POLARIS

Royal Astronomical Society of Canada
London Centre Newsletter
September 2015

Give me an A! Give me a S! Give me a T! Give me...

By Patrick Whelan

Astronomy is such a great sport, er I mean hobby. So many things to do, only so many years to do them. I love that there are so many aspects to it. A person can go buy a telescope and observe bright objects from the comfort of their home in the city. If they live in the country they can observe dimmer objects as well. You might want to buy telescope parts and put a telescope together yourself. Have a camera? You can image the objects you see in the sky. Don't want to stay up late? Observe the Sun with a solar telescope. If you really want to get hands-on, you can buy a chunk of glass and grind your own telescope mirror. How about building an observatory? Lots of people do that. You can connect computers and electronics and motors to automate and remote control everything. The sky is the limit, pardon the pun. As an example here are my recent exploits.

Recently I had fun modifying a couple of my telescopes. Fun as in: oh my goodness, what have I got myself into now? It all started a number of years ago....

An amateur astronomer from Windsor had a large telescope that he wanted to give away. He talked to Dave McCarter here in London and Dave brought this up at one of our meetings. I jumped on the chance. I liked reflectors and a 10" f/8 is a wonderful (if not very large) piece of equipment. I drove to Windsor to pick it up. I asked why it he didn't want any money for it and he told me someone had given him the mirror for free on the stipulation he would not sell it either. I am glad I didn't bring my daughter for the drive, since the telescope just barely fit in my station wagon from corner to corner! It was a complete Dobsonian setup. I was elated. The main mirror had some issues as did the secondary but the scope was usable. The tube is HEAVY because it is long and made from a sonotube and is coated with fiberglass. Strong! I call this telescope my behemoth! At home I already had a (I hoped to be wonderful) 10" f/7.5 mirror I had bought the previous year but I hadn't created a telescope out of it yet. This mirror was made by Nova and was one of the mirror choices when you bought an Obsession telescope. The inevitable happened, as I sourced a mirror cell for my Nova mirror and when it arrived I put them into the telescope. I now have a spare 10" f/8 mirror that needs some TLC. I also bought a new (smaller) secondary and curved spider and installed them. Moving the telescope was difficult because of its size and weight. My daughter would help me get it into the backyard and up on its mount. Last year I added two handles at each end to make moving it easier.

This week I decided to do more upgrades. I had a great Antares focuser that I purchased last year. I decided to put it on my 10" Meade SN. It is a dual speed focuser and it has a great feel. There is virtually no black lash and no slippage. Putting it on my Meade was more than I bargained for. I had already upgraded the focuser once and that involved drilling new holes for the focuser. After removing the focuser I realized I had to drill four more holes in the metal tube again. The focuser really needs to be precision placed and that had me worried the last time! Using pencil and ruler I drew lines between the mounting holes both vertically and horizontally. I then used a compass (the type you draw circle with) and created lines that bisected those lines perpendicularly. I then scribed lines on the focuser to mark the center of each side. Lining up the lines on the tube with the scribed lines on the focuser I was able to mark where the mounting holes would go. I made a dent with an awl and then drilled them with a small drill bit. Then I drilled them to size. I made them bigger than the bolts so I had a little play in mounting the focuser so I could get it centred. Everything worked out. I put a laser collimator in the focuser and made measurements to make sure it was pointing exactly across the tube and through the centre of the tube. Great, it was. Next I installed the corrector plate with the secondary mirror on it. I used a peep hole in the focuser to ensure that the secondary was properly in line with the focuser. I had to adjust it a bit but not too much. I put the primary mirror back in and that was that. It only took 5 hours to get this done!

(Continued on page 9)

Moon Phases

September 21 2015

September 28 2015

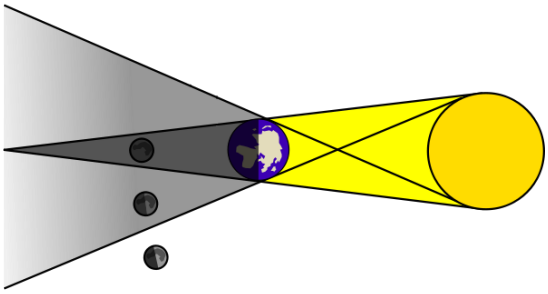
October 4 2015

October 13 2015

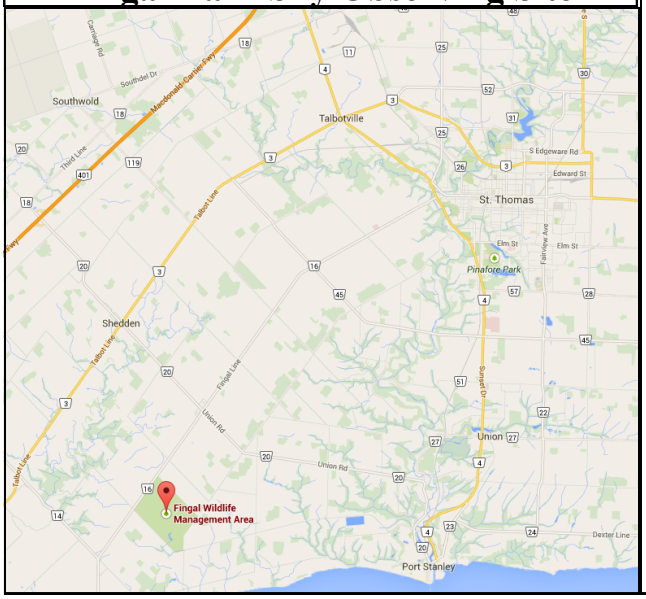
September

Attend one of our meetings!

Don't miss the lunar eclipse on Sept 28!



Fingal Dark Sky Observing Site



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London RASC Website: **http://www.rasclondon.ca/**

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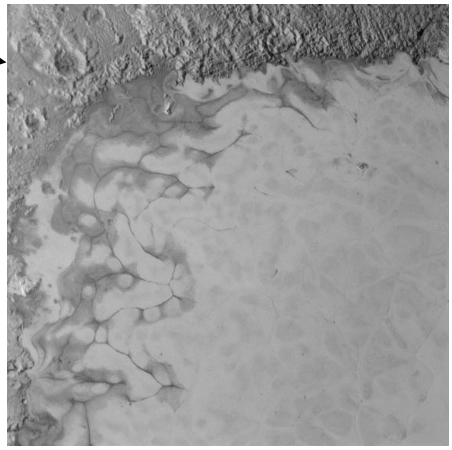
The ESA sent tardigrades into space in a mission they called Tardigrades in Space. For 12 days in September 2007, some 3000 water bears hitched a ride into space on ESA's orbital Foton-M3 mission. They shortened the mission name to **TARDIS**! Any Dr. Who fans present?

Sky Events for Late September and October

Sept 23 Equinox
Sept 28 Total Lunar Eclipse
Sept 29 Uranus 1.0 N of Moon
Sept 29 Vesta at opposition
Oct 2 Aldebaran 0.5 S of Moon
Oct 8 Venus 0.7 N of Moon
Oct 11 Zodiacal light observable in E before morning twilight, next two weeks
Oct 11 Mercury 0.9 N of Moon
Oct 12 Uranus at opposition

Pluto!



Mercury: Inferior conjunction on Sept 30
Venus: Shines brightly in the dawn sky
Mars: Low in the E twilight
Jupiter: Reappears in the morning sky
Saturn: Low in the southwest mid-evening sky.
Uranus: Rises in mid-evening
Neptune: Visible all night in Aquarius.

R.A.S.C. London Centre Library
Books of the Month October 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 September 2015 are as follows:

Cataclysmic Cosmic Events and How to Observe Them, 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/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

Cronyn Observatory Public Nights, July 18th—August 29th, 2015

By Robert Duff

Cronyn Observatory Public Night, Saturday, July 18th, 2015

Mostly cloudy, hazy skies greeted some 70 visitors to Western University's Cronyn Observatory Public Night, Saturday, July 18th, 2015, 8:30 p.m. Professor Sarah Gallagher made the first of her 2 digital slide presentations, "On Top of the Mountain All Covered with Ash: An Astronomer at the Telescope," before an audience increasing to more than 50 people, with 59 arrivals at the Observatory by 9:15 p.m. She followed this with her second presentation, "Highlights from the New Horizons Flyby," after inviting everybody to take a break and visit the dome. There were an estimated 70 visitors by the end of the evening.

Graduate student Jeff Vankerkhove was telescope operator for the big 25.4cm refractor in the dome. RASC London Centre was represented Bob Duff, Dale Armstrong, Tricia Colvin and Mark Tovey. London Centre member Richard Gibbens lis-

tened to the slide lecture and later showed up on the roof patio outside the dome. Physics and Astronomy Department computer resources person and RASC member Henry Leparskas was also there.

When people had arrived upstairs after Professor Sarah Gallagher's first slide presentation, Bob gave a brief talk about the history of the Cronyn Observatory and technical aspects of the big 25.4cm refractor in the dome. Bob also explained the Standard and Sidereal Time clocks on the east wall of the dome. Since it was mostly cloudy, Jeff invited visitors to view the lights on the communications tower in south London through the big 25.4cm refractor, using the 32mm Erfle eyepiece (137X). The NASA Web site on the New Horizons spacecraft flyby of Pluto was also opened on the dome computer for people to view highlights of the mission, including a short close-up video of Pluto's surface.

On the roof patio outside the dome, Dale operated the Observatory's 8-inch (20.3cm) Meade 2080/LX3 Schmidt-Cassegrain, showing visitors the communications tower, using the 26mm Plossl eyepiece (77X); Saturn, using the 15mm Sky-Watcher Ultra-Wide eyepiece and 2X Barlow lens (266X); and Epsilon Lyrae and Vega (77X). The 2X Barlow lens was from the 90mm Coronado H-Alpha Solar Telescope.

Tricia and Mark showed visitors the wind turbine on the Engineering building and later Vega in the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X). Bob later took over the 25.4cm Dobsonian, talking to a few visitors and showing them Vega in the telescope. Bob talked to people throughout the evening, and showed several visitors the Pluto flyby video on the NASA New Horizons spacecraft Web site displayed on the dome computer. The Observatory was closed down around 11:00 p.m. after a very interesting evening of slide presentations and some observing through telescopes despite the mostly cloudy sky.

Cronyn Observatory Public Night, Saturday, July 25th, 2015

Partly cloudy, later clearing skies greeted some 70 visitors to Western University's Cronyn Observatory Public Night, Saturday, July 25th, 2015, 8:30 p.m. Beginning with 3 slides from the New Horizons spacecraft flyby mission of Pluto, Professor Jan Cami made 4 presentations of his digital slide presentation "Fingerprinting the Universe" and "Spectroscopy Demonstration" using 4 low pressure high voltage gas lamps, containing hydrogen, helium, mercury vapor and neon. A limited number of diffraction glasses were distributed to the audience who crowded around the table at the front of the lecture room where the gas lamps were set up. RASC London Centre members Bob Duff counted 43 visitors by 9:00 p.m. and Peter Jedicke counted 57 by 9:45 p.m. With some 10—16 later arrivals the estimated total number of visitors for the evening was around 70.

Professor John de Bruyn was telescope operator for the big 25.4cm refractor and was assisted by Physics and Astronomy Department computer resources person and RASC member Henry Leparskas in opening the dome. RASC London Centre was represented Tricia Colvin, Mark Tovey, Bob Duff, Paul Kerans, Steve Gauthier, Peter Jedicke, Steve Imrie and graduate student and London Centre member Emily McCullough. London Centre member Roman Dubinski showed up on the roof patio and Richard Gibbens listened to the slide lecture.

Emily and John de Bruyn operated the big 25.4cm refractor showing visitors the one-day-past-first quarter Moon and Saturn, using the 32mm Erfle eyepiece (137X). They also showed visitors Saturn in the big 25.4cm refractor, using the 18mm Radian (244X) and 6mm Ortho (731X) eyepieces, as well as Paul Keran's Tele Vue 21mm Ethos eyepiece (209X), with its 100 degree apparent field of view.

Steve Gauthier operated the London Centre's 25.4cm Dobsonian showing visitors the Moon, using Paul's 21mm Ethos eyepiece (53X); Albireo (17mm Nagler eyepiece, 66X); and Saturn (8mm eyepiece, 139X), with the moons Titan and Rhea visible.

Tricia and Mark operated the Observatory's 8-inch (20.3cm) Meade 2080/LX3 Schmidt-Cassegrain, showing visitors the Moon and Saturn (20mm Plossl eyepiece, 100X) and Saturn again, using the 2X Barlow lens with the 20mm Plossl eyepiece (200X). The 2X Barlow lens was from the 90mm Coronado H-Alpha Solar Telescope.

Heather MacIsaac has been bringing her telescope to the Cronyn Observatory and recently joined the RASC as an unattached member. She set up her Go-To Celestron 90mm Maksutov telescope on the roof patio and showed visitors the Moon (32mm Plossl eyepiece, 39X); and Saturn and Mizar and Alcor (17mm Plossl eyepiece, 73X).

The Observatory was closed down around 11:00 p.m. after a very interesting evening of slide presentations, spectroscopy demonstrations and much observing through telescopes under good skies.

Cronyn Observatory Public Night, Saturday, August 1st, 2015

Partly cloudy, later clearing skies greeted some 76 visitors to Western University's Cronyn Observatory Public Night, Saturday, August 1st, 2015, 8:30 p.m. Undergraduate student Ian Mulholland made 2 presentations of his digital slide presentation "A Walk Through the Solar System." RASC London Centre member Peter Jedicke counted 27 people in Ian's first slide presentation and Ian counted 34 in his second presentation, with 15 walk-ins afterwards, for an estimated total of 76 visitors.

Professor Peter Brown was telescope operator for the big 25.4cm refractor and was assisted by graduate student and RASC London Centre member Emily McCullough. Other RASC London members included Bob Duff, Dale Armstrong, Tricia Colvin, Mark Tovey, Paul and Charlene Kerans and Peter Jedicke. London Centre member Roman Dubinski also showed up on the roof patio outside the dome. Physics and Astronomy Department computer

resources person and RASC member Henry Leparskas was also there.

When visitors arrived upstairs after Ian's first slide presentation, Bob gave a brief talk on the history of the Cronyn Observatory and technical aspects of the big 25.4cm refractor, also explaining the Standard and Sidereal Time clocks on the east wall of the dome.

Peter Brown, Emily and Bob took turns showing visitors Saturn through the big 25.4cm refractor, which made a splendid sight in the 28mm Meade Super Wide Angle eyepiece (157X). They gave out to visitors Saturn cards, of which there were many left over from the International Year of Astronomy 2009, and Peter Jedicke also encouraged them to take the pamphlet "Getting Started in Astronomy" (RASC, SkyNews [2015]). Peter Brown called everybody's attention to the bright ISS pass travelling southwest to east-northeast (10:09—10:15 p.m.) and passing overhead at 89 degrees altitude.

Dale operated the Observatory's 8-inch (20.3cm) Meade 2080/LX3 Schmidt-Cassegrain, showing visitors Saturn (15mm SkyWatcher UltraWide eyepiece and 2X Barlow lens, 266X) and the one-day-past-full Moon (26mm Plossl eyepiece, 77X). (The 2X Barlow lens was from the 90mm Coronado H-Alpha Solar Telescope.) Mark showed them Saturn in the Observatory's unpowered 8-inch (20.3cm) Meade Schmidt-Cassegrain, using the Tele Vue 26mm Plossl (77X) and 12.5mm Ortho (160X) eyepieces. Tricia operated the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X) showing people Saturn and Albireo. Bob later directed the 25.4cm Dobsonian towards M57 and Peter Jedicke located M13, both splendid views in the 17mm Nagler eyepiece (66X).

Heather MacIsaac has been bringing her telescope to the Cronyn Observatory and recently joined the RASC as an unattached member. She set up her Go-To Celestron 90mm Maksutov telescope on the roof patio and showed visitors Saturn, Arcturus and Albireo (25mm Plossl eyepiece, 50X), and with Dale's assistance, located M13, which was viewed with 32mm (39X) and 25mm (50X) Plossl eyepieces.

The Observatory was closed down around 12 midnight after a very interesting evening of slide presentations and excellent viewing through telescopes under very clear skies.

Cronyn Observatory Public Night, Saturday, August 8th, 2015

Cloudy skies with later partial clearing greeted 18 visitors to Western University's Cronyn Observatory Public Night, Saturday, August 8th, 2015, 8:30 p.m. Undergraduate student Ian Mulholland made 2 presentations of his digital slide presentation "Are We Alone?" RASC London Centre member Bob Duff counted 12 people in Ian's first slide presentation and Ian counted 7 in his second presentation, including 3 "repeats" from the first presentation. Ian also counted 2 walk-in visitors who did not see the slide presentation bringing the total to some 18 visitors for the evening.

Graduate student and RASC London Centre member Emily McCullough was telescope operator for the evening and directed the big 25.4cm refractor in the dome towards the communications tower in south London. She also set up the London Centre's 25.4cm Dobsonian on the roof patio outside the dome. Other RASC London members included Dale Armstrong, Peter Jedicke, Paul Kerans, Tricia Colvin, Mark Tovey and Mike Costa. London Centre member Richard Gibbens listened to the slide lecture. Physics and Astronomy Department Computer Resources person and RASC member Henry Leparskas was also there.

Although the tripod and wedge for the Schmidt-Cassegrain had been set up on the roof patio, Dale set up the Observatory's 8-inch (20.3cm) Meade 2080/LX3 Schmidt-Cassegrain on a table in the dome and spent the evening cleaning the exterior of the telescope's corrector plate and objective lens of the 8X50mm finderscope with cotton swabs and a lens cleaning solution.

Emily spent the evening showing visitors the lights on the communications tower in south London and later, with some partial clearing in the clouds, a hazy view of Saturn, through the big 25.4cm refractor (32mm Erfle eyepiece, 137X). On the roof patio Bob installed the 17mm Nagler eyepiece (66X) in the 25.4cm Dobsonian enabling visitors to view the wind turbine on the Engineering building and later the star Arcturus.

Heather MacIsaac, who has been bringing her telescope to the Cronyn Observatory and recently joined the RASC as an unattached member, set up her Go-To Celestron 90mm Maksutov telescope (32mm Plossl eyepiece, 39X) and showed people the TV screen visible through the Western Student Recreation Centre windows, the Canadian flag flying above Middlesex College to the north and the star Arcturus.

Bob spoke to a couple of visitors and gave out 2 "Star Finder" planispheres, assembling and showing how to use them. Visitors were also encouraged to take the pamphlet "Getting Started in Astronomy" (RASC, SkyNews [2015]). Paul Kerans brought 2 meteorites, an iron and a stony iron, to show visitors. The Observatory was closed down around 11:00 p.m. after an interesting evening of slide presentations and viewing through telescopes despite the cloudy sky.

Cronyn Observatory Public Night, Saturday, August 15th, 2015

Clear skies greeted some 70 visitors to Western University's Cronyn Observatory Public Night, Saturday, August 15th, 2015, 8:30 p.m. Graduate student Abedin Abedin made 2 presentations of his digital slide presentation "Near Earth Objects and Potentially Hazardous Asteroids." RASC London Centre member Bob Duff counted 14 people in the dome and 23 in the slide presentation for a total of 37 visitors at 8:45 p.m. There were 66 people counted both upstairs in the dome and in the lecture room at 9:14

p.m. There were 10 people at 10:00 p.m. for the second slide presentation and an estimated total of some 70 visitors for the evening.

Graduate student Matthew Shannon was telescope operator for the evening and was assisted by graduate student and RASC London Centre member Emily McCullough. They directed the big 25.4cm refractor towards Saturn, which made a splendid view for visitors in the 28mm Meade Super Wide Angle eyepiece (157X). Other RASC London members present included Paul and Charlene Kerans, Bob Duff, Peter Jedicke, Tricia Colvin and Mark Tovey. London Centre member Richard Gibbens listened to the slide lecture.

On the roof patio outside the dome, Paul and Charlene set up their new Celestron 9.25-inch (235mm) Schmidt-Cassegrain on a Sky-Watcher EQ6 Equatorial mount and spent the evening showing people Saturn, Arcturus, Mizar and Alcor and the Andromeda Galaxy (M31), using Paul's Tele Vue 21mm Ethos eyepiece (112X), with its 100 degree apparent field of view. Paul was also showing visitors some tiny samples of Moon and Mars rocks in a couple of small display cases. Peter operated the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X), showing visitors Saturn, M31, M32 and M110, and was later joined by Bob who showed a few visitors Albireo.

Heather MacIsaac, who has been bringing her telescope to the Cronyn Observatory and recently joined the RASC as an unattached member, set up her Go-To Celestron 90mm Maksutov telescope (25mm Plossl eyepiece, 50X) and showed people Saturn, Albireo, and Mizar and Alcor.

Peter called everybody's attention to two ISS passes that took place that evening. The first ISS pass was travelling northwest—east, 21:02:18—21:08:04, reaching a maximum altitude at 28 degrees at 21:05:11 (9:05 p.m.). The second ISS pass was travelling west-northwest—west, 22:38:34—22:41:12, reaching a maximum altitude at 46 degrees at 22:41:12 (10:41 p.m.). The Observatory was closed down around 11:15 p.m. after a very successful evening of slide presentations and viewing through telescopes under very clear skies.

Cronyn Observatory Public Night, Saturday, August 22nd, 2015

Mostly clear skies greeted some 69 visitors to Western University's Cronyn Observatory Public Night, Saturday, August 22nd, 2015, 8:30 p.m. Undergraduate student Ian Mulholland made 2 presentations of his digital slide presentation "Light; Beyond What the Eye Can See." RASC London Centre member Bob Duff counted 18 visitors in the dome and 27 in the lecture room for Ian's first slide presentation for a total of 45 visitors by 8: 48 p.m. More visitors arrived and Bob counted some 57 people in the dome and roof patio around 9:22 pm. Physics and Astronomy Department Computer Resources person and RASC member Henry Leparskas reported counting an estimated 74—76 people around 9:40 p.m., which was close to Bob's estimated total of some 69 visitors (adults and children) for the evening.

Graduate student Shannon Hicks was telescope operator for the evening with some assistance from graduate student and RASC London Centre member Emily McCullough. Shannon supervised visitors as they climbed the observing ladder to view Saturn through the big 25.4cm refractor (28mm Meade Super Wide Angle eyepiece, 157X). RASC London members present included Paul Kerans, Tricia Colvin, Mark Tovey, Bob Duff, Dale Armstrong, Peter Jedicke, Steve Imrie and graduate student Emily McCullough. London Centre member Richard Gibbens listened to the slide lecture and later came upstairs onto the roof patio outside the dome.

Dale operated the Observatory's 8-inch (20.3cm) Meade 2080/LX3 Schmidt-Cassegrain, showing visitors Saturn (15mm Sky-Watcher UltraWide eyepiece and 2X Barlow lens, 266X) and the first quarter Moon (26mm Plossl eyepiece, 77X). (The 2X Barlow lens was from the 90mm Coronado H-Alpha Solar Telescope.) He then swapped in the 15mm Sky-Watcher UltraWide eyepiece (133X) to show people the orange and blue double-star Albireo and the "Wild Duck" cluster M11. Tricia and Mark showed visitors the Moon, Albireo and Saturn in the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X). Bob briefly swapped in the 6mm Ortho eyepiece (186X) in the 25.4cm Dobsonian for a few people to view Saturn before reinstalling the 17mm Nagler eyepiece (66X). Steve showed a few people Vega in the 25.4cm Dobsonian (66X).

Paul Kerans set up his Celestron 9.25-inch (235mm) Schmidt-Cassegrain on a Sky-Watcher EQ6 Equatorial mount (Tele Vue 21mm Ethos eyepiece, 112X), using Arcturus as a guide star for polar alignment, and showing people the Moon, Saturn, M31 and M13. He showed people the Moon through his Tele Vue 13mm Ethos eyepiece (181X) as well as the 21mm Ethos eyepiece (112X) in the 9.25-inch (235mm) Schmidt-Cassegrain. Paul also brought 2 meteorites, an iron and a stony iron, to show visitors.

RASC London Centre member Peter Jedicke gave a talk in the dome about the Cronyn Observatory later in the evening as people line up to view through the big 25.4cm refractor. The Observatory was closed down around 11:10 p.m. after a very successful evening of slide presentations and viewing through telescopes under very clear skies.

Cronyn Observatory Public Night, Saturday, August 29th, 2015

Cloudy skies greeted 37 visitors to Western University's Cronyn Observatory Public Night, Saturday, August 29th, 2015, 8:30 p.m. Postdoctoral fellow David Stock made his digital slide presentation "Dawn: Exploring New Worlds" before and audience of 28 visitors (including 7 children) by around 8:55 p.m. There were some 37 visitors by the end of the evening.

Graduate student Tony Martinez was telescope operator for the evening with some assistance from graduate student and RASC London Centre member Emily McCullough. RASC London members present included Bob Duff, Paul Kerans, Dale Armstrong, Dave McCarter, Peter Jedicke, and graduate student Emily McCullough. London Centre member Richard Gibbens listened to the slide lecture. Physics and Astronomy Department Computer Resources person and RASC member Henry Leparskas brought cookies and thermoses of coffee and tea, which he set out on a table in the dome.

Dale set up the Observatory's 8-inch (20.3cm) Meade 2080/LX3 Schmidt-Cassegrain (26mm Plossl eyepiece, 77X) inside the dome so as to view out the door towards the white and red flashing lights on the communications tower is south London. Bob set up the London Centre's 25.4cm Dobsonian (17mm Nagler eyepiece, 66X) inside the dome for demonstration. When the visitors had arrived upstairs after David Stock's slide presentation, Peter Jedicke gave a talk about the history and technical aspects of the Cronyn Observatory and 25.4cm refractor in the dome. He pointed out that 2015 was the 75th anniversary of the opening of the Cronyn Observatory, October 25th, 1940.

Peter also explained the 20.3cm Schmidt-Cassegrain and 25.4cm Dobsonian telescopes and visitors were invited to view the flashing white and red lights on the communications tower through the Schmidt-Cassegrain. The Cronyn Observatory was shut down beginning around 11:00 p.m. after an interesting and enjoyable evening for the visitors despite the cloudy sky and damp weather which prevented use of the big 25.4cm refractor in the dome.

RASC London Centre Star Nights, July—September 2015

By Robert Duff

Star Night, Springwater Conservation Area, Wednesday, July 22nd, 2015

Report by Peter Jedicke, Revised with Additions by Robert Duff

RASC London Centre Past President and Public Outreach Coordinator Dave McCarter and fellow member Harold Tutt had already set up their telescopes in the West Campground playground area of Springwater Conservation Area when Peter Jedicke and Steve Gauthier arrived, Wednesday, July 22nd, 2015, around 8:40 p.m. Springwater Conservation Area, Springwater Road, Aylmer, Ontario (south or Orwell).

Dave had already set up his 25.4cm Dobsonian and Harold his 80mm Stellarvue Nighthawk refractor, on a Vixen alt-azimuth mount directed at the 7-day-past new crescent Moon. Peter and Steve set up Peter's 40.6cm (16-inch) Truss-Tube Dobsonian and directed it at the Moon. With deepening twilight all telescopes moved to Saturn and besides Titan, 3 other moons were observed. Some 30 guests showed up, including 20 children and 10 adults. Continuing into the evening, Dave showed people M13, M57 and M27 in his telescope. Peter showed the visitors M57, M71 and M56, all using a magnification of 56X. They packed up at 11:10 p.m. after a very enjoyable evening of astronomy.

Star Night, Gary Hink's Farm and Observatory, July 23rd, 2015

Report by Peter Jedicke, Revised with Additions by Robert Duff

RASC London Centre member Gary Hink's hosted a Star Night for his fellow Rona employees at his farm and observatory on Thursday, July 23rd, 2015, 8:00 p.m. There were 4 visitors who showed up. He was joined by fellow London Centre members Dale Armstrong, with his Vernonscope 80mm refractor on a camera tripod; Mike Roffey, with his 15cm Celestron NexStar 6SE Schmidt-Cassegrain on a Vixen alt-azimuth mount; and Harold Tutt with his Celestron 15 X 70mm binoculars on a tripod.

Peter Jedicke and Steve Gauthier arrived to share the evening. Peter reported that Gary's observatory was quite an amazing facility with a 20.3cm Meade Schmidt-Cassegrain under a roll-off roof and a 38cm (15-inch) Starsplitter Truss-Tube Dobsonian, which slides out on a track from a shed attached to the building. There were 2 eyepieces used with the 38cm Starsplitter Dobsonian including an 8mm and a 14mm eyepiece. Gary also set up his 80mm refractor on a tripod. In addition, Gary had his giant dual magnification 25/40X 100mm binoculars set up on a concrete pier, but for the Star Night only 25X was used.

Objects observed included Venus and the one-day-prior-to-first quarter Moon in early evening twilight. Peter did not know if anyone observed Jupiter but noted that the Moon was particularly striking at this phase with all kinds of dramatic shadows along the terminator. The Moon's brightness affected the rest of the sky throughout the evening. As dusk deepened, all eyes turned towards Saturn. Referring to his dumbphone app, Steve was able to pick out more than the usual array of moons including Titan, Rhea, Iapetus, Dione, Tethys and Enceladus. Mimus eluded them, lost beside the glare of Saturn's rings. Despite scattered clouds there were always gaps with nice transparent sky.

After the visitors had left London Centre members continued observing, with galaxies M101, M81 and M82 being viewed in the binoculars. Peter used the Starsplitter to view galaxy M51, the red giant carbon stars Mu Cephei and WZ Cassiopeia, the Ring Nebula (M57), globular clusters M71 and M56, the open cluster M29, and globular clusters NGC7006 and M22. Dale viewed the Moon, Saturn, Albireo, globular cluster M15, and the red giant carbon stars UX Draconis and WZ Cassiopeia in his 80mmVernonscope refractor. Gary closed down his observatory before midnight and everybody else packed up for the night after an enjoyable evening under the stars with great camaraderie.

Star Night, Lake Whittaker Conservation Area, July 24th, 2015

As Reported by Peter Jedicke, Revised with Additions by Robert Duff

Mostly cloudy skies greeted some 30 visitors for the Lake Whittaker Conservation Area Star Night, Friday, July 24th, 2015. This event was organized by new RASC London Centre member, Scott Vodon, working at the Conservation Area for the summer, and London Centre's Public Outreach Coordinator, Dave McCarter.

Dave brought his 25.4cm Dobsonian and was joined by London Centre members Steve Imrie, with his Orion SkyQuest 20.3cm Dobsonian; and Mark Tindall with his 15cm Celestron NexStar 6SE Schmidt-Cassegrain. They were joined later by Peter Jedicke and Ron Sawyer. Observing was pretty well limited to the first-quarter Moon and Saturn due to the clouds. However, Dave did show people Arcturus, M27, M13 and M57 at one point in the evening. He tried for M51 but the sky was too hazy. Dave also did a constellation tour with his green laser pointer. There were many interesting conversation before everybody packed up to go home.

RASC London Centre member Peter Jedicke described the main action as already over, when he and Ron Sawyer arrived later in the evening, with the Moon and Saturn playing peek-a-boo between clouds. Peter reported that the visitors were not disappointed and Dave McCarter did an excellent job fixing his 6mm knock-off Erfle-Barlow eyepiece, so that it work nicely in Dave's trusty 25.4cm Dobsonian telescope.

Star Night, Pioneer Park, Bayfield, August 8, 2015

Persistent clouds covered the southern sky while to the north of Bayfield it was reasonably clear as RASC London Centre Past President and Public Outreach Coordinator Dave McCarter and fellow member Harold Tutt set up their telescopes for the Bayfield Star Party at Pioneer Park, Bayfield, Ontario (near Goderich), Saturday, August 8th, 2015. Dave brought his 25.4cm Dobsonian and Harold his 80mm Stellarvue Nighthawk refractor, on a Vixen alt-azimuth mount.

Dave began digital slide presentation "Hubble Vision, 25 Years of Discovery" around 9:00 p.m. before 17 adults. The skies had mostly cleared by the end of the slide presentation and while they never did see Saturn they had a good time showing people a number of deep-sky objects including M13, M57, M27, Albireo and Mizar and Alcor. Clouds thickened by 11:30 p.m. and 2 tired observers drove the long distance home.

Star Night, Pittock Conservation Area, Woodstock, August 22nd, 2015

The skies were mostly clear as RASC London Centre Past President and Public Outreach Coordinator Dave McCarter and fellow members Harold Tutt and Gaetan Godin set up their telescopes for a Star Night at Pittock Conservation Area near Woodstock, Ontario, Saturday, August 22nd, 2015. Dave brought his 25.4cm Dobsonian; Harold, his 80mm Stellarvue Nighthawk refractor and Vixen alt-azimuth mount; and Gaetan, his home-built 20.3cm Dobsonian / Newtonian reflector rebuilt on a Sky-Watcher NEQ6 equatorial mount.

They set up their telescopes on the lawn in the Day Use area and people enjoyed high-power views of the first quarter Moon. As the sky darkened, they found Saturn and everyone enjoyed views of the ringed planet. One young girl noticed a star beside Saturn and was surprised to learn that she had discovered Saturn's moon Titan. Gaetan used his Sky-Watcher NEQ mount to automatically navigate his 20.3cm reflector telescope towards the Moon, Saturn and the yellow and blue double-star Albireo, and the globular cluster M13 in the constellation Hercules.

After everyone had seen the Moon and Saturn several times Dave asked if everybody would like to see his digital slide presentation "Hubble Vision, 25 Years of Discovery" and, after receiving a positive response, set up his projector and netbook computer. He received many great questions after the slide talk from some young boys present. They returned to the telescopes but, after waiting for some thin clouds to clear, decided to pack up for the evening. Gaetan estimated that there were 18 adults and children for the evening.

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The next thing on my list was to take the focuser I just removed from my SN and put it in the behemoth! The old focuser had to come out. It was bolted and siliconed in place. I cut the silicone and removed the bolts and it came out without too much fuss. I placed the new focuser on the tube and holy moly! The top holes lined up but the bottom holes were about 3mm to high. I used my drill and pushed the holes down into an elongated shape. The focuser fit perfect. I tested to see how it lined up in the tube but the focuser was not pointing straight through the middle of the tube. I cut some sheet metal strips from some old furnace ductwork and voila! It was now pointing properly. Using the peep hole I could see the secondary was off as well. I had to muscle and bend the vanes a little and got it pretty close to centre. This project only took 45 minutes. Or so I thought.

I took the Meade SN out the next night. It was great. The focuser is a buttery smooth and wonderful piece of tech. Even a focuser can be a thing of beauty! The telescope performed wonderfully and the views were great. I can't wait to put my camera on it!

The next night I took out the behemoth. I was very disappointed. None of my 1.25" eyepieces would reach focus. The focuser was too short. I thought it was the same height as the old one, but I was wrong. Darn! If I used my 2.25" focus extender my 2" eyepieces would focus. I spent the night with my 2" eyepieces and had some great wide angle views. I then put every eyepiece in the focuser and measured how far they had to be. I had a range of distances. My 13.5mm Speers Waler only needed 1/16" more focus travel. My 16mm Nagler needed 7/8" more travel. All my 2" eyepieces need 1" more travel. The next day I marked the end of the tube and moved the main mirror back by 1.25". This is much easier than moving the focuser and the secondary! I collimated the telescope in the daylight and waited for it to get dark. Bingo! I tried every eyepiece and they all reached focus. I felt great.

The next night (four clear nights in a row!) I put my scope in the car and headed out to our dark sky site at Fingal. It was a night to be remembered. I set up the scope before it got dark. I viewed the Moon for a minute before it slid behind a tree. Then I observed Saturn but it was low in the sky and didn't give up much detail. The southern sky was clear and it was getting dark. I started star hopping around Sagittarius. The three small dim globular clusters in the bottom of Sagittarius were visible. They are small but easy to find. M28 the globular cluster at the top of Sagittarius looked good but M22 (the Sagittarius Cluster) looked amazing. In one pocked I had my 2" 34mm eyepiece to use as a 'finder' when pointing telescope. In my other two pockets I had my 16mm Nagler and my 10mm Speers Waler. Find a target, zoom in with another eyepiece to really check it out. Then on to the nebulas. The Lagoon nebula is easy to find and it looked great. I used my (just newly purchased from Astrobuysell.com) 2" OIII filter. Wow! It just popped out with a very dark sky. Fantastic! I used my 28mm Meade SWA eyepiece and just stared at it for some time. You really have to look at objects for an extended amount of time. As you view, more details become apparent, and the pleasure factor of observing increases. I observed star clusters as I moved the telescope up more and more. When I got to the Swan nebula, M17, I used the OIII filter again. It was wonderful to view and I spent some time on it. The other nebulas I observed that evening: the Ring nebula M57, the Dumbell nebula M27. The Dumbell really had a great look to it, very much like an apple core. And then it hit me: I have never viewed the Veil nebulas through one of my own telescopes. They were very close to the zenith and then I found out my telescope wouldn't point that high. Doh! In moving the mirror I changed the balance point and now the tube was sitting too far back in the cradle and it hit the rocker box when tilted up high. No problem. I moved the tube to clear the rocker box but now it was too front heavy. I put my fleece jacket on the back of the tube. Perfect balance! Cheezy but perfect. Both veil nebulas are actually quite easy to find around the constellation Cygnus. I used my 28mm Meade SWA at first with the OIII filter but the nebulas are quite big. I then used my 'face couch' eyepiece: the 40mm Meade SWA and the OIII filter. This eyepiece is enormous and heavy. The veil! Amazing. The east Veil is bigger and I had to scan around to see it all. The west Veil was wonderful to view as well. What a fantastic night. I also found and scanned the North American nebula but it is really big!

I finished off the night looking at the amazing globular cluster M13 in Hercules. I pumped up the magnification and just stared at it for a while. So many stars. And then: the Perseus Double Cluster visible in one field of view with the 40mm face couch eyepiece as well as the galaxy duo in the Big Dipper: M81 and M82. The Owl cluster and the Scorpion (M52) and NGC663in Cassiopeia. And of course the Andromeda galaxy and its companions. Very big and very bright.

I managed to work with steel and create needed lines using high school geometry. I fixed problems using household items and a bit of 'MacGyvering'. I worked with fiberglass and cardboard (the sonotube) and used simple math and problem solving to move the main mirror. Observing objects was done with the time honoured technique of star hopping using star atlases. I used my eyes to observe instead of using a camera for imaging. I really felt a sense of accomplishment through all of this. I made it all work and I got out under dark skies the enjoy the fruits of my labours.

What are you doing in your astronomy hobby right now?