



AURORA



Volume 25, Number 7

The Royal Astronomical Society of Canada - Windsor Centre

March 2000

The Fearless Eclipse Hunters by Rev. Harry

As we all know Thursday January 20th 2000 was the date of the latest eclipse of the moon. We amateur astronomers could hardly wait for what promised to be one of the better eclipses in recent memory. Only one thing could spoil this Heaven sent event, bad weather. This is the story of how a few intrepid astronomers fought off the clouds, and sub zero temperatures (not to mention snow flurries) to win through and obtain the prize, a clear view of the eclipsed moon.

Early Thursday evening I drove over to St. Peter's Anglican Church from my home in the West End of the city. I left the Rectory about 5:45 p.m. just as the full moon was rising. The sky was crystal clear, and the moon hung like a gigantic medallion in the deep blue sky. I attended to my business and left to return home at 9:10 p.m.

Much to my despair the sky had clouded over. Not completely, but with enough patches of thin and thick cloud to arouse both hope and despair. By the time I got back to the Rectory the sky had cleared, and the full moon illuminated the landscape with a wash of silver light.

Upon entering the Rectory I made some phone calls. I decided to go to Robin Smallwood's to view the eclipse. I left just after 10 p.m. and I could see a slight darkening of the lunar disc on the lower left hand side. I arrived at Robin's at 10:25 p.m.

The clouds had started to roll in. There were enough holes that it appeared that we would be able to see something of the moon. One could only hope!

There were other adventurers at Robin's house. John Beaudoin, Allison and Lindsay, and John Carter. They had telescopes and binoculars set up in Robin's backyard. The view was so-so, at times we got some clear views of the moon as it slowly slipped deeper into the Earth's shadow.

As the time of totality approached the clouds were thickening, but we could still see the lunar disc. We adjourned to Robin's Rec. Room, while he awoke his 8 year old son Bryce, to share in the impending event. After helping Bryce prepare for our sub-arctic adventure we headed outside. Alas, the sky was clouded over except for a small patch off to the southeast over Ken Rounge's house.

We were defeated, or were we. It was then that Robin took action. He called Ken Rounge on his cell phone and discovered that Ken's sky was still clear. "Let's head to Ken's" Robin urged us. So the six of us piled into Robin's van and John Beaudoin's car headed off to Ken's.

We traveled at breakneck speed (not really that fast but it makes for a better story). Along the way I called Ken as we crossed Walker Road on County Road #8. Ken's view of the target was still clear but ominous clouds were approaching. Would we make it in time?

We got to Ken's just as the sky had clouded over. You couldn't even see a glow in the sky where the moon should be. Ken and Larry waxed eloquent over the fantastic sights they had just witnessed.

Robin would not accept defeat. We climbed into our vehicles and headed south on County Road #15. About 6-8 kilometers later we encountered a driving snow storm. We stopped, got out, and to our delight, could see a glimmer of moonlight through the snow and cloud.

Robin led us back down the road towards the east. We traveled about three kilometers when his

(Continued on page 3)

<i>In This Issue</i>	
The Fearless Eclipse Hunters	Cover
Calendar of Events / Maps	Page 2
Submitting Articles / Membership	Page 2
Giordano Bruno	Page 3
Windsor Centre Financial Report	Page 4
A Celestial Body With A Magnetic Personality	Page 4
The Lunar Eclipse That Wasn't	Page 5
January Meeting Minutes	Page 6
For Sale	Page 6

Calendar of Events

Our next meeting...

Tuesday March 21, 2000
8:00 p.m.
at
St. Stephen's Church
Howard Road, 1.4 kms. south of
Hwy # 3

Main Speaker...

Joady Ulrich

Topic...

Activities...

Messier Marathon - Saturday March 4 at Ken Rong's House and Saturday April 1 location to be determined

Earth Day - Sunday April 16 at Ojibway Park

May Day Observing - Saturday May 6 location to be determined

Windsor Centre Picnic - Saturday June 3 at Tim Bennett's house.

Council Meeting - Tuesday June 6 at Ken Rong's house. The meeting will begin at 7:25 p.m..

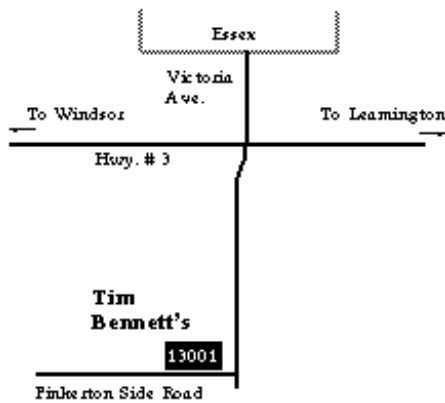
Observing Nights

Frank Shepley's.....Last Quarter Moon

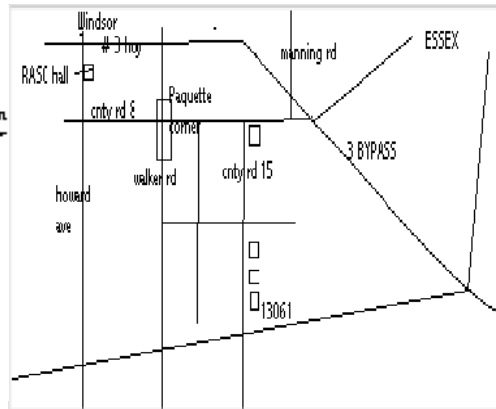
Dan Taylor's.....New Moon

(please call before showing up)

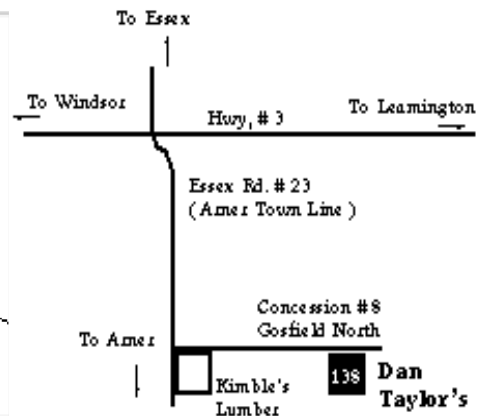
Maps



Tim's House (776-8901)



Ken's House (984-4975)



Dan's House (776-4493)

Submissions

Aurora is published monthly except for August. The September, November, January, March, May and July issues are full newsletters (usually 6 pages) with a number of member submitted articles. The October, December, February, April and June issues are short flyers (2 pages) with one short article. Submitted articles can be of any length from a paragraph to multiple pages. I can scan pictures and/or diagrams (both prints and film) to support your article and the originals will be returned to you.

Submission deadline is the 1st of the month. I will accept Emails at the address below, floppy disks, or written submissions.

Editor: Steve Mastellotto

Email: mastels@towers.com

Membership

The Windsor Centre of The Royal Astronomical Society of Canada meets on the 3rd Tuesday of every month (except July and August) at St. Stephan's church. In addition to regular meetings the centre hosts a number of observing nights, a picnic and a December social. Members receive a copy of the Observer's Handbook, the RASC Journal, a subscription to SkyNews magazine and access to the Centre's library and telescopes.

Membership is \$36.00 - 1 year, \$72.00 - 2 years and \$108.00 - 3 years. Life memberships are also available.

Contact Frank Shepley at (519) 839-5934 or visit our website at:

Giordano Bruno

by Rod Clark

FEBRUARY 17, 1600

Twinkle, twinkle little star
How I wonder what you are
Up above the world so high
Like a diamond in the sky.

This year's February 17th is on a Thursday and four hundred years ago, it was also on a Thursday. On that day, in the city of Rome, a fifty-one-year-old former monk was being led in chains to a cruel death.

Filippo Bruno was born in 1548, just five years after Copernicus published his revolutionary claim that the Sun, not the Earth was at the center of the universe, around which all else revolved. At the age of sixteen, Filippo entered the Dominican order in Naples and took the name Giordano. He was instructed in Aristotelian philosophy but his inquisitive mind attracted him to new streams of thought that included the heliocentric theory of Copernicus. This brought him to the attention of the Inquisition and in 1576, he was forced to flee to Paris. For the next sixteen years, he traveled to the cities of Europe, developing and proclaiming his unorthodox theories.

Bruno had adopted the Copernican theory but took it even further. Copernicus thought the stars were merely part of the firmament, a finite sphere that encased the solar system. Bruno said that they were actually distant suns scattered throughout the universe. Around these suns circled planets and living on these planets there could be other living creatures.

Bruno's perception of the universe came almost three decades before Galileo saw Jupiter and its moons through his new telescope. Galileo was unable to solve the mystery of the stars.

Giordano Bruno was a philosopher. He did not practice astronomy as a scientist. His insights were derived from his religious and philosophical background. He believed that if God was infinite then his universe must also be infinite. "Thus is the excellence of God magnified and the greatness of his kingdom made manifest. He is glorified not in one, but in countless suns, not in a single earth, a single world, but in a thousand-thousand, I say in an infinity of worlds."



A half century later, Bruno's pantheism would influence the metaphysics of the German philosopher, Spinoza, but for the late sixteenth century, it raised more questions than the old dogmas could tolerate.

Bruno was confined to prison for eight years during which time he was interrogated and given many opportunities to recant. In the year 1600, he was tried and sentenced to be burned at the stake.

His response was, "Perchance you who pronounce my sentence are in greater fear than I who receive it."

On February 17, the sentence was executed.

It has taken many more brave men to guide us from the darkness of uninformed superstition. We owe them gratitude for their hard-won understanding and for the independence of thought that we enjoy. In this new century, we will continue to explore the universe spurred on by the glorious freedom of wonder.

Twinkle, twinkle little star
Now we know just what you are.

Fearless Eclipse Hunters

(Continued from page 1)

cell phone rang. Upon answering Robin discovered that it was Lindsay's mother inquiring where we were. Robin assured her that her daughter was safe (after all she was with three mature men and two other children in the middle of nowhere on the coldest night of winter to date). But not to worry! He neglected to mention that his gage was sitting on empty since we left Windsor.

We finally came to a stop (voluntarily, we never did run out of gas I was praying too hard). We disembarked, looked up and saw a glorious sight. The fully eclipsed moon shining brightly in the frigid sky.

As we watched the sky cleared even more. We could easily see the familiar stars of Orion, and the Beehive Cluster. The moon itself was hauntingly beautiful.

It appeared like a globe of light hanging in the sky. It's spherical shape was more obvious than when you observe a normal full moon. The upper half of the lunar disc was dark, almost a blackish green like the patina of an old copper roof. The lower half was a lighter coppery red much brighter than the northern half. We stood there for about 15 minutes basking in the wondrous scene. Truly it was one of those special moments that astronomers seek, a beautiful almost spiritual event.

Finally we packed it in. The numbing cold and the late hour had proven too much. It was beginning to cloud over, and the wind was picking up. We headed back to Robin's with the satisfaction that comes from conquering the elements. WE HAD SEEN IT!!!!

Windsor Centre Financial Report by Frank Shepley

Windsor Centre - RASC Income Statement October 1,1998 to September 30,1999		Windsor Centre - RASC Balance Sheet as of September 30,1999	
REVENUE		ASSETS	
Operating Income		Current Assets	
Associate Membership	28.00	Bank Account	2232.88
Membership	1206.00	Cash On Hand	50.00
Life Member Grant	28.80	Total Cash	2282.88
Donations	459.11	Accounts Receivable	9.50
Draws and Raffles	232.16	National Office Credit	1.60
Miscellaneous	36.04	Total Current Assets	2293.98
Educational Activities	0.00	Merchandise	
Interest and Dividends	0.44	B.O.G.	0.00
Total Operating Income	1990.55	Handbook	61.53
Merchandise Income		Calendar	0.00
B.O.G.	32.00	Mug	161.04
Handbook	0.00	Pins	94.86
Calendar	285.00	Sky & Tel Stickers	0.00
Mug	28.00	Total Merchandise	317.43
Pins	10.00	Long Term Assets	
Sky & Tel Stickers	0.00	Mutual Fund	5000.00
Total Merchandise Income	355.00	Total Long Term Assets	5000.00
TOTAL REVENUE	2345.55	TOTAL ASSETS	7611.41
EXPENSE		LIABILITIES	
Operating Expense		Current Liabilities	
Bank Charges	7.80	Accounts Payable	0.00
General Supplies	71.99	Sky & Tel Payable	13.45
Equipment	0.00	Astronomy Payable	13.32
Telescopes	286.92	Total Current Liabilities	26.77
Miscellaneous	409.73	Membership in Advance	
Hall Rental	125.00	Student Membership 2000	18.00
Newsletter	236.05	Regular Membership 2000	244.80
Total Operating Expense	1137.49	Regular Membership 2001	57.60
Merchandise Expense		Student Membership 2001	9.00
B.O.G.	31.48	Regular Membership 2002	28.80
Handbook	0.00	Student Membership 2002	9.00
Calendar	211.96	Total Membership in Advance	367.20
Mug	19.52	TOTAL LIABILITIES	
Pins	6.32	393.97	
Sky & Tel Sticker	0.00	EQUITY	
Total Merchandise Expense	269.28	Equity	
Subscriptions		Current Earnings	882.03
Sky & Telescope	56.75	Windsor Centre Capital	6335.41
Total Subscriptions	56.75	Total Equity	7217.44
TOTAL EXPENSE	1463.52	TOTAL EQUITY	7217.44
NET INCOME	882.03		

A Celestial Body With A Magnetic Personality by Bert Huneault

Ever heard of magnetars?... Well, a magnetar is a very special kind of neutron star, one with a super-powerful magnetic field. One such critter, SGR 1900+14, is located about 20,000 light-years away and is the strongest magnet in our galaxy. Incidentally, SGR stands for Soft Gamma Repeater, spinning neutron stars known to emit bursts of soft gamma rays and hard x-rays.

How strong is this particular SGR's magnetic field?... It is estimated to be 10 to the 15th power Gauss, i.e.

1,000,000,000,000,000 Gauss! To put this in perspective, the Earth's magnetic field which deflects compass needles has a strength of slightly less than 1 Gauss.

A magnet as strong as SGR 1900+14, located at about half the distance to the Moon, would easily erase your credit cards and suck pens out of your pocket. Now, THAT'S a magnet!

More information on the nature and history of SGRs and magnetars can be found on the Internet at this URL: <http://solomon.as.utexas.edu/~duncan/magnetar.html>

The Lunar Eclipse That Wasn't by Dave Marchand

For most of you the recent total lunar eclipse would have been your first view of such an event without having to travel to some exotic location. We have had our fair share of lunar eclipses both total and partial in this area compared to solar eclipses which have a much narrower field of coverage. The forecast for the evening predicted cloud cover but at what time and how complete was still anyone's guess. I had plans to head out to Frank Shepley's place with an almost unobstructed view in all directions. Because the moon was going to be almost directly overhead I had debated whether to observe from home or at Frank's. The temperature had started falling during the day forcing me to quit work early due to a lung ailment so I thought it wise to set up at home instead. Just after sunset I started to set up the 10" Meade with a 4" piggyback for photos and slides. I anticipated using up some of that 1600 ASA film I won as a door prize a few years ago during the height of the Hyakutake - Hale \Bopp comet apparitions. After polar alignment it was just a waiting game until the first visual signs of the shadow appeared. And just as the shadow started across the surface of the moon a bank of clouds came in from the west. I could see them illuminated with an orange tinge from the Detroit skyline with the casino spotlights tracing out designs on them. My first picture came at 10:03 p.m. when the eastern edge of the moon had the smallest bite out of the side. At 10:13 p.m. anyone looking at the moon would have noticed that something was amiss with the surface which was at full just hours ago. But before I could take the next picture another faster moving bank of clouds started moving in from the west but this time I could not see any clear openings like in the previous clouds. The forecast which predicted a light snowstorm to start around 11:00 p.m. was finally here and I only managed to take two more pictures through some thin spots in the cloud cover. Needless to say the sky was

completely overcast before the earth's shadow had covered 2/3 of the moon's surface. Frank on the other hand had called twice to say he managed to see the moon in full eclipse just before the clouds had made their way over Ruthven. Obviously his place was the preferred choice to view from. It was not a total disappointment for me seeing as I had successfully taken pictures of many previous eclipses over the years. But as they say every eclipse is different and it would have been nice to see what the moon would have looked like at totality.

Communing with the Stars by Martha Pinch

Air-planes with incessant blinking,
interrupts my ponderous thinking.
Don't want to think of folks in flight,
winging through the dark of night.

A satellite goes scooting by,
man made clutter in the sky.
Thoughts of satellite communication,
shatters my serious meditation.

Long past the time for bed,
but Gods chandelier hangs overhead.
Serenity of the stars soothes my soul,
artistically arranged from pole to pole.
His signature, a meteor streak of light.
It is enough for me this night.

UNIVERSAL SCIENCE



Windsor's Astronomy And More Store

Celestron Starhopper Dobsonian Telescopes, 6" f/8 - \$499, 8" f/6 - \$675
5" f/8 Closed Tube Newtonian Telescope on Heavy Duty Equatorial Mount,
26mm Plossl, 6x30 Finder, Barlow - \$549.00
The Sky Level II - Version IV - Sale Price \$39.99 (regularly \$119)

Visit us at our showroom
3690 Walker Road, Unit 1
Windsor, ON N8W 3S7

Telephone: (519) 969-0751
Fax: (519) 969-9620

Hours: Tuesday and Wednesday 10:30am - 6:00pm,
Thursday and Friday 10:30am - 8:00pm, Saturday 10:00am - 5:00pm
Closed Sunday and Monday

\$5.00 OFF

on purchases over \$30.00

1 coupon per purchase

Expires April 30th, 2000

January Meeting Minutes

GENERAL MEETING MINUTES

January 18, 2000

President Susan Sawyer-Beaulieu called the meeting to order at 8:02 p.m.

President asked the membership to review the November 18, 1999 general meeting minutes.

MOTION # 1 1-18-2000 Tim Bennett put forth a motion to accept the minutes of the November 18, 2000 general meeting as printed in the newsletter. Motion was seconded by John McDermott. Carried.

REPORTS

Secretary - Joady Ulrich was absent.

Treasurer - Frank Shepley mentioned that he has membership cards available.

National Council Rep. - Tim Bennett mentioned that the G.A. for 2000 will be held in Winnipeg this year. He has information forms for anyone who wishes to do a talk or paper session and registration forms. The National Council is looking for a new editor for the Journal.

Librarian - Tom Sharron has completed setting up the library at his residence. Members can contact him for books and videos.

Public Education - Randy Groundwater was absent. The President read a report from Randy stating that CBC 1 and AM 800 radio stations will be broadcasting an interview he did regarding the lunar eclipse on January 20, 2000. He also will add

new members to the phone list.

Editor - Steve Mastellotto has current flyers available. He has printed a chart of the lunar eclipse on the back of the flyer for members to use as a reference. Newsletters from other centres are also available. Henry Lee has sent Steve some articles from China for the newsletter. As usual Steve is looking for new articles for the newsletter.

BUSINESS

Council Meeting - February 8, 2000 at Steve Pellarin's

Director of Observing - Robin Smallwood handed out a star chart of the Gemini region highlighting various items to observe. He also mentioned the lunar eclipse on Thursday.

50/50 draw was on by Jamie Burgess - \$13.50

Frank mentioned as of tonight we have three more new members.

Jim Meredith gave a talk on using binoculars.

Susan Sawyer-Beaulieu gave a talk on making your own eyepiece case.

Steve Pellarin did a short talk on the Galileo Probe due to time constraints. He will do a full presentation at a later date.

President thanked the speakers.

Meeting was adjourned at 10:22 p.m.

For Sale

94mm Brandon Refracting Telescope by VERONscope (U.S.A.). This is a high-end F/7 Apochromatic Triplet of almost 4" in diameter. zero-colour, razor sharp lunar & planetary views, splits close double stars with ease. Very compact 27" long and only 11.5 lbs, the 2" focuser has lockdown for astrophotography. Includes aluminum mounting saddle split rings, 2" Meade star diagonal 90-deg, 1 1/4" Erect-Image diagonal prism 45-deg, 1 1/4" reducing bushing for 1 1/4" eyepieces, Orion EZ finder (red dot). Price \$1,200.00. Contact Alan DesRosiers at (519) 735-9550 or e-mail at desros@jet2.net.

10" f/6 aluminized mirror with matching secondary mirror, diagonal holder and spider for 11 1/2" tube. 2" Meade focuser with 1 1/4" adapter. Entire package for \$750.00. Contact Satish Shonek at (519) 736-0753.

Meade MPS-SN6 6" f/5 Schmidt-Newtonian. Equatorial fork mount with AC drive, 2" focuser with 1 1/4" adapter, 6x30 finderscope, 9mm Meade MA, 25mm Meade MA, and Celestron 45mm Plossl eyepieces, Meade 2x barlow and dust caps. Complete telescope. \$1,000.00. Contact Ignacio Chacon at (519) 979-0077.

Complete Darkroom. Omega C760XL Dichroic (Colour) Enlarger and base, 50mm f/2.8 El-Nikkor lens for 35mm negatives, 90mm f/4 Rodenstock lens for medium format. Negative carriers, double blade easel, electronic timer, grain focuser, trays, tongs, graduates, developing tanks, thermometer, changing bag, everything you need to set up your own darkroom. \$1,000.00. Contact Steve Mastellotto at (519) 735-9046.