Engineering building and later Jupiter through the 25.4cm Dobsonian (17mm Nagler eyepiece, 66X). Everybody was gone by a little after 8:00 p.m. after a very enjoyable early evening of astronomy and learning about telescopes.

### **Exploring the Stars, London District Catholic School Board, Grade-7 Enrichment Program, April 6th, 2016**

Cloudy skies and rain greeted students from the London District Catholic School Board, Grade-7 Enrichment Program, for Exploring the Stars at Western University's Cronyn Observatory, Wednesday, April 6th, 2016, 7:00 p.m. There were 37 visitors in all, including some 21 Grade-7 students and possibly other siblings, one teacher, 14 parents and one small child.

Graduate student Shannon Hicks presented the digital slide presentation "Extra Solar Planets" and fielded questions. Shannon followed this with the activity "Transit Demo," and invited everybody to the table at the front of the room where she had set up the "Transit Demo" model of an extra-solar planetary system

on a turntable with an electrically lighted "sun" in the middle. A photodiode was clamped to a laboratory stand and linked to a laptop computer, which displayed the dipping light curve as model planets of various sizes revolved around and in front of the lighted model sun. The lecture room was darkened with the lights turned off for this very impressive demonstration of how the transit detection method worked for finding extra-solar planets.

RASC London Centre was represented by Everett Clark, Paul Kerans and Bob Duff. Since it was raining, Paul set up the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X) just inside the dome door. Everett and Paul set up the observatory's 8-inch (20.3cm) Meade 2080/LX3 Schmidt-Cassegrain (20mm Plossl eyepiece, 100X) immediately behind the 25.4cm Dobsonian, followed by the Orion AstroView 6 (15cm) Newtonian reflector (25mm Plossl eyepiece, 30X), on its equatorial mount, and the 90mm Coronado H-Alpha solar telescope on the Sky-Watcher EQ5 mount, all inside the dome for display.

When everybody arrived upstairs in the dome, Bob gave a talk on the history of the Cronyn Observatory and technical aspects of the big 25.4cm refractor, using his green laser pointer to indicate the 25.4cm objective lens and the finderscopes. Bob also used his green laser pointer to show them the Schmidt camera and Cassegrain reflector telescope piggy-backed on the 25.4cm refractor and briefly explained how they worked. Bob pulled down the big telescope and removed the dust cover to show them the 25.4cm objective lens and Everett installed the 32mm Erfle eyepiece (137X) and pointed the telescope towards the top of the dome to give the visitors the experience of looking through the eyepiece even though the observatory dome could not be opened.

Bob also explained the Standard and Sidereal Time clocks on the east wall and how the reflector and Schmidt-Cassegrain telescopes worked and how the 90mm Coronado H-Alpha solar telescope was used to view prominences and flares on the Sun. The teacher then divided everybody into 2 groups with one group returning downstairs for Paul's presentation on his meteorites and the other remaining upstairs to view through the amateur telescopes. The 2 groups then changed places so that both had the opportunity to view through the telescopes and examine Paul's meteorites.

The visitors were delighted with the views through the amateur telescopes, including structure and stonework on the Engineering building in the 25.4cm Dobsonian (17mm Nagler eyepiece, 66X), the TV screen visible in the windows of the Western Student Recreation Centre in the 8-inch (20.3cm) Schmidt-Cassegrain (20mm eyepiece, 100X) and the lights on the communications tower in south London in the Orion AstroView 6 (15cm) Newtonian reflector (25mm Plossl eyepiece, 30X). Paul set out a small collection of meteorites on the lecture room table along with current issues of "SkyNews," "Sky & Telescope" and "Astronomy" magazines as well as the "Sky & Telescope Pocket Sky Atlas," by Roger W. Sinnott (c2006), a copy of the RASC's "The Beginner's Observing Guide," by Leo Enright, and 2 books on meteorites. He also set up his microscope for the visitors to examine the meteorites.

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Everett shared the “RASC General Assembly and AstroCATS, May 19—23, 2016” poster with some interested members of the group and the poster “A Teachers’ Workshop: Comfortable Astronomy, Thursday, May 19, 2016” with the teacher. The visitors left around 8:50 p.m., after expressing their thanks for a very interesting and enjoyable evening learning about extra-solar planetary transits, telescopes and meteorites, despite the cloudy sky and rain.

### **Cronyn Observatory Public Night, Saturday, April 9th, 2016**

Cloudy with snow flurries and later clearing skies greeted visitors to Western University’s Cronyn Observatory Public Night, Saturday, April 9th, 2016, 8:00 p.m. Graduate student Dilini Subasinghe presented the digital slide presentation “The Kuiper Belt” before an audience of some 36 people and fielded questions. Other people arrived during the course of the evening for an estimated total of some 46 visitors, including 2 people who had to be turned away after the observatory closed—hopefully to return another time!

RASC London Centre was represented by Everett Clark, Paul Kerans, Mark Tovey, Tricia Colvin, Bob Duff, Steve Gauthier, Dale Armstrong and Peter Jedicke. Graduate student Kendra Kellogg was telescope operator and left early in the evening with Everett taking over the big 25.4cm refractor in the dome. When everybody arrived upstairs in the dome after Dilini’s slide presentation, Peter gave a talk on the technical aspects of the big 25.4cm refractor, also explaining the Schmidt camera and Cassegrain reflector telescope piggy-backed on the big telescope. Peter also talked about some of the history of the Cronyn Observatory and explained the amateur telescopes set up inside the dome, including the London Centre’s 25.4cm Dobsonian and the observatory’s 8-inch (20.3cm) Meade 2080/LX3 Schmidt-Cassegrain and Orion AstroView 6 (15cm) Newtonian reflector. These amateur telescopes were taken outside the dome on to the roof patio as the sky cleared.

Everett operated the big 25.4cm refractor (32mm Erfle eyepiece, 137X), showing visitors the 2-day-past-new crescent Moon and Jupiter. Peter later directed the 25.4cm refractor (52mm Erfle eyepiece, 84X) towards the Orion Nebula (M42). Dale also directed the 25.4cm refractor (52mm Erfle eyepiece, 84X) towards the star cluster M35 in Gemini. Steve operated the London Centre’s 25.4cm Dobsonian (17mm Nagler eyepiece, 66X) showing visitors the Moon and Jupiter, also swapping in his 9mm Nagler eyepiece (124X) to show them good views of Jupiter, M42 and the star Sirius.

Dale showed visitors Jupiter through the observatory’s 8-inch (20.3cm) Meade 2080/LX3 Schmidt-Cassegrain (26mm Plossl eyepiece, 77X). The observatory’s Orion AstroView 6 (15cm) Newtonian reflector had been set up in the dome early in the evening for display and directed towards the TV screen visible in the windows of the Western Student Recreation Centre but was otherwise not taken outside for observing. Paul showed visitors 4 meteorites that he had brought including a stony-iron and an iron /

nickel meteorite, as well as samples of Moon and Mars meteorites in small display cases. The visitors were gone by around 10:30 p.m. after a very enjoyable evening of astronomy under unexpected clear skies.