

# POLARIS



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

### Star Hopping

Patrick Whelan

I own a Meade 10" Schmidt Newtonian on a LX200 mount. It is a motorized/computerized mount that has GOTO built-in. Most of the time though, I just use it as a motorized mount and use my amateur astronomer skills to point it at what I want. If you know the constellations and can use a finder it isn't too hard to do. (use a planisphere!) You can usually find your way around using the stars that you can see by eye to point the telescope where you want. But when you are in the city there usually aren't many stars to guide you. You can use the GOTO function in times like this or you can use star hopping.

Star hopping is the process of finding a bright object and pointing your telescope at it and then using an eyepiece with a known 'field of view' (FOV) to 'hop' from spot to spot. This article is all about star hopping in the summer Southern skies with all of the deep sky objects it contains.

The type of telescope mount you use determines how you star hop. If you have an equatorially mounted telescope (like mine) then you need charts with RA and DEC lines on them. If you have a ALT-AZ mount then you will need charts for the time and day you are observing. You can't use charts with RA and DEC lines with a Dobsonian very well since you might have the charts for 10pm and you are observing at 1am and the sky has rotated around and your 'up and down and left and right' have shifted around. A computer running planetarium software is great since it can show you the sky as it changes. If you have charts with altitude and azimuth lines (or even a computer program) it doesn't help so much with an equatorially mounted telescope since it does not move up and down and left and right in regards to the horizon. For the purposes of this article I am using planetarium software with RA and DEC lines.

The other bit of info or gear you need is a FOV indicator for the eyepiece you are using. The software I am using lets me put in the FOV of my eyepieces for the telescopes I own. For almost all of the star hopping assume I am using my 22mm Panoptic in my 10" telescope. It has a FOV of 1 degree.

I started the night pointing my telescope at Antares. It is a very bright star in the Southern sky and it is easy to find. It is in the constellation Scorpius. There is a globular cluster just to the right of it in the sky. The software shows me the FOV superimposed on the sky and it is just a little more than one FOV (or one degree) away in RA only. So I use my hand control paddle to move the scope in RA only about one field of view to the right and voila! There is M4, the Cat's Eye! The night I am observing it is almost right behind a power line and even after it moves it is still quite dim to see. (If I was using a

Dobsonian it would have been to the right and also down. Quite a different move.) Next I find M80. It is one hop to the right in RA and two hops up in DEC. It is rather dim in the city sky as well but I found it!

Next I want to find M6 and M7 which are quite low on the horizon. Actually there are just about skimming my neighbour's roof. My starting point there is the star called Shaula in Scorpius. It is the end of the hook shape of Scorpius. Two hops in RA to the left and two hops in DEC up and I find M7, Ptolemy's Cluster. It is an open cluster and quite bright. I am not going into details with all my observing of the night, just the star hopping. This particular night I am using a number of my eyepieces (16mm Nagler, 7.2mm 10mm and 13.4 mm Speers Walers and maybe my 9mm Orthoscopic with and without my Orion Skyglow filter and my OIII filter for nebulas) (yeah okay...I have to tell you the Skyglow filter works quite nice on clusters since it darkens the sky but not the stars..) Now where was I? Right. So from M7 I go two hops to the right in RA and two hops up in DEC and I find M6 the Butterfly cluster. Not quite as bright as M7 but nice and easy to find using star hopping!

Now I point my telescope to the star at the top of the tea pot asterism (Sagittarius) which is Kaus Borealis. In the same field of view I can see M28, a globular cluster. It is faint but observable. Two star hops to the left in RA points me at M22 the Sagittarius Cluster. The skies are not very dark and I can't make out the top star in Sagittarius which is Mu Sagittarii. So I start at Kaus Borealis again and go four hops to the right in RA and two hops up in DEC to find M8 the Lagoon Nebula. It is very pretty and I spend a bit of time there. One hop in DEC brings me to M20 the Trifid Nebula and in the same field of view is M21, an open cluster. Another very pretty spot and I try all combinations of eyepieces and filters.

From the Trifid I star hop three hops up in DEC and one hop to the right in RA and I find the open cluster M23. From there I go four hops to the left in RA and two hops up in DEC and find M17. I like the name Swan Nebula for this object since that is what I think it looks like. I observe it for a long time. Two hops up in DEC brings me to the Eagle Nebula M17. The nebula isn't very noticeable but the star cluster is very nice.

At this point it is getting rather chilly and I can hear that the railway crossing bells have been going for a long time. I go get a sweatshirt. It is getting late and I am getting tired. I pack it all in and call it a night. What a great night of observing and what a wonderful bunch of objects I found in light polluted skies using the time honoured technique called star hopping.

## Moon Phases



July 12 2016



July 19 2016



July 26 2016



August 2 2016

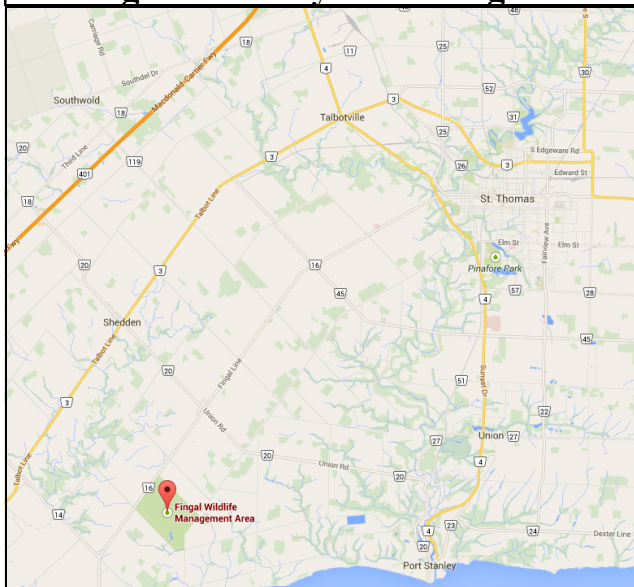
## July Meeting

This is travelogue month!  
Texas Star Party  
Starmus

### 2016 GA and AstroCATS

A huge shout out to the two co-chairs of the amazing 2016 London GA:  
David Clark  
Peter Jedicke  
As well as to the chair of AstroCATS:  
Andy Blanchard

## Fingal Dark Sky Observing Site



## London Centre Executive

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## Sky Events for Late July, August and early September

July 16 Mercury 0.6 N of Venus  
 July 23 Neptune 1.1 S of Moon  
 July 29 Aldebaran 0.3 S of Moon  
 July 30 Mercury 0.3 N of Regulus  
 August 4 Venus 3.0 N of Moon  
 August 4 Regulus 1.7 N of Moon  
 August 4 Mercury 0.6 N of Moon  
 August 5 Venus 1.1 N of Regulus  
 August 6 Jupiter 0.2 N of Moon  
 August 7 Double shadow transit on Jupiter  
 August 12 Perseid meteors peak  
 August 14 Double shadow transit on Jupiter  
 August 16 Mercury greatest elongation E  
 August 19 Neptune 1.1 S of Moon  
 August 20 Pallas at opposition  
 August 24 Mars 1.8 N of Antares  
 August 25 Aldebaran 0.2 S of Moon  
 August 27 Venus 0.1 N of Jupiter  
 August 30 Zodiacal light visible in E before morning twilight for next 2 weeks  
 September 1 Annular solar eclipse (Central Africa)  
 September 2 Neptune at opposition  
 September 2 Jupiter 0.4 S of Moon  
 September 3 Venus 1.1 S of Moon  
 September 15 Neptune 1.2 S of Moon



Mercury well placed in the morning sky  
 Venus too close to the Sun to see  
 Mars in Libra, visible most of the night  
 Jupiter in the western evening sky in Leo  
 Saturn visible most of the night in Ophiucus  
 Uranus in the eastern morning sky in Pisces  
 Neptune rises after midnight in Aquarius

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

Cataclysmic Cosmic Events and How to Observe Them, by Martin Mobberley. c2009. (Astronomers' Observing Guides)

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

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

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)

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## **Cronyn Observatory Public Nights & Special Events, June 11th—June 6th, 2016**

**By Robert Duff**

### **Cronyn Observatory Public Night, Saturday, June 11th, 2016**

Partly cloudy skies, becoming mostly clear by 10:30 p.m., greeted some 130 visitors to Western University's Cronyn Observatory Summer Public Night, Saturday, June 11th, 2016, 8:30 p.m. Professor Jan Cami was introduced by colleague Carol Jones and made 4 presentations of his digital slide presentation "Binary Stars: How a Partner Can Change Your Stellar Life." The first 2 presentations were to full houses and the last 2 for much smaller groups.

Professor Carol Jones was telescope operator in the dome and directed the big 25.4cm refractor (28mm Meade Super Wide Angle eyepiece, 157X) towards the Moon for most of the evening, before moving to Jupiter. The Moon was just one-day-prior-to-first quarter, occurring, June 12th, 4:10 a.m.

There were 8 RASC London Centre members present, including Dale Armstrong, Everett Clark, Peter Jedicke, Paul Kerans, Heather MacIsaac, Patrick Whelan, Tricia Colvin and Mark Tovey. Dale showed visitors the Moon, Mars, Jupiter and Saturn with the observatory's 8-inch (20.3cm) Meade Schmidt-Cassegrain (15mm Sky-Watcher UltraWide eyepiece, 133X). Peter Jedicke and Patrick Whelan showed visitors the Moon, Jupiter, Mars and Saturn with the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X). Everett Clark showed visitors the Moon, Jupiter, Mars and Saturn with the observatory's Orion AstroView 6 (15cm) Newtonian reflector. Heather MacIsaac showed visitors the Moon, Jupiter and Mars with her Celestron Go-To 90mm Maksutov telescope (25mm Plossl eyepiece, 50X).

Physics and Astronomy staff member Henry Leparskas and Peter helped a couple of visitors take pictures of Jupiter through the 25.4cm Dobsonian with the iOptron cell phone adapter. Everett also used the iOptron cell phone adapter to take pictures with his cell phone of the Moon through the 15cm Newtonian and helped visitors take pictures with their cell phones. Peter called everybody's attention to an ISS pass travelling from northwest to east southeast, between 9:55—10:01 p.m., reaching an altitude of 53 degrees above the north northeast horizon.

Henry Leparskas and Tricia Colvin both gave tours of the observatory's downstairs "Black Room," where they operated the "Transit Demo" model (demonstrating the transit detection method for finding extra-solar planets), and the historic "Period Room." Tricia was later joined by Mark in the "Period Room" to welcome visitors.

There were 15 "Getting Started in Astronomy" (RASC, SkyNews [2015]) pamphlets and 2 "Star Finder" planispheres distributed to interested visitors. Dale showed the Moon in the 20.3cm Schmidt-Cassegrain and Everett showed Jupiter in the 15cm Newtonian

once more to a few visitors before the observatory closed around 11:15 p.m., after very enjoyable and informative evening of astronomy.

### **Cronyn Observatory Public Night, Saturday, June 18th, 2016**

Partly cloudy skies greeted some 130 visitors to Western University's Cronyn Observatory Summer Public Night, Saturday, June 18th, 2016, 8:30 p.m. Graduate student Sebastian Bruzzone made 4 presentations of his digital slide presentation "Direct Imaging: Discovering New Planetary Systems." There were 52 people at the beginning of the first slide presentation with more people arriving to fill the lecture room.

Professor John de Bruyn was telescope operator with undergraduate student William Hyland assisting in the dome and Physics and Astronomy staff member Henry Leparskas giving tours in the downstairs "Period Room." There were 10 RASC London Centre members assisting with the event including Dale Armstrong, Everett Clark, Bob Duff, Steve Gauthier, Steve Imrie, Peter Jedicke, Paul Kerans, Heather MacIsaac, Tricia Colvin and Mark Tovey. Other London Centre members present included Richard Gibbens, who attended the slide lecture, and Roman Dubinski, who arrived later to view through telescopes.

Everett and Peter assisted John de Bruyn with the big 25.4cm refractor in the dome and showed visitors the 2-day-prior-to-full gibbous Moon using the 28mm Meade Super Wide Angle (157X), the 52mm Erfle (84X), the 18mm Radian (244X) and the 12.5mm Ortho (351X) eyepieces. They also directed the big 25.4cm refractor to show people Jupiter (18mm Radian eyepiece, 244X), Mars (12.5mm Ortho eyepiece, 351X) and Saturn (18mm Radian eyepiece, 244X).

Bob Duff and William Hyland set up the observatory's 8-inch (20.3cm) Meade Schmidt-Cassegrain, which William operated for the evening, showing visitors the Moon, Jupiter, Mars and Saturn, using the 26mm Plossl (77X), 20mm Plossl (100X) and 12.5mm Ortho (160X) eyepieces. Steve Gauthier and Steve Imrie operated the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X) showing visitors the Moon, Jupiter and Saturn. Steve Gauthier also used his 9mm Nagler eyepiece (124X) and Orion Shorty 2X Barlow lens. Heather MacIsaac set up her Celestron Go-To 90mm Maksutov telescope to show visitors the Moon, using her 32mm (39X) and 17mm (73.5X) Plossl eyepieces; Jupiter, using the 17mm Plossl (73.5X) eyepiece; and Saturn, using Steve Gauthier's 9mm Nagler eyepiece (139X).

Setting up his 9.25-inch (23.5cm) Celestron Schmidt-Cassegrain telescope on its Sky-Watcher EQ6 mount in the Alumni / Thompson parking lot on the south side of the Cronyn Observatory, Paul Kerans showed visitors the Moon, Jupiter, Saturn and Mars through 21mm (112X) and 13mm (181X) Ethos eyepieces, using an Antares 1.25-inch Variable Transmission Polarizing filter with the 13mm Ethos eyepiece (181X) to reduce the Moon's brightness. Towards 11:00 p.m. he used his 6mm Ethos eyepiece (392X) together with the variable polarizing filter to view great

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detail on the Moon. Paul packed up around 11:30 p.m. and estimated that perhaps 75 people (possibly 50 adults and 25 children) viewed through his telescope.

Bob brought a batch of “TMT: Astronomy’s Next-Generation Observatory Thirty Meter Telescope” pamphlets to the Cronyn for distribution to visitors in the dome. Downstairs in the “Black Room” Tricia Colvin operated the “Transit Demo” model throughout the evening—demonstrating the transit detection method for finding extra-solar planets—and was later joined by Mark Tovey. Henry Leparskas gave tours of the historic “Period Room.”

Seeing conditions improved around 11:20 p.m., permitting exceptional views of Mars through the 25.4cm refractor (12.5mm Ortho eyepiece, 351X). The last few visitors were gone and the observatory was closed down after a very enjoyable evening of astronomy.

### **Cronyn Observatory Public Night, Saturday, June 25th, 2016**

Partly cloudy skies with some hazy clouds, later clearing, greeted some 130 or more visitors to Western University’s Cronyn Observatory Summer Public Night, Saturday, June 25th, 2016, 8:30 p.m. Professor Pauline Barmby made 3 presentations of her digital slide presentation “Space is Hard!”—which concerned the challenges of space exploration and failed missions. There were some 60 people for the first slide presentation, 31 for the second and 4 for the third slide presentation.

RASC London Centre was represented by 9 members, including: Everett Clark, Heather MacIsaac, Bob Duff, Steve Gauthier, Steve Imrie, Tricia Colvin, Mark Tovey, Peter Jedicke and Mike Flegel. Recently graduated undergraduate student Nathalie Thibert was telescope operator and was assisted by Everett Clark in locating Jupiter with the big 25.4cm refractor in the dome (28mm Meade Super Wide Angle eyepiece, 157X). Peter Jedicke gave a telescope talk as people lined up to view through the 25.4cm refractor and called everybody’s attention to an Iridium flare occurring at 11:13:59 p.m., 32 degrees above the northeast horizon. The 25.4cm refractor was later directed towards Saturn (157X), with the 12.5mm Ortho eyepiece (351X) swapped in for a better view.

Steve Gauthier brought his laser collimator, and with help from Steve Imrie and Everett, collimated the London Centre’s 25.4cm Dobsonian. Steve Imrie operated the 25.4cm Dobsonian, showing visitors Jupiter and Mars, using the 17mm Nagler eyepiece (66X). There were good views later in the evening of Saturn through the 25.4cm Dobsonian, using the 12.5mm (89X) and 6mm (186X) Ortho eyepieces. Steve Gauthier operated the observatory’s 8-inch (20.3cm) Meade Schmidt-Cassegrain, showing visitors Jupiter, using the 12.5mm Ortho (160X), and Jupiter, Mars and Saturn, using his 9mm Nagler (222X) eyepiece. Steve also used his Orion Shorty 2X Barlow together with his 9mm Nagler to view Saturn at 444X in the Schmidt-Cassegrain. Heather MacIsaac showed visitors Jupiter, Mars and the stars Mizar and Alcor

through her Celestron Go-To 90mm Maksutov (17mm Plossl eyepiece, 73.5X).

Downstairs in the “Black Room” Tricia Colvin operated the “Transit Demo” model throughout the evening—demonstrating the transit detection method for finding extra-solar planets—while Physics and Astronomy staff member Henry Leparskas gave tours of the historic “Period Room.” Mark Tovey arrived later, taking Henry’s place giving tours in the “Period Room.”

Observing continued after the visitors were gone with Saturn being viewed through the 25.4cm refractor using the 8mm (548X) and 4mm (1,096X) eyepieces and Steve Gauthier’s 9mm Nagler eyepiece (487X). A pleasing view of Mars was also obtained in the 25.4cm refractor using the 12.5mm Ortho eyepiece (351X). The observatory was finally closed down around 12:07 a.m. after an exceptional evening of planetary observing.

### **Asteroid Day at the Cronyn Observatory, June 30th, 2016**

Western University’s Centre for Planetary Science and Exploration (CPSX) in collaboration with the Department of Physics and Astronomy and the Department of Earth Sciences hosted a special event at the Hume Cronyn Memorial Observatory on Asteroid Day, Thursday, June 30, 2016. Asteroid Day is held each year on the anniversary of the 1908 Tunguska impact event—the largest in recent history—and is a global awareness campaign bringing people around the world together to learn about asteroids and how to protect future generations from cosmic impacts.

There were digital slide presentations by faculty members, including Professors, Peter Brown, “The Tunguska Event and the Hazard of Asteroid Impacts” (3:00 p.m.); Paul Wiegert, “Fire from the Sky: how Rocks from Space Fall to Earth” (4:00 p.m.); Mikael Granvik (University of Helsinki), “Killer Asteroids” (5:00 p.m.); and Audrey Bouvier “Meteorites: Messengers from Asteroids and Planets” (6:00 p.m.). Professor Audrey Bouvier, Curator of the Western Meteorite Collection, and students from the Earth Sciences Department fielded questions at the Meteorites & Impactites display table in the dome. It was an opportunity for the public to bring rocks they thought might be meteorites for inspection by meteorite experts and learn how to recognize them.

RASC London Centre was represented by Paul Kerans, Heather MacIsaac, Bob Duff and Peter Jedicke. On the roof patio outside the dome Paul Kerans set up the Cronyn Observatory’s 90mm Coronado H-Alpha Solar Telescope, on its Sky-Watcher EQ5 mount, and 8-inch (20.3cm) Meade Schmidt-Cassegrain with the Kendrick Astro Baader film solar filter. Paul, and then Bob Duff, showed people the Sun through the 90mm Coronado, using the 25mm eyepiece and 2X Barlow lens (64X) and, later, the 7mm Tele Vue Plossl eyepiece (31X). Undergraduate student William Hyland showed people the Sun through the 20.3cm Schmidt-Cassegrain (26mm Plossl eyepiece, 77X). Heather MacIsaac showed people the Sun through her Celestron Go-To 90mm Maksutov (32mm Plossl eyepiece, 39X) with Mylar solar film over the aperture. In the telescopes with the Baader and Mylar solar film

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filters the Sun was completely featureless with no sunspots visible. Through the 90mm Coronado people noticed filaments on the surface as well as some faint edge prominences on the Sun.

Among those present were graduate students Dilini Subasinghe, Kendra Kellogg and Laura Lenkic, as well as Parshati Patel, recently graduated with her doctorate. Physics and Astronomy Department staff and RASC member Henry Leparskas was there with his camera. Paul Kerans counted some 40 visitors by 3:40 p.m. and Dilini and Parshati, together with Bob Duff, estimated there were some 70 visitors in total when the event ended around 7:00 p.m.

### **Cronyn Observatory Public Night, Saturday, July 2nd, 2016**

Partly cloudy skies with hazy clouds, later clearing, greeted visitors to Western University's Cronyn Observatory Summer Public Night, Saturday, July 2nd, 2016, 8:30 p.m. Graduate student Laura Lenkic made 2 presentations of the digital slide presentation "Small Bodies in the Solar System." There were some 160 visitors by the end of the evening, and if we include 16 people who viewed through Paul Kerans' 9.25-inch (23.5cm) Celestron Schmidt-Cassegrain telescope set up on the south side of the Cronyn Observatory but who did not enter the observatory, the total would be 176 people.

RASC London Centre was represented by Everett Clark, Bob Duff, Steve Imrie, Paul Kerans, Heather MacIsaac, Steve Gauthier, Dale Armstrong, Peter Jedicke, Tricia Colvin and Mark Tovey. Physics and Astronomy staff member Henry Leparskas assisted in the observatory and graduate student Keegan Marr supervised visitors. Graduate student Collin Knight was telescope operator for the big 25.4cm refractor in the dome and, with Everett's help, showed visitors Jupiter, using the 28mm Meade Super Wide Angle (157X) and 18mm Radian (244X) eyepieces; Saturn (244X); and Mars, using the 12.5mm Ortho eyepiece (351X).

On the roof patio outside the dome, Dale Armstrong operated the observatory's 8-inch (20.3cm) Meade Schmidt-Cassegrain, showing visitors Mars and Saturn, using the 15mm Sky-Watcher UltraWide eyepiece together with a 2X Barlow lens (266X). Steve Gauthier operated the London Centre's 25.4cm Dobsonian showing visitors Jupiter and Saturn with his 9mm Nagler eyepiece (124X). Steve also used his Orion Shorty 2X Barlow lens together with his 9mm Nagler to view Saturn at 248X in the 25.4cm Dobsonian. Also observed in the 25.4cm Dobsonian were the orange and blue double-star Albireo, using the 17mm Nagler (66X) and 9mm Nagler (124X) eyepieces, and M57 (124X). Heather MacIsaac set up her Celestron Go-To 90mm Maksutov and showed visitors Jupiter and Saturn (17mm Plossl eyepiece, 73.5X) and the stars Mizar and Alcor (32mm Plossl eyepiece, 39X).

Paul Kerans showed visitors Jupiter, Mars and Saturn through Paul Kerans' 9.25-inch (23.5cm) Celestron Schmidt-Cassegrain (21mm Ethos eyepiece, 112X), set up on his Sky-Watcher EQ6 Equatorial mount, on the south side of the Cronyn Observatory.

Downstairs in the "Black Room" Physics and Astronomy staff member Henry Leparskas operated the "Transit Demo" model early in the evening—demonstrating the transit detection method for finding extra-solar planets—while Mark Tovey gave tours of the historic "Period Room." Tricia Colvin arrived later, taking Henry's place demonstrating the "Transit Demo" while Henry helped Mark in the "Period Room" with the "Sotellunium" mechanical eclipse demonstration model.

A visitor spotted a satellite at 22:23 (10:23 p.m.) moving east through the Cygnus and called it to the attention of Henry Leparskas, who said it looked as bright as the ISS. Peter Jedicke looked it up on his cell phone and it turned out to be the derelict Chinese space station Tiangong-1. The Cronyn Observatory closed down around 11:20 p.m. after an interesting and enjoyable evening of astronomy.

### **Ontario Association of Physics Teachers, Physics Camp: Solar Observing at the Cronyn Observatory, July 6, 2016**

Partly cloudy skies greeted 20 visitors (17 teachers and 3 event organizers) from the Ontario Association of Physics Teachers (OAPT) Physics Camp for solar observing at Western University's Cronyn Observatory, Wednesday, July 6th, 2016, 12:30—2:00 p.m. They were welcomed by Professors Sarah Gallagher and Pauline Barmby along with postdocs Parshati Patel and Aycha Tammour. Physics and Astronomy Department staff member Henry Leparskas was also there.

RASC London Centre was represented by Everett Clark, Paul Kerans, Bob Duff, Heather MacIsaac and Peter Jedicke. Everett set up both the observatory's 90mm Coronado H-Alpha Solar Telescope, on its Sky-Watcher EQ5 mount, and 8-inch (20.3cm) Meade Schmidt-Cassegrain, with the Kendrick Astro Baader film solar filter, on the roof patio outside the dome.

Paul showed the teachers the Sun through the 90mm Coronado H-Alpha Solar Telescope, using the CEMAX 25mm eyepiece (32X) and later added the 2X Barlow lens (64X). Seeing conditions were good with prominences visible on the edge of the Sun as well as filaments and granulation noticeable on the solar surface. Everett showed the teachers the Sun through the 20.3cm Schmidt-Cassegrain (26mm Plossl eyepiece, 77X). Heather MacIsaac showed the teachers the Sun through her Celestron Go-To 90mm Maksutov (32mm Plossl eyepiece, 39X) with Mylar solar film over the aperture. Peter Jedicke also set up the Sunspotter (provided by Fanshawe College). In the telescopes with the Baader and Mylar solar film filters the Sun was completely featureless with no sunspots visible.

Parshati Patel and later Henry Leparskas demonstrated to several small groups of teachers the "Sotellunium"—a mechanical eclipse demonstration model—which had been brought up from the "Period Room" and set up on the table beside the computer in the dome. Professor Sarah Gallagher demonstrated a Moon phase activity—involving white Styrofoam balls placed on sticks and

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distributed to the teachers—that is used in both outreach events and in university astronomy classes to teach the phases of the Moon and discussed common student misconceptions about motions within the solar system.

There were 6 or more “Star Finder” planispheres and “Moon Gazers’ Guide” cards distributed. The teachers were gone by around 2:00 p.m. after thanking everybody for a very interesting and enjoyable afternoon of solar observing and learning about the Cronyn Observatory and the astronomy educational resources available.



Bob Duff and his  
8 inch f6  
reflector