

# POLARIS



Royal Astronomical Society of Canada  
London Centre Newsletter  
July 2008

## Observing Jupiter

By Patrick Whelan

Jupiter is it. Jupiter is king. I love viewing Jupiter! The Great Red Spot and the dance of its satellites.

Jupiter is rising earlier and earlier as the summer goes by. You can find it in the southern skies around 11 pm these days. It is the brightest object in the southern skies. If you wait until 1am or so, it is much higher and better to view.

I just bought a used telescope from [www.astromart.com](http://www.astromart.com) the other month. It is an Orion 127mm Maksutov. It was a bit out of collimation from the trip but I was able to collimate it without too much difficulty. (note: the instructions I found on the Orion website are a wee bit off on how to do it) As you may or may not know, Maksutovs are long focal length telescopes in a small package and they excel at high magnifications. I had the telescope out on a few occasions but the viewing was not that great. I had the telescope out last night and that is what I am going to be writing about.

I live in the east end of London Ontario and the viewing is never all that great. Heat shimmers from my neighbour's roofs and the roads and a ton of light pollution are all the norm for me. Deep sky objects are very difficult to view on all but the most rare of nights. But the planets and the moon are REALLY bright and they are great targets from inside the city. My new 'scope is just the weapon I need for them.

I went outside last night, July 14th, and set up my telescope and tripod on the front porch. I noticed that the moon was almost full and not very far away from Jupiter. I continued undaunted! I will observe Jupiter anyway I thought to myself. Of course, I can always observe the Moon too! Jupiter was still rising and was behind my neighbour's trees. I turned the telescope to the moon.

One thing I noticed the first time I got my Mak out was how stable it was on my mount. I have an LXD75 Meade mount and it normally has a 10" Schmidt-Newt hanging off of it. The 10" really loads it down and I am sure it is at the weight limit for that mount. When you focus the 10", it really jitters around for a bit and to really

get a good focus you have to: focus> let go> check it> focus> let go> check it, until you get it right. With the Mak on the mount I can focus and leave my hand on the focus knob and there is no jittering at all. In fact at one point I realized I had my hand on the telescope and was leaning on it while observing with no jittering at all. A 'medium' mount with a light weight telescope on it is very stable! How sweet it is...

So where was I? Oh yeah, I went outside with the scope and mount and that darn near full moon. I was trying out some eyepieces to see how they worked on the moon and on Jupiter. I have some orthoscopies that I normally use for high power viewing since they really are the eyepiece of choice for that kind of thing. I have an old Coulter 12.5mm ortho, a 9mm and a 5mm University Optics ortho and a 6mm Antares ortho. My newest eyepiece is a 10mm Speer-Waler that has a very wide field of view (70 degrees! compared to 45 degrees for orthos). I was also testing a high power wide field eyepiece, the Orion Stratus 5mm.

When Jupiter made it over the trees I was very surprised by the view. I could easily see many bands on it as well as the Great Red Spot (GRS). I was skeptical at first, since the GRS can be quite elusive from my location and remember that the moon was out! I used the 12.5mm ortho first after centering Jupiter in the field of view with a 32mm plossl. It was very impressive. There did not seem to be very much atmosphere disturbance since Jupiter looked very steady and the moons focused to very small points. In the eyepiece the sky around Jupiter was quite washed out. But the view of Jupiter was fantastic. I tried the 9mm and the view was quite nice but a bit more washed out and the seeing would bring the detail in and out. I was in for a surprise when I put in the Speers Waler. The wide field eyepieces have a lot of glass in them and I figured they would wash out the contrast and detail. Boy was I wrong! The 10mm Speers Waler was my eyepiece of choice for the rest of the evening. The GRS was gorgeous

*(Continued on page 5)*

## Moon Phases



July 3 2008 02:19



July 10 2008 04:35



July 18 2007 07:59



July 25 2008 18:42

### Letter from the Editor

July 15 2008

### Starfest

Starfest is held just outside of Mount Forest Ontario at a campgrounds River Place Park, RR 3, Ayton, Ontario, Canada, Phone:519-665-2228. The coordinates for Starfest are: 80° 50' 27" west 44° 04' 28" north with an elevation of 400 meters.

It is the biggest star party in Canada! This year it is being held from August 7th to the 10th.

My daughter and I have been going for many years now. It is an annual pilgrimage. It attracts over 900 people each year.

Remember that people may be imaging at night so:  
**NO GREEN LASERS!**

## London Centre Executive

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## LONDON RASC MONTHLY MEETINGS

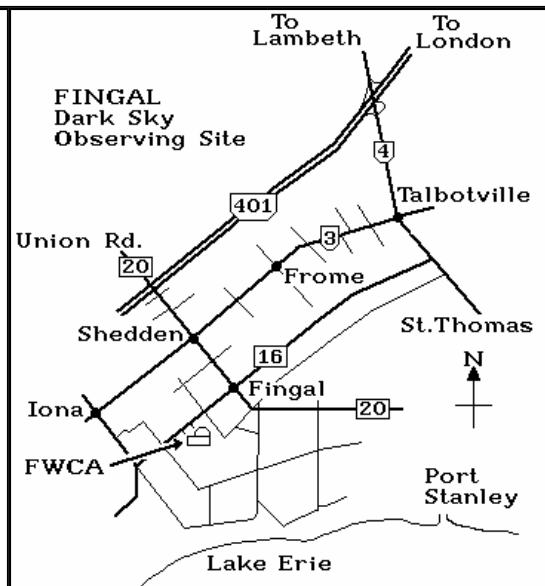
The London RASC group meets at Fanshawe college in London Ontario, September through July on the third Friday of the month at 19:00. They meet in room B1073.

Everyone interested in astronomy is invited to attend and enjoy our guest speaker, member activity and observing reports, announcements of new discoveries and upcoming events, telescopes and telescope accessories show and tell, and other fun activities. Have a look at our future and past activities on our website to see what we are doing.

Parking is free on Friday evenings, and there is plenty of room in the east parking lot off Oxford St. and parking spaces on the south side of B building. Enter the college by B building doors near Oxford Street, just west of the bus stop. College signs at key hallway locations will help you find us. The London RASC webpage can be found at:

[www.rasc.ca/London](http://www.rasc.ca/London)

They have a preferred observing site at Fingal Wildlife Management area.

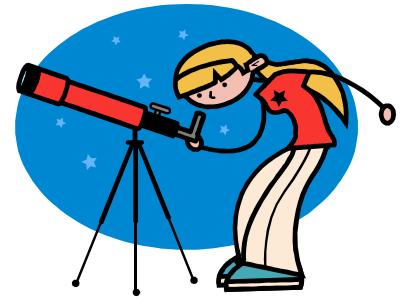


## Sky Events for July, August and September 2008

July 20 Neptune 0.9 S of Moon  
 July 27 Moon 1.1 N of Pleiades (M45)  
 August 2 Venus 2.0 N of Moon  
 August 5 Double shadow transit on Jupiter  
 August 10 Antares 0.4 N of Moon  
 August 12 Perseid meteor shower peaks  
 August 13 Venus 0.2 of Saturn  
 August 15 Neptune at opposition  
 August 16 Mercury 0.7 S of Saturn  
 August 16 Neptune 0.8 S of Moon  
 August 19 Double shadow transit on Jupiter  
 August 23 Mercury 1.3 S of Venus  
 August 23 Moon 1.1 N of Pleiades (M45)

August 26 Double shadow transit on Jupiter  
 August 28 Zodiacal light  
 August 28 Moon 0.6 S of Beehive (M44)  
 September 2 Double shadow transit on Jupiter  
 September 7 Antares 0.3 N of Moon  
 September 8 Double shadow transit on Jupiter  
 September 11 Mercury greatest elongation  
 September 11 Venus 0.3 N of Mars  
 September 13 Neptune 1.8 S of Moon  
 September 13 Uranus at opposition

**Jupiter is high in the southern sky in the evening**  
**Saturn is low in the western sky at sunset**  
**By mid August Mercury becomes visible beside Venus in the evening twilight**  
**Mars is disappearing into the evening twilight**



### R.A.S.C. London Centre Library Books of the Month July 2008 *By Robert Duff*

In order to make our library collection available to members, I bring three books to our general monthly meetings. These "Books of the Month" are available for loan, to be returned at the following monthly meeting.

The books for July 2008 are as follows:

Looking Up: a History of the Royal Astronomical Society of Canada, by R. Peter Broughton. c1994.

The Backyard Astronomer's Guide, by Terence Dickinson & Alan Dyer. Revised Edition. c2002.

More Things in Heaven and Earth: Poets and Astronomers Read the Night Sky, by David H. Levy. c1997.

For a complete listing of our library collection please see our RASC London Centre Web site at: <http://www.astro.uwo.ca/~rasc/>

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)



## Sky and Telescope Subscriptions

Sky & Telescope subscriptions are available at a discounted rate through the London Centre. The cost is \$39.95USD instead of the normal \$49.95USD subscription rate. Please see Bill Gardner for details.

## **Cronyn Observatory, Saturday, June 14, 2008**

**By Robert Duff**

I arrived at the Cronyn Saturday night, June 14th, around 10:30 p.m. and found at least 10 RASC London members and 6 telescopes (4 on the front lawn and 2 on the roof patio) set up. I looked at the Moon through several members' telescopes and at Saturn through the RASC London Centre's 25.4cm Dobsonian (with Richard's 9mm eyepiece), which Dave McCarter had set up on the Observatory's roof patio. The seeing was very good and three moons were visible around Saturn. Adam Priestap-Suttis was also there with his father, Dave. Adam also had his 60mm refractor set up on the roof patio.

The Astronomy Faculty members making the digital slide presentation and operating the 25.4cm refractor in the dome were Dr. Shantanu Basu and Dr. Aaron Sigut.

Dave McCarter recalls that there were only about 25 members of the public at the Observatory throughout the evening with just two non-astronomers in the early stages of the talk. Nevertheless, people were thrilled to see Saturn and Titan through the amateur telescopes. The big 25.4cm refractor in the dome remained directed at the Moon.

Harold and Fraser each brought their 80mm refractors, Bill Gardner his 85mm refractor, and Peter Raine his 60mm refractor. Many thanks to Harold Tutt, Bill Gardner, Marcus Stevens, Peter Raine, Cheri McCracken, Fraser McCrossan, Dave McCarter, Richard Gibbens, Suzie Chelico and Dave and Adam Priestap-Suttis.

## **Cronyn Observatory, Saturday, June 21, 2008**

**By Robert Duff**

I arrived around 8:15 p.m. at the Cronyn on Saturday, June 21st, under cloudy weather with showers. Faculty member Dr. Pauline Barmby and graduate student Mike Attard were there. Pete Jedicke and Dave McCarter arrived a short time later. Only two members of the public showed up. Dr. Barmby showed the IYA2009 trailer and made an interesting digital slide presentation on the infrared Spitzer Space Telescope, which she had used for research.

Afterwards we had a useful discussion on plans for the upcoming International Year of Astronomy in 2009. Peter, Dave and I went to the Dairy Queen for refreshments and further discussion.

## **Cronyn Observatory, Saturday, June 28, 2008**

**By Robert Duff**

I arrived around 8:20 p.m. at the Cronyn Observatory on Saturday, June 28th, under clear sky with hazy clouds. Graduate students Wolfgang Dapp and Talayeh Hezareh were there and Dr. Shantanu Basu arrived sometime later. Wolfgang Dapp made a wide-ranging digital slide presentation, which featured radio astronomy and extra-solar planets amongst other things before an audience, which included many children. More people arrived later so that by the end of the evening we had 50 visitors.

Talayeh directed the Cronyn Observatory's 25.4cm refractor in the general direction of Saturn and waited for twilight to give way to darkness. I set up the RASC London Centre's 25.4cm Dobsonian and directed it towards the construction crane over the building next door to the south. Children and adults marvelled at the view of the crane's structure through the Observatory's 17mm Nagler eyepiece, which yielded 67X in the London Centre's Dobsonian telescope. A large brown hawk perched on the crane facing away from us. Detail in his brown tail feathers and occasional glimpses of his curved beak and head made a fine sight in the telescope. He eventually flew away towards Alumni Hall pursued by a small bird.

The sky cleared first to the west and then to the east around 9:45 p.m. I began by showing people Vega, then Arcturus and Saturn, which made a tiny ringed image at 67X in the Dobsonian. I also found Albireo and Antares. Talayeh showed visitors Saturn through the Observatory's 25.4cm refractor, first with the 52mm (84X) and then with the 35mm (125X) Erfle eyepieces.

Wolfgang Dapp, Dr. Basu, Talayeh, myself and a few remaining visitors observed Jupiter low in the southeastern sky around 11:00 p.m. at 67X through the Dobsonian. It was a pleasing sight with the four Galilean moons lined up to the right (celestial east) of the planet.

There was some misting of the Telrad finder, which made locating objects difficult, and my accessories case was wet with dew at the end of the evening. Everybody enjoyed the star night after what had seemed to be a day of unpromising weather.

## **Cronyn Observatory, Saturday, July 5, 2008**

**By Robert Duff**

Bright blue skies greeted visitors to the Cronyn Observatory on Saturday, July 5th, for what was promising to be an exceptionally clear night. I arrived at around 8:15 p.m. to find Harold Tutt setting up his 80mm refractor on its German equatorial mount. Graduate students Ryan Marciniak and Alyssa Moldowan were there with Ryan giving the digital slide talk and Alyssa operating the big refractor telescope in the dome.

Dan Tremblay was also setting up his 80mm refractor with its German equatorial mount on the west end of roof patio of the Cronyn Observatory. Adam Priestap-Suttis and his mother, Cheryl, were also there. Adam set up his 60mm refractor with its alt-azimuth mount on the east end of the roof patio. Mild back pain ruled out my hauling the RASC London Centre's 25.4cm Dobsonian downstairs onto the front lawn. After a brief consultation with Alyssa we decided that with appropriate supervision we could accommodate three telescopes on the roof patio and Dan Tremblay helped me set up the London Centre's Dobsonian between the other two scopes.

Other RASC London members soon arrived including Peter Jedicke, Eric Clinton (with his son, Ben) and later,

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in it and I could see detail in the bands and around the GRS. With the wide field of view I could see 3 of Jupiter's moons. When I positioned one of the moons near the edge of the field of view the Speers Waler showed very little distortion and the moon was still pinpoint. If I put the moon right at the edge there was a bit of distortion but man, that is way over there and hard to see! What a gorgeous eyepiece.

I tried the 5mm ortho but it made Jupiter bigger and more fuzzy. Too much magnification for the seeing conditions. The 6mm ortho was the same. They both gave a big fuzzy low contrast view of Jupiter. Then I tried the 5mm Orion Stratus. It was very nice on the moon and I would love to try it on small tight globulars but on Jupiter the story was the same: too much magnification. The 10mm Speers Waler was the eyepiece for the evening.

I watched the moon Io pass in front of Jupiter and disappear. It was impossible to see the white moon in front of such a bright Jupiter. Not too long after that the shadow of Io appeared on Jupiter. It was plainly visible as an ink black dot. A very small dot mind you. I explained the sight to some of my friends as being one pixel of 'eyeball resolution'. It was very small but very noticeable. I watched the shadow transit the disc of Jupiter for some time. It was more than half way across the disc when I decided to pack it in. At this point the GRS was over near the limb of Jupiter and not very noticeable any more.

At the end of the evening, just before packing it all in, I brought out my digital camera. It is a canon Rebel XT. I use a home made shutter release made from a Sun Microsystems mouse to minimize blur. (and I use the mirror lock up) I didn't have a Hartmann mask so the focusing was not very good. I took a bunch of pictures using my Televue 3X Barlow to get some close-ups. I photographed the moon in various areas and also tried Jupiter. I figured that Jupiter would be just a blurry white blob in the pictures but I was surprised again that night. I could see the two dark bands on Jupiter in the raw pictures. No processing! The moon shots were okay but the focusing was soft.

All in all a great evening. What a surprise the Speers Waler was! I love my new 127mm Mak and it lived up to its reputation for being a high magnification telescope.

Jupiter I got my eye on you!



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## Star Night, London Public Library, July 10, 2008

By Robert Duff

A hazy sky with clouds drifting in from the west made for less than ideal conditions for the star night in the Rotary Reading Garden of the London Public Library, Central Library, at 251 Dundas Street. Security personnel opened the wooden doors facing the parking area behind the old TD Bank building on Wellington Street, allowing Fraser McCrossan and I to unload our vehicles and set up our telescopes in the Reading Garden.

Peter Jedicke gave a spirited digital slide talk in the TD Canada Trust activity room of the Children's Library to 16 parents and children who had arrived for the event. Peter was able to introduce the talk with the International Year of Astronomy 2009 trailer. It was still light around 9:00 p.m. as we struggled to view the First Quarter Moon with our telescopes through hazy clouds, which washed out contrast in the bright nearly daylight sky.

Fraser had his 80mm Williams Optics apochromatic refractor on its German equatorial mount, which delivered a good view at 48X despite the hazy clouds. I brought my Meade Starfinder 20.3cm Newtonian on its Dobsonian mount. I used the 25mm eyepiece (49X) and briefly tried the 7mm Nagler eyepiece (174.3X). However, the best contrast in the bright hazy sky seemed to be at a magnification of 49X. We

also showed visitors a communications antenna on the roof of the tall office building to the north, One London Place, to better demonstrate telescope performance.

In all, 20 people showed up for the star night, including the 16 who arrived for Peter's digital slide talk. We discussed with the librarian, who had organized the event, cooperation with the upcoming International Year of Astronomy 2009.

By around 9:37 p.m. we had packed up and were leaving the Reading Garden by the entrance to the parking area on Wellington Street. Fraser, Peter and myself went to the Dairy Queen for further discussion after what was a successful event for public outreach



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Richard Gibbens. I took a few photographs with my single-lens reflex film camera on the roof patio and of the group of us surrounding Harold's telescope on the walkway in front of the Observatory.

Alyssa and Peter directed the big refractor in the dome towards the 3-day-old crescent Moon in the west, showing visitors a good view at 84X with the 52mm Erfle eyepiece. They then observed Saturn using the 35mm eyepiece (125X) and later swapped in the Meade 28mm Ultra-Wide Angle eyepiece for visitors to view Jupiter at 156X.

As twilight deepened I showed visitors the star Vega overhead towards the east using the Observatory's 17mm Tele Vue Nagler eyepiece to obtain a magnification of 67X in the 25.4cm Dobsonian. Arcturus was next and one lady marvelled at its orange colour. Adam directed his 60mm refractor towards Saturn in the western sky, just above the Engineering building.

Mizar and Alcor were a fine sight for visitors in the Dobsonian at (67X) with the double components of Mizar nicely split—a good example of a double star. As the sky darkened we directed our telescopes towards Jupiter, which was rising above the trees to the southeast. The four Galilean moons were visible along with the North and South Equatorial Belts on the planet's surface. It was a fine sight at 67X in the Dobsonian and seeing improved as Jupiter rose higher in the sky. Dan Tremblay directed his 80mm refractor at the globular cluster M13 in Hercules and then located the Ring Nebula (M57) in the 25.4cm Dobsonian.

On the walkway in front of the Observatory Harold Tutt showed visitors Saturn, the orange and blue double star, Albireo, and the Ring Nebula (M57) through his 80mm refractor.

We packed up our telescopes at around 11:00 p.m. after an estimated 100 members of the public had visited the Cronyn Observatory. Peter, Harold, Richard, Alyssa and myself went to the Dairy Queen for refreshments and further discussion. Many thanks go to RASC London Centre members Harold Tutt, Dan Tremblay, Peter Jedicke, Eric Clinton and Richard Gibbens, as well as Adam Priestap-Suttis and Astronomy graduate students, Ryan Marciniak and Alyssa Moldovan for making this a great evening of public star gazing at the Cronyn Observatory.

### **Cronyn Observatory, Saturday, July 12, 2008** **By Robert Duff**

Hazy skies with clouds drifting in from the west greeted my arrival at the Cronyn Observatory at around 8:10 p.m. on Saturday, July 12th. Graduate student Jacqueline Otaguro was there to make the digital slide presentation in the lecture room and Dr. John de Bruyn was making ready the 25.4cm refractor in the dome. I set up the RASC London Centre's 25.4cm Dobsonian on the Observatory's roof patio. I also set up the RASC London Centre's photographic display, which I had created for the 2008 General Assembly, on the table near the east wall of the lecture room.

Jacqueline made her first digital slide presentation on galaxies to a group of just 7 visitors. As twilight descended after 9:00 p.m. Dr. John de Bruyn directed the Observatory's big refractor towards the gibbous Moon. Shining brightly through the hazy sky to the south. He had available the 52mm Erfle (84X) and the Meade 28mm Ultra-Wide Angle (156X) eyepieces.

I also directed the London Centre's 25.4cm Dobsonian at the Moon, using the Observatory's 17mm Nagler eyepiece (67X) to show visitors its heavily cratered surface. Switching to the Observatory's 6mm Orthoscopic eyepiece we were able to get an equally impressive view of the Moon's cratered surface close up at 190.5X.

More people arrived and we observed Jupiter, which was followed by the 4 Galilean moons to its celestial east as it drifted across the field of view. Jupiter was impressive when viewed through the 17mm Nagler eyepiece at 67X, with the cloud belts visible on its surface. It was also quite impressive when viewed through the 6mm Orthoscopic eyepiece at 190.5X, although not as sharp because of atmospheric conditions near the horizon. Other objects viewed through the Dobsonian included the Double Double star system Epsilon Lyrae, located with the 17mm Nagler at 67X and nicely split with the Orthoscopic eyepiece at 190.5X, and the orange and blue double star Albireo at 67X. Visitors also viewed Jupiter through the big refractor in the dome.

Jacqueline made a second digital slide presentation to 16 of the late arriving visitors, ending at 11:15 p.m., just after Dr. John de Bruyn and I had come down from the dome. I took home the London Centre's 2008 General Assembly display, which had won some favourable comments from visitors. One couple took a RASC London Centre brochure along with a Starfest pamphlet. A gave another London Centre brochure to a public school teacher who wanted to have a star night at his school.

In all, it was a very successful evening, with a relatively clear sky alternating with hazy clouds. There were about 30 visitors in all that evening. I plan to bring the London Centre's 2008 General Assembly display back to the Cronyn next Saturday and hopefully we can find a permanent place to display it.

