

Event Horizon

November 2004

Volume 12 Issue 1

Observing Notes *by Mike Spicer*

JOIN US AT BINBROOK !

Join HAA members at Binbrook Conservation Area for an evening of observing from 6:00 pm EST. Bring a lawn chair and binoculars if you don't have a telescope. Mittens, warm coat, toque and even a blanket may be a good idea if you plan to stay late. You can tell your friends and family you saw Orion, the Pleiades and Saturn! Email Observing Director Greg Emery or Mike Spicer, to make sure someone can open up the big gate for you (email address at the bottom of this screen)

RECENT OBSERVING EVENTS

Thick low cloud threatened to obscure the total Lunar Eclipse on Wednesday night, but that did not deter HAA Chair Glenn Muller and several members who staked out the relative darkness of the gravel parking lot at Bayfront Park in Hamilton, eating Timbits and waiting (im)patiently for the sky to clear. After 11 pm the clouds and haze blew south, the air became very transparent for the totality. About a dozen of us watched the rusty-grey moon framed in stars and high in the south, just below the constellation Aries. Yes, it was cool and windy at times, but worth the wait. A new member (welcome, Matthew!) brought his 8" reflector and recorded digital photos; the rest of us used binoculars.

The weekend of 9-10 October offered observers at Binbrook a bonanza of objects: Uranus, Neptune, asteroid Vesta, Messier objects 2, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 20, 22, 25, 30, 31, 32, 54, 55, 56, 57, 69, 70, 71, 75, 92, 107 and 110; NGC 891, 6520, 6522, 6569, 6624, 6638, 6642, 6644, 6658, 6723, 6818, 7009 (we saw the rings of the Saturn Nebula!), 7331.

Sunday evening 3 October was a spectacular opportunity for observing at Binbrook. One long-time HAA

member came out for the first time to observe with us! Participants used 10 x 50 binoculars, a 3.5" apo refractor (perfect!) and an 11" SCT to view the blue disks of Neptune and Uranus, dozens of Messier objects, double stars and some faint fuzzies known only by NGC number!

Saturday evening 2 October there were nine observers at Binbrook with several go-to apo telescopes and two larger dobsonian reflectors offering excellent high-magnification views of double stars. Sagittarius yielded up all of its M object sights in crystal-clear darkness and that alone made the night worthwhile.

Wednesday 22 Sept and Saturday 25 September a number of observers out at Binbrook with various telescopes (a few apo refractors among them) trained on the moon with different filter and eyepiece combinations.

Monday 20 September six observers, a couple of scopes and a great pair of binoculars cruised the sky from the high ground at Binbrook, lit by the crescent moon and hazy with cirrus clouds until later in the evening.

Sunday evening 19 September 9 observers used 5 telescopes from 8 pm for lunar viewing in cloudless, still fall air. There was practice aligning GEM and go-to alt-az telescopes, eyepiece swapping, star chart-comparing, constellation identification and after moonset, binoviewing of planetary nebulae and other DSO's.

Email Reminder notice

We send email reminders before each meeting which describes the location, time and topic of the general meeting.

If you're not on the list, make sure that you receive your reminder by sending a note to: publicity@amateurastronomy.org

Upcoming events	page 2
Chair's report	page 3
November Sky	page 3
For Sale	page 4

Eye Candy	page 4
NASA	page 6
Financial Statements	page 7
Calendar	page 10

Upcoming Events

Event: MOON MADNESS MARATHON

Date: Monday November 15th to Saturday the 20th 7-9PM

Location: Hamilton Bayfront Park

Admission: Free. Everyone is welcome!

Details: Would you like to see the terminator up close? Not the Hollywood franchise, but the line dividing night and day that gives the Moon its phases. Craters, crevices, mountains, and volcanoes stand in sharp relief when at the shadows edge. And, when seen through high-powered telescopes the views rival those seen by the Apollo astronauts. As the Moon moves through its first quarter, November 15th to the 20th, members of the Hamilton Amateur Astronomers will congregate at Bayfront Park from 7-9pm to explore the features revealed each night. Naturally, the public is invited to this Moon Madness Marathon and details can be found at www.amateurastronomy.org or by calling 905-945-5050.

Event: HAA meeting

Date: Friday December 10, 2004 7:30PM

Location: The Spectator building.

Admission: Free. Everyone is welcome!

Subscription Offer for Members

Members of the club are eligible for a discount on Sky & Telescope Magazine subscriptions.

The regular annual rate is \$49.95 (U.S.). HAA members pay only \$39.95 (U.S.).

Contact Ann Tekatch for information on how to sign up; tekatch@sympatico.ca 905-575-5433

Domain Name and Web hosting for the Hamilton Amateur

Astronomy club supplied by

Axess Communications

Corporate and Residential DSL and Web Hosting

<http://www.axess.com>

support@axess.com



Event Horizon is a publication of the Hamilton Amateur Astronomers (HAA).

The HAA is an amateur astronomy club dedicated to the promotion and enjoyment of astronomy for people of all ages and experience levels.

The cost of the subscription is included in the \$25 individual or \$30 family membership fee for the year. Event Horizon is published a minimum of 10 times a year.

HAA Council

Hon. Chair Jim Winger
 Chair Glenn Muller
 Second Chair Doug Welch
 Secretary Margaret Walton
 Treasurer Cindy Bingham
 Observing Dir. Greg Emery
 Publicity Gail Muller
 Editor/Web Anthony Tekatch
 Membership Dir. Stewart Attlesey
 Councillor Bob Christmas
 Councillor John Gauvreau
 Councillor Ann Tekatch
 Councillor Cathy Tekatch
 Councillor Mike Spicer

PO Box 65578
 Dundas, ON
 L9H 6Y6

(905) 575-5433

Chair's Report

by Glenn Muller

Well, the results are in and it appears that the HAA has claimed Silver in the Gemini Imaging Contest Olympics. In fact, both our proposals were runners-up for time on the GMOS and MegaPrime cameras. Details on the chosen targets will be posted when available but, in the meantime, our congratulations go to the Quebec and Alberta clubs that submitted them. It was a lot of fun and even though we didn't win at least we were consistent.

Speaking of consistent images, our own Bob Christmas captured yet another one on his recent trip to Spectacle Lake Lodge. If you haven't visited Bob's gallery on our website lately, his new shot of Orion's Sword and Nebula is certainly worth logging on for.

Of course, my infrequent trips to Flamboro Downs continue to prove that I rarely pick a winner - but that never stops me from making predictions. For the October 27th morning show of 900 CHML I crawled onto that limb to forecast clear skies for the evening's lunar eclipse. By 9:30pm, however, the clouds sat heavy on the branch where I'd perched my credibility.

Still, the handful that gathered to observe at Bayfront Park had optimistically brought an 8" Newtonian and several pairs of binoculars, including my own mounted on a mirror box. While the Moon teased just enough to maintain interest, a steady wind continued to keep our hopes up. With only fleeting glimpses of the shadow, its progress was dramatically enhanced by the intervals between. Just before totality, however, my exoneration came complete as the cumulus crumbled to reveal a jaw-dropping, copper-tinged, lunar landscape.

Once the transparency improved, eyes became glued to eyepieces. Stable on their platform, my 10x50's resolved with sharp relief the coloured contours and shaded terrain. I took that in for several moments then expanded my view to the immediate stars in Pisces. Bee-like, the swarm of tiny glinting chips from light years away accentuated three-dimensional Space with their apparent closeness to the hive.

It was hard to tear away from that burnished copper disc but the rare sight was one that had to be shared. Normally, an event like this would have brought Van Morrison's *Moondance* to mind, but on this night a proverb by A. Nonymus seemed more appropriate for it was he (or she) that said "Don't be afraid to

go out on a limb - for that is where the fruit is".

Glenn invites your comments on these topics or any aspect of the club. He can be reached via chair@amateurastronomy.org



November Sky by Greg Emery

Assuming there are clear skies to be had, November is the early start of some nice Winter viewing. On those rare November nights we can get clean and crisp skies (with the corresponding cold temperatures).

The moon is new on November 12 and full on the 26th of the month. Planets in the evening sky are Uranus and Neptune in the constellations Aquarius and Capricornus, respectively. Neptune sets at approximately 22:00 (Local) on November 20, 2004. Much later in the night (or early in the morning for you morning people) we have Saturn, Jupiter, Venus and Mars to behold. Saturn rises with Gemini around 21:00, and should be in good viewing position by 01:30 earlier in the month and by 00:00 in late November early December. Jupiter and Venus were in conjunction in the first week of November and are still relatively close together in the constellation Virgo. Mars also lies in Virgo, east of Venus.

On November 22, 2004 around 05:00 to 06:00 Jupiter and Venus will be about 10° north-northeast of Spica (α - Virgo) while Jupiter is about 12° West of Spica. The three will form a nice triangle of bright objects.

There are a host of Deep Sky Objects to view. Several beautiful open clusters can be seen M44 (Beehive or Praespe) in Cancer, M45 (Pleiades) in Taurus and the Double Cluster in Perseus. M31/32/110 in Andromeda is in good viewing position. For those of you with a small/medium sized telescope and a large imagination M33 in Triangulum is a nice galaxy to view.

However, Orion the Hunter is out and about. Regardless of my intentions or target list, I personally end up playing in Orion. The sight of M42 in even a small scope is wondrous.

I will personally plan to not touch my telescope or plan to go out observing for the month of November, that hopefully will guarantee clear skies for the rest of you.

Telescopes for sale



Meade LX200

I am interested in selling a Meade LX200 (10") telescope (electronic version). It includes a 26mm eyepiece, star diagonal, tripod and carrying case. It has a 65,000-object database. The original price was \$4499.00 (purchased from Khan Scope Centre in Toronto). It has seldom been used as my circumstances were such that I was unable to find the time to seek locations away from light pollution. As such it is in excellent condition. I am asking \$2900, but this is negotiable- within limits.

If interested or for further information I can be contacted by e-mail at nep48@yahoo.com or by telephone at (450) 267-0710. As I am hearing impaired please ask for Stella or leave a phone number where you can be reached.



Celestron CR-150-HD 6

I have a Celestron CR-150-HD 6 (6" refracting telescope). As a result of poor eyesight I no longer can use my telescope and it has been sitting here unused for a couple of years. Some of the features on this telescope are: telrad, it can hold 1 1/2" and 2" eye pieces, has a 9x50 finder scope. Still have the original boxes. I paid well over \$2,000 for it and I'm open to any reasonable offers. This telescope is in mint condition.

Colin (905) 524-9887

Hamilton, Ontario

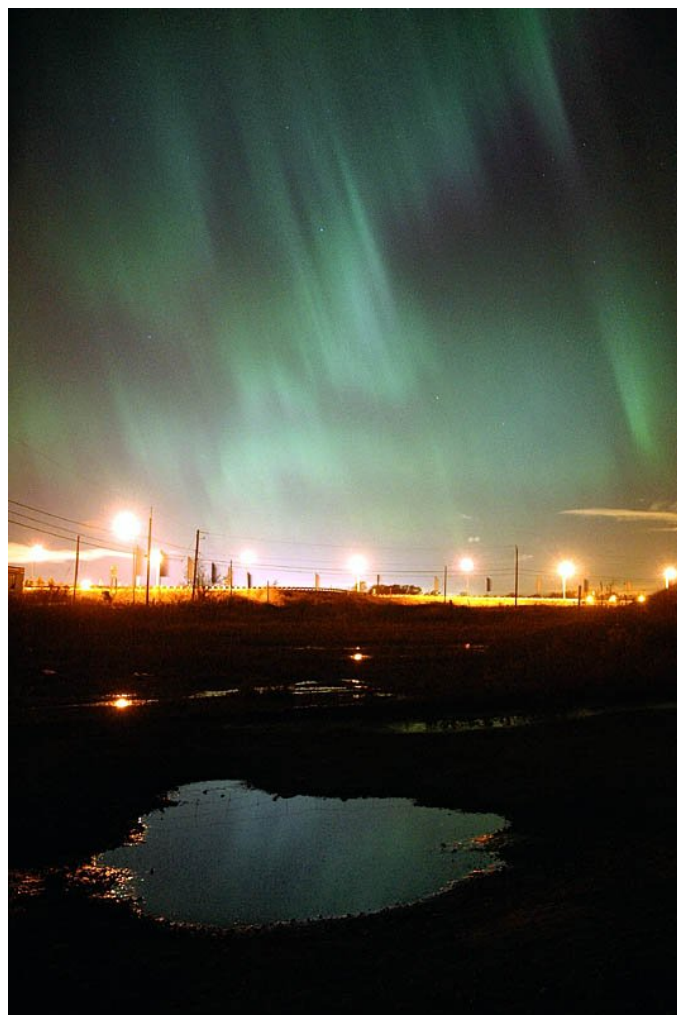
EyeCandy



The Hamilton Amateur Astronomers invited everyone to catch the Halloween Moon (Lunar eclipse) at Bayfront Park on October 27th. Photo by Glenn Muller.



Orion's Sword Photo by Bob Christmas



Aurora from November 7 by Bob Botts



October 2004 Lunar eclipse photo by Lou Darcie



October 2004 Lunar eclipse photo by Matthew Rosato



October 2004 Lunar eclipse photo by Bob Botts



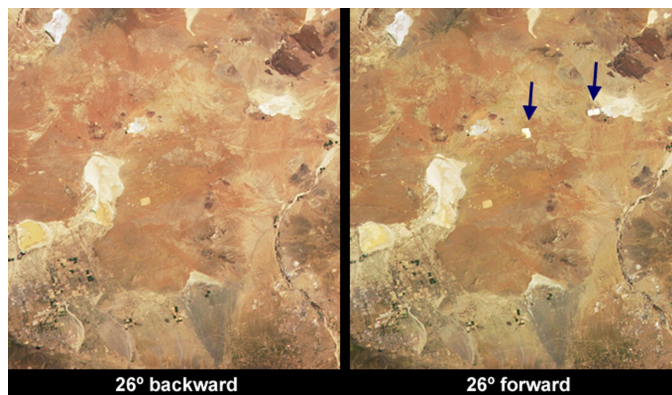
A Summer Vacation Tracking Down UFOs

by Diane K. Fisher

Erin Schumacher's summer job for NASA was to look for UFOs. Erin is a 16-year-old high school student from Redondo Beach, California, attending the California Academy of Mathematics and Science in Carson. She was one of ten students selected to work at NASA's Jet Propulsion Laboratory (JPL) in Pasadena as part of the Summer High School Apprenticeship Research Program, or SHARP.

But is studying UFOs a useful kind of NASA research? Well, it is when they are "unidentified flashing objects" that appear in certain images of Earth from space. Erin worked with scientists on the Multi-angle Imaging SpectroRadiometer (MISR) project to track down these mysterious features. MISR is one of five instruments onboard the Earth-orbiting Terra satellite. MISR's nine separate cameras all point downward at different angles, each camera in turn taking a picture of the same piece of Earth as the satellite passes overhead. Viewing the same scene through the atmosphere at different angles gives far more information about the aerosols, pollution, and water vapor in the air than a single view would give. Ground features may also look slightly or dramatically different from one viewing angle to another.

Erin's job was to carefully examine the pictures looking for any flashes of light that might be visible from just one of the nine angles. Such flashes are caused by sunlight bouncing off very reflective surfaces and can be seen if a camera is pointed at just the right angle to catch them. Because the satellite data contain precise locations for each pixel in the images, Erin could figure out exactly where a flashing object on the ground should be. Her job was then to figure out exactly what it was that made the flash in particular, to see if she could distinguish man-made objects from natural ones.



Two cameras on MISR made these images of the same part of the Mojave Desert. The camera pointed at an angle of 26 forward saw the flashes from two solar electric power generating stations. These objects are nearly invisible at the other angle.

When Erin began working at JPL, scientists on the MISR project had already identified two large flashes out in the middle of the Mojave Desert in Southern California. These turned out to be from solar power generating stations. Soon, Erin began finding flashes all over the place. She learned how to apply her math knowledge to figuring out how the objects would have to be oriented in order to be seen by a particular MISR camera. One time, she and a team of MISR scientists and students went on a field trip to the exact locations of some flashes, where they found greenhouses, large warehouses with corrugated metal roofs, a glass-enclosed shopping mall, and a solar-paneled barn. For some flashes, they could find nothing at all. Those remain "UFOs" to this day!

Learn more about SHARP at www.nasasharp.com and Earth science applications of MISR at www-misr.jpl.nasa.gov Kids can do an online MISR crossword at spaceplace.nasa.gov/en/kids/misr_xword/misr_xword1.shtml

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Council meetings

All club members are welcome to attend the council meetings. Contact info@amateurastronomy.org for details.

**HAMILTON AMATEUR ASTRONOMERS
BALANCE SHEET
AS AT OCTOBER 31, 2004
(Unaudited)**

	Oct 31 2003	Oct 31 2004
ASSETS		
Bank	1616	3124
Investmen	0	2442
Inventory	223	212
Prepaid P.O. Box Ren	105	105
Prepaid Banquet Expi	<u>0</u>	<u>837</u>
Total Current Assets	1944	6720
Fixed Assets - Equipm	<u>3059</u>	<u>1287</u>
TOTAL ASSETS	<u>5003</u>	<u>8007</u>
LIABILITIE		
Accounts Payable	0	0
Deferred Membership Revenue	540	665
Deferred Banquet Re	<u>0</u>	<u>1440</u>
TOTAL LIABILITIES	<u>540</u>	<u>2105</u>
EQUITY		
Opening Balance	5902	5552
Current Ye	<u>-1439</u>	<u>350</u>
EQUITY CLOSING BALANCE	<u>4463</u>	<u>5902</u>
TOTAL LIABILITIES AND EQUI	<u>5003</u>	<u>8007</u>

Prepared by Cindy Bingham, Trea

**HAMILTON AMATEUR ASTRONOMERS
INCOME STATEMENT
AS AT OCTOBER 31, 2004**
(Unaudited)

	Oct 31 2003	Oct 31 2004
INCOME		
Banquet Revenue	2085	0
Donations	0	43
Membership Fees	1540	1977
Observers Handbook/Calendar S	368	585
Investment Income	41	0
Interest Income	0	442
	<hr/>	<hr/>
TOTAL INCOME	4034	3047
	<hr/>	<hr/>
EXPENSES		
Banquet Expenses	2640	0
Bank Charges	0	34
Donation Expense	103	150
Handbooks/Calendar Cost of Sal	335	465
Insurance	1080	810
Meeting/Observing E	194	73
Office Supplies	30	0
Printing Expense	686	522
Post Office Box Rent	105	77
Postage	269	284
Promotion	31	282
	<hr/>	<hr/>
TOTAL EXPENSES	5473	2697
	<hr/>	<hr/>
SURPLUS/DEFICIT	-1439	350
	<hr/>	<hr/>

Prepared by Cindy Bingham, Trea

Hamilton Amateur Astronomers Membership Renewal November 1, 2004 - October 31, 2005

Name:	
Address:	
City:	
Postal Code:	
Phone:	
E-mail:	

Type of Membership:

Individual (\$25 Cdn/year)	
Family (\$30 Cdn/year)	
Royal (\$50 Cdn/year)*	
Friend (\$100 Cdn/year)*	
Patron (\$250 Cdn/year)*	
Voluntary Donation \$	

* These levels of membership confer the same rights and privileges as a Family membership. We greatly appreciate the additional financial support our members provide by signing up as a Royal, Friend or Patron.

All membership dues are eligible for tax receipts.

Total:	\$
--------	----

Please make cheque payable to:

Hamilton Amateur Astronomers
P.O. Box 65578
Dundas, Ontario
L9H 6Y6
CANADA

Membership renewals are due November 1.

December 2004

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday			
			1	2	3	4			
5	6	7 Moon appears close to Jupiter	8	9	10 HAA General Meeting at the Spectator building	11			
12 Geminids meteor shower	13 Geminids meteor shower	14 Geminids meteor shower	15	16	17	18			
19	20	21 Winter Solstice (shortest day of the year)	22	23	24 Christmas Eve	25			
26	27	28	29	30	31 New Year's Eve				
			For observing info, Rob Roy 692-3245, Greg Emery greg.emery@mohawkcollege.ca, or Mike Spicer at DeBeneEsse2001@aol.com http://amateurastronomy.org/events.php			November 2004 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30			
			January 2005 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31						