

# Event Horizon

May 1999

Volume 6 Issue 7

## A Messier Hunt at the Observatory

- Bert Rhebergen

The following Messier Objects were observed at the Leslie V. Powis Observatory in Flamborough. I used a 4.5" (112mm) f8 reflecting telescope, with a 16mm Plossl eye-piece.

Four of the five nights were spectacular, with the Coma Cluster and the Beehive Cluster (M44) easily visible.

It will be noticed that many of these objects are faint, very faint, or extremely faint. This does not detract from their interest. Once found, they become easier to see every time they are looked at, and the observer will be pushing the telescope to find still fainter objects.

NGC galaxies in the Virgo Cluster were found with the Hamilton Centre's 17" f4.3 telescope and a 25mm Kellner eye-piece equipped with cross-hairs.

99/3/20 7:55-9:35 p.m. E.S.T.  
99/3/21 00:55-2:35 U.T.

**M 41** Bright, widely scattered, stars.

**M42** Spectacular. and **M43** faint glow around a star, separate from M 42

**M47** prominent in binoculars

**M46** faint.

**M93** small, fattened.

**M48** fainter, more scattered than M 41.

**M45** spectacular.

**M 78** faint indistinct glow around star.

**M 34** few bright stars, unimpressive.

**M35** many stars, obscured by thin cloud. Search stopped by cloud cover.

99/4/12 9:15 pm E.D.T.  
99/4/13 01:15 U.T.

**M 41** more bright stars, less crowded with faint stars than M 35

99/4/10-11 9:10pm - 3:40am E.

D.T.

99/4/11 01:10-07:40 U.T.

**M 44** widely scattered, bright stars, "background" of faint stars

**M 50** group of stars circled by larger group of stars.

**M 81** Bright nucleus, surrounded by glow

**M 82** bright sliver of light.

**M 3** bright glow of unresolved stars.

**M 51** and companion: two faint nuclei (patches) of light.

**M106** faint glob of light; extending north, south

**M104** smaller than M106

**M 65** 0.5° south of star, more elongated than M 66

**M 66** brighter than M65; in same field, 56x

**M95** very faint.

**M 96** small, round, larger than  
(Continued on page 3)

inside...

Chair's Report page 2  
Rob'serving Report page 3  
HAA Star Party page 4

Ask Stella page 5  
Eternal Ice page 6  
Calendar of Events page 8

## Chair's Report

**F**or all of you that have a connection to the Internet, Grant Dixon has set up an "egroup" for the HAA. An egroup provides a means to distribute information to the members via e-mail, join in chat sessions, conduct polls and much more. This is not intended as a replacement for bigbang, which serves all of Southern Ontario. The egroup haa is be restricted solely to HAA members. Bigbang has also moved over to its own egroup called bigbang-astro. You can join the HAA's egroup by contacting Grant at [dixon@netaccess.on.ca](mailto:dixon@netaccess.on.ca). Alternatively, you can go to the web page <http://www.egroups.com> and submit a request to join the haa or bigbang-astro group.

We have decided to hold sidewalk astronomy sessions once a month. The idea is to share our interest in astronomy with the public. Suggested locations are Pier 4 Park, Spencer Smith Park, Sam Lawrence Park and Dundas Driving Park. We need volunteers who are willing to join a group of us and set up their telescope for passersby to have a look and perhaps learn something about astronomy.

Mark your calendars for May 22. This is astronomy day and some of us will be setting up a display in one of the malls along with the

RASC. Anyone who would like to hand out pamphlets, answer questions or demonstrate the use of a telescope will be more than welcome to join us.

Mars was at its best in many years at the end of April but it's not too late to get some great views of this planet. A good web page to visit to get information about Mars is at <http://www.astroleague.org/marswatch/>. The International MarsWatch is a group founded by amateur and professional astronomers more than 30 years ago to facilitate better communication between the amateur and professional Mars observing communities. Here you will find images of Mars contributed by amateurs and professional, tools to aid you in planning your own Mars observations, current and past issues of the International Mars Watch Electronic Newsletter, and links to other Mars-relevant sites on the Internet.

Last month I was asked to provide a list of web sites that I have mentioned at previous meetings. If you go to the page <http://www.interlog.com/~attlesey/nightsky.html> you will find my "Links of the Month".

**Stewart Attlesey**  
[Attlesey@interlog.com](mailto:Attlesey@interlog.com)

## HAMILTON AMATEUR ASTRONOMERS

**E**vent 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 \$15 individual or \$20 family membership fee for the year. Event Horizon is published a minimum of 10 times a year.

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## Editor's Report

**T**he next deadline for *Event Horizon* is Friday June 4th, 1999. Please send your articles to me at [assalor@mcmaster.ca](mailto:assalor@mcmaster.ca)

**Rosa Assalone**  
[assalor@mcmaster.ca](mailto:assalor@mcmaster.ca)



# Rob'serving Report

## Moon Occultation.

Locally, this year's best Moon occultation is of Regulus occurring in the early morning of May 22. The disappearance of Regulus occurs on the dark side of the 1st. quarter Moon at 12:10am. Reappearance is at 01:09am. It might be a good photo-op for a small telescope just as Regulus is about to go behind the Moon's limb just after midnight. The glare on the lit side of the Moon will make the reappearance more difficult to catch. It certainly is worth a look-see, at least.

The riddle of the origin of the new "Blue Moon" definition seems to have been solved. See Sky and Telescope, May, 1999, page 36 for details. It was a mistake by S&T 53 years ago, but it looks as if we're stuck with it now.

Upcoming Binbrook observing

nights are scheduled for May 14, 15 and June 11,12. Bret says that he will open up the Conservation area after the monthly meeting if skies are clear. Call Rob Roy (692-3245), Bret Culver (575-9492), or John McCloy (523-4359) at 8:30 pm for local weather conditions and to confirm. The gate will be opened at about 9:30 pm.

## Monthly In-Sights

### May

**17/18-** Crescent Moon near Venus.

**22-** 1st. Quarter Moon occults Regulus in Leo.

### June

**05-** Mars is stationary and resumes forward W to E motion.

**10-** Venus at greatest elongation, 45 degrees east of he Sun.

**12-** Venus near the Beehive

cluster.

## The Planets

Mercury visible in the evening twilight from mid-June.

Venus still dominates the western evening sky.

Mars visible for most of the night, very near Spica in Virgo.

Jupiter rises about 2 hours before the Sun.

Saturn is still to close to the Sun for much observing.

Neptune & Uranus are rising in Capricornus at 1am.

**Rob Roy,**  
**Observing Director**  
**rroy@idirect.com**

## Messier Hunt (continued....)

*(Continued from page 1)*

M95, easily seen

**M 105** brighter than NGC 3384  
**NGC 3384** north, following M 105  
both have small bright nuclei, easily seen in same field 56x.

Used stars in Virgo Clusters, plotted in Sky atlas 2000.0 volume 2, chart #B to star-hop from galaxy to galaxy.

**M 84** and **M 86** same field 56x, similar brightness. fainter than M96.

**M 86** north following M 84.

**M 87** brighter than M 86, south of bright star.

**M 88** 2° north of M 87, very faint, elongated.

**M 91** extremely faint, at limit of detection, 1° following M88.

**M 90** very faint but discernible.

**M 89** small, faint, 1° following M 87.

**M 58** fainter than M 87.

**M 59** coarser and little brighter than M58.

**M 60** coarse, brighter than M59. same field as M59 56x.

stopped search 3:40am E.D.T.

**99/4/13, 1:00am-2:55am E.D.T.**  
**99/4/13, 05:00-06:55 U.T.**

**M 67** faint stars, uncrowded.

**M 97** faint "thumbprint"

**M 108** very faint, edge-on, elongated east-west.

**M 109** very faint smudge, following faint star, fainter than M 108

**M 40** pair of stars, near star "70 ursa majoris"

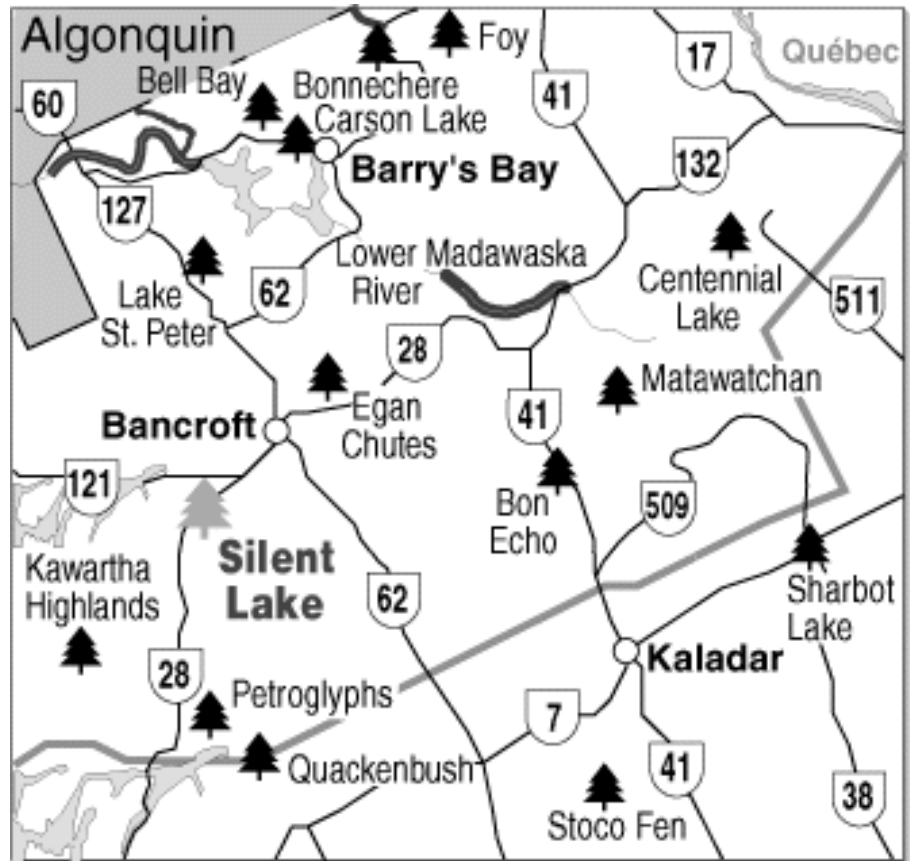
(continued next month)

## HAA Summer Star Party - June 18-20

**W**e've decided to have another HAA star party at Silent Lake Provincial Park. There is plenty to do at this park, including hiking, canoeing and swimming, even bike riding seems popular there. You can also explore abandoned mines in the area, and the town of Bancroft, "gem capital of Ontario", is about ten or so minutes up the road. The campsites are set within the woods which means you can sleep in in the mornings after a night of observing without the sun blazing down on your tent. This means, however, that to do astronomy we have to go to the parking lot of the day-use area near the front gate, so be prepared to put your telescope up and take it down again each night.

Silent Lake Provincial Park is located on Highway 28, north of Peterborough. It takes about 3 1/2 to 4 hours to drive there. From Toronto, take Highway 401 east, past Bowmanville, to Highway 115. Then take Highway 115 north to Peterborough. Driving through Peterborough you want to pick up route 29 north (previously called Highway 28), but the city is poorly signed for this, and you can easily get lost here. You might just have to stop and ask for directions as necessary. I think almost all of us got lost in Peterborough last time, but, as far as I know, we all made it eventually to the star party! North of Peterborough, route 29 eventually becomes Highway 28 again. Follow Highway 28 past Lakefield and past Apsley till you come to Silent Lake. The best plan is to have an Ontario road map which is as up-to-date as you can find, one which shows Route 29 going north out of Peterborough.

The regular campsites in the loop containing sites 49-58 where some of us camped last time were very



nice, and this area has a full service washroom facility with free showers close by. There is also an area for trailers which has electrical hookups in a different part of the park.

If you would like to reserve your campsite call 1-888-ONT-PARK. Also, look at the web site <http://ontarioparks.com> for more information about Silent Lake. The fee is close to \$20/night, plus a \$9.00 reservation fee. You'll need to provide your credit card number, but you can pay by cash at the park when you arrive. For more information about Silent Lake, call the Ministry of Natural Resources at (416) 314-2000.

Remember that you don't need a telescope to attend the star party. Other members are always willing to let others experience the

awesomeness of the night sky as seen through their equipment and to share their expertise and experiences. And don't forget, as Terence Dickinson always reminds us, binoculars are an excellent and recommended tool for learning about the night sky. Hope to see you there.



## Ask Stella!

**Question:** Seyfert galaxies and Quasars radiate prodigious amounts of energy. Would this likely kill life on planets within such a galaxy? Could this have happened in our galaxy? Could such radiation (from an active milky way nucleus) account for the several extinctions that have occurred on earth?

- W Frankart, Spokane WA

Let me focus on Seyfert galaxies, since these are spiral galaxies and therefore similar to the Milky Way. Seyferts are one of a family of active galaxies. For a long time, their incredible wattage was a source of mystery to many astronomers, but lately they've been collecting evidence that Seyferts and other active galaxies are hiding massive black holes at their cores. When gas and dust fall into the black hole, the swirling matter gives off all kinds of radiation, from gamma rays right through to radio.

But getting back to your question, a back-of-the-envelope calculation shows the core of a Seyfert galaxy doesn't have much of an effect on how much radiation a planet receives, if that planet is a good distance away from the core.

Let's start with a few numbers. The average luminosity of a Seyfert Galaxy is  $10^{36}$  to  $10^{38}$  Watts. Most of this luminosity originates from the Broad-Line Region, a small area near the center of that galaxy which is light days to light weeks in diameter.

Now let's focus on a star located 8.5 kiloparsecs (1 kpc =  $3.09 \times 10^{19}$  m) away from the

center of such a galaxy. This is how far the Sun is from the center of the Milky Way. If the source of the Seyfert's emission is 10 light-days across (a happy medium), then the flux received in the vicinity of the star is given by

$$f_2 = (r^2/d^2) f_1$$

Where  $f_1 = L/(4\pi r^2)$

$r$  is the radius of the broad-line region (5 light-days or  $1.296 \times 10^{14}$  m)

$L$  is the luminosity of the galaxy (let's say  $10 \times 10^{37}$  Watts which I'll assume is all coming from this broad-line region)

$f_1$  is the flux at the surface of the broad-line region

$d$  is the distance of the star from the center of the galaxy

Plugging in the numbers gives us

$$f_1 = 4.73 \times 10^7 \text{ W/m}^2$$

$$f_2 = (1.30 \times 10^{14} / 8.5 \times 3.09 \times 10^{19})^2 * 4.73 \times 10^7 \text{ W/m}^2 \\ = 23.45 \text{ W/m}^2$$

Now this is only about 2% of the solar constant (the flux received at the Earth's surface from the Sun). So even if the Earth was located in Seyfert galaxy, the radiation from the central engine would be a small fraction of what the Earth gets from the Sun.

Of course, this would be a significant increase as far as life on Earth is concerned. Such an increase or decrease would probably change the weather patterns on the Earth, just as it did during the Maunder minimum, a period in when very few sunspots were observed on the Sun. This coincided with the "Little Ice Age" from 1640-1710,

when the global temperature dropped by about 2 degrees Fahrenheit - causing rivers to ice up and precipitating major crop failures in Europe and other areas of the world.

But this would only be the case if the Earth were instantly transported to a Seyfert galaxy. If the planet had been there all along, whatever life had developed there would no doubt have adapted to the higher flux long ago.

As far as the last part of your question goes, there is a theory that all spiral galaxies pass through a stage where their nuclei are very active. It is possible (though this is by no means a solid theory) that the Milky Way was a Seyfert galaxy in the past.

However, if the Milky Way had gone through such a phase, it would probably have done early in its history, long before life arose on Earth. It is astronomically improbable that mass extinctions on our planet were caused by such a phenomenon.

Still, a very interesting question!

-Stella

Have an astro-question that's keeping you up, nights? Then ask Stella  
**ask\_stella@earthling.net** --  
your source for astro-facts.

## Hans Hoerbiger and The Doctrine of Eternal Ice - Part 2

**M**yths from around the world corroborate the disintegration of the moon. Dragon legends may have come into existence when the moon was set to collapse. Since the moon was so close, the pitted surface resembled the scales of the traditionally depicted dragon. Furthermore the sickle shape of the moon's tail was incorporated into the horns of various gods like Beelzebub of the Phoenicians. (Bellamy 77)

The devil can further be linked with the falling tertiary moon. The phonetic similarities between the Sanskrit word deva ('the bright shining one' who announces the end of the world), 'devil', 'divine' and 'day' all come from a root word meaning 'to shine'. Lucifer, ('the light bringer') and Luna, the name of the next moon are also phonetically linked.

The various flood myths around the world are renderings of the different experiences of the falling moon. At the equator, the place of the tidal bulge there was considerable bombardment of cosmic material. Here the waters rapidly receded as the gravitational pull of the moon rapidly ended. In the subtropics, the seas rose but there wasn't a sudden inundation of water. In temperate zones on the other hand, little cosmic debris fell but there was widespread flooding. In the extreme northern and southern climates, there was a rapid influx of hot water from the equilateral tidal bulge which is recounted in the myths of the Inuit.

The five great Maritime civilizations were left high and high on the mountain tops. Whole populations of humans and animals that moved to lower lying

regions were wiped out in the extensive flooding that ensued. One of the first things the flood survivors did when the waters receded was to build towers to warn heaven of coming too close to earth again. The ziggurats which we are familiar with at Ur and Erida in Mesopotamia may be reconstructions and remembrances of these older structures.

After the tertiary moon crashed to the earth and there was no satellite in the sky to counter the earth's gravity only those creatures who could adapt to the new heavier gravitation could survive. Because of the greater gravitational force a new breed of smaller brutish men became interspersed among the remaining giants. The 'fall of man' at this time is symbolized by the ground hugging serpent, a product of greater gravity. The giants continued to live amongst the smaller humans in the moonless period and the early days of Luna, kickstarting their nascent civilizations in Egypt and Central America and informing their creation myths.

A ten ton stone monument with numerous indentations and incisions at Tiahuanaco led Saurat to believe that it was built for smaller humans by the surviving giants. A tribe called the Uris, ancestors of the people who apparently lived with the giants still live in this area.

The giants who survived in this moonless period established great civilizations including Lemuria and Mu, the latter situated on a now sunken landmass in the Pacific Ocean. The most well known is the Atlantis in the North Atlantic ocean that Plato wrote about. (Pauwels and Bergier pg 167)

The capture of Luna about

12,000BC caused the poles of the earth to flatten and to shift to their present 23 and half degree position. New flooding took place particularly in the tropical areas which had escaped severe inundation when the tertiary moon fell. The stories of the Hebrew and Babylonian flood in this part of the world or at least the remembrance thereof stem from this celestial event. The atmosphere of northern climates was sucked towards the bulging equator, with cold air rushing in to fill the gap. This is Hoerbiger's explanation of the last ice age. The seismic upheavals caused the great waterfalls of the world to be formed at this time. The Niagara gorge was created by a tilt in the eastern plateau causing Lake Huron to pour more water into Lake Erie while less water now came out of Lake Ontario. This plateau broke at a weak line creating the Niagara escarpment. (Bellamy 280)

Another result of the capture of Luna was the elimination of the Mediasiotic sea where the Gobi desert is now, an occurrence which may have caused the invasions of the Indo-Europeans, so crucial to the development of Western civilization. (Bellamy 287) The Mediterranean Sea may also have been formed at this time. Formerly this area may have consisted of four small seas, but when the land lock between Africa and Europe was broken with the pull on the earth's crust from the new moon in the sky, the waters of the Atlantic rushed in.

As the north pole oscillated in a steadily reduced spiral between two extremes, the levels of the new Mediterranean sea fluctuated widely. Bellamy believes that the Mediterranean coastal civilizations of the Etruscans, Cretans, and Phoenicians seem so rootless,

more like that of colonists since they were frequently displaced from their habitations during this period. (Bellamy 291)

As indicated, the erratic orbit of the new moon caused it come close to the earth, although not as close as the infalling tertiary moon, causing new giants to appear on the earth and things to grow older again. The millennium aged patriarchs of the Bible are thus explained. But these giant were not the noble regal ones of old. They were seen as monsters that had to be dealt with harshly. The stories of the slaying of Goliath by the David and Uranus(Gaea) and Saturn(Cronus) swallowing their children come from this time.

The most accurate reportage of giants in antiquity is in the Bible. Unlike the grandiose Greek depiction of giants in their myths, the Bible mentions giant as simple facts and interjects them into the text without no ulterior purpose. Unlike the Greek myths, Yahweh's all-mightiness does not have to accentuated by making him into a giant. (Saurat 76)

It is stated matter of factly that nine cubits was the length and four the width of the bed of Og, king of Bashan. (Saurat 82) Numbers 13:32-33 reports of the wandering Israelites seeing these giants also known as the Nephilim, believed to be the offspring of the mating of the fallen angels and mortal women.

And there we saw the giants, the sons of Anak which come of the giants. We seemed to ourselves like grasshoppers and so we seemed to them."

Giants in the Philistine armies with six log sized digits on their hands and feet are mentioned in 2 Samuel. These may have descended from the giants in the land of Gath, the reputed

birthplace of Goliath (Angels A-Z pg. 311-312)

The pulp writer H.P. Lovecraft's giants in his macabre stories are also an echo of the Atlanteans, Andeans and other antediluvians that once inhabited the earth, the product of definable celestial events. Kenneth Grant, Anton Leyva and others maintain that Lovecraft had profound subconscious insights into the nature of the universe and the history of the earth that he was not aware of or choose to repress.

In Nazi Germany Hans Hoerbiger was given ample resources in his calculated and impassioned overthrow of what he saw as the soul destroying influence of Liberal-Jewish theories such relativity and theoretical physics. The following was issued 1925 by a public information service that Hoerbiger ran:

"You must choose and right now, whether you want to be with us or against us. While Adolph Hitler has cleaned up politics, Hans Hoerbiger will take care of the false sciences. The doctrine of eternal ice will herald the regeneration of the German people. Watch out!. Come to out side before it is too late." (quoted in Sklar pg 77)

Hoerbiger also published a monthly newsletter called the 'Key To World Events' and recruited volunteers from the Hitler Youth. When astronomers meet they were heckled and shouted down if they dared to challenge Hoerbigerianism. In some companies employees were made to sign an oath stating that they believed in the doctrine of eternal ice.

Heinrich Himmler notorious Ahnenerbe( Ancestral Research) division of the SS put a whole department at work on long term

weather forecasts based on Hoerbiger's ideas. Expeditions were mounted to Tibet and Abyssinia to find remnants of the fabled giant humans

In 1942 The V-2 tests at the island of Peenemunde near Denmark were held up because the Nazi were afraid of the disruption of the ice crystals in the atmosphere. Apparently Hitler had dreamed that to shoot a rocket into space would cause such havoc as to destroy the whole earth.

Such was the belief in the violent struggle between ice and fire that Hitler boasted the 'fire' of the Wehrmacht would overcome the 'ice' of Bolshevik Russia. As a result he didn't properly equip his troops with winter supplies or pursue the initial impetus of advance into Moscow before the bad weather came. Hoerbiger had also predicted it would be a warm winter that year. It turned out to be one of the worst winters in memory. The battle of Stalingard was the beginning of the end for Nazism and the doctrine of eternal ice.

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3. Oliver, Evelyn Dorothy and Lewis, James R. Angels A-Z. Visible Ink Press, Detroit, 1995
4. Pauwels Louis and Bergier Jacques. Morning of the Magicians. Stein and Day, New York, 1968.

## Tranquil Abyss

When I look into the night sky  
I see the mystery of your face.  
As your grandeur overwhelms me  
I ponder deeply your identity.

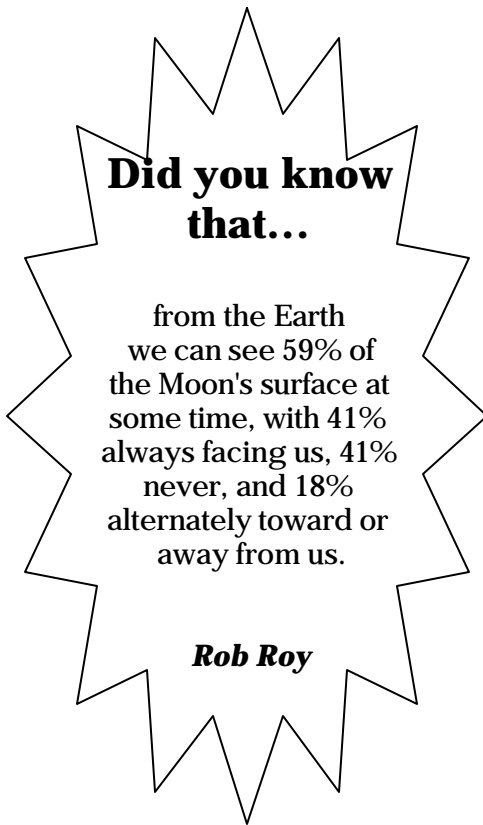
Then slowly as my eyes adjust  
My mind clearly focuses.  
In the breadth of your creation  
I see my very own silhouette.

For an eternal moment I gaze into your eyes.  
The constellations that stare back  
Speak to me as friends  
The details of who you are.

Frozen in time while lost in space  
I feel the warmth of your embrace.  
Peace, stillness, serenity and silence.  
I am one with all matter, the cosmos.

Unity and wholeness  
Connectedness and fusion  
Creation and the Creator  
Under the night sky merge.

By Nat Filice



## CALENDAR OF EVENTS

- May 7, 8, 14, 15 9:30pm
- Tuesday, May 17, 7:00pm
- Friday, June 11, 7:30pm
- June 18-20

**BINBROOK OBSERVING NIGHTS** - For confirmation or directions call Rob Roy at 692-3245 or Bret Culver 575-9492 or John McCloy 523-4359.

**HAA MEETING** - McMaster Burke Science Building, room B148.  
For more information contact Rosa Assalone at 540-8793.

**HAA GENERAL MEETING** - At the Spectator Building auditorium.

**HAA STAR PARTY** - At Silent Lake Provincial Park. See page 4 for more details.