

Event Horizon

June 2000

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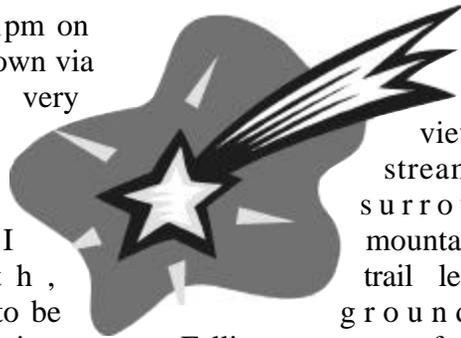
Star Party Report - Star Cruise 2000

Margaret Walton

This past weekend, June 1 - 4, I attended Laurel Highlands Star Cruise 2000, hosted by the Amateur Astronomers Association of Pittsburgh. This was their second annual star party, but only the first open to the public. It was obvious that the organizing committee spent a lot of time organizing, as the party was excellent and well run, from the facilities and the registration to the speakers and door prizes.

I left Dundas around 1pm on Thursday, and drove down via Hwy 219, a small, very pretty highway winding through the mountains of Pennsylvania. As I drove south, rhododendrons began to be common foundation plantings in many yards, and they are in full bloom at this time of the year. Although it took a little longer than using the interstate, the drive was well worth the extra time. Thursday night was very poor for observing, so I got to get to bed early in preparation for the weekend ahead.

The speakers didn't start until Friday afternoon, so Friday morning I took a long hike at the Bear Run Nature Reserve. This is a beautiful wilderness area with many trails. It is full of wild rhododendrons and azaleas and

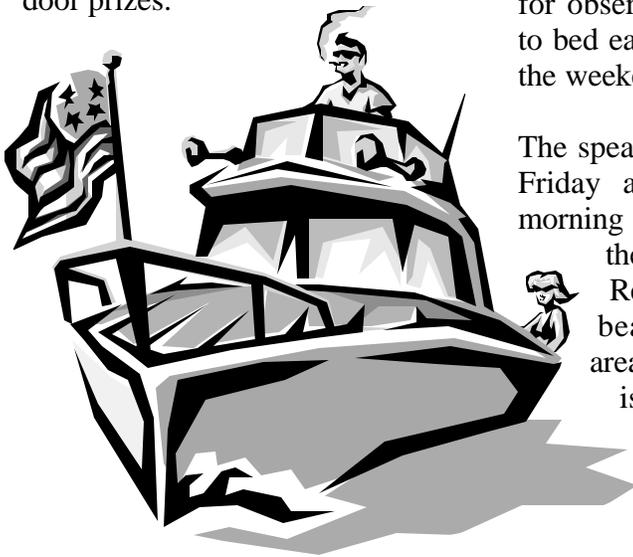


gives some great views of streams and surrounding mountains. The trail led to the grounds of

Fallingwater, one of the homes designed by Frank Lloyd Wright. This house is built over a waterfall and integrates the waterway into the design of the house. It is pretty amazing, and house aside, an incredible place to live.

Friday afternoon and evening I attended some of the talks. They included sessions on Astrophotography, Sun and Star Dials, Weather, Astronomy on the Internet and Highlights of the Mars Pathfinder Mission. The session on the Pathfinder was especially good, given from more of a 'behind the scenes' perspective, and highlighted by

(Continued on page 6)



inside...

Chair's Report
Ask Stella
Links of the Month

page 2
page 3
page 3

Constellations for the Summer page 4
July Star Chart page 7
Calendar of Events page 8

Chair's Report

It's Summer! Well, not officially, but I'm taking the proliferation of flowers and baby birds as a solid indication that Summer is here. With the arrival of Summer comes the birth of new ideas, emotions, and opportunities. We all have our different ways of embracing Summer, and what I look forward to is a break from the reality of my everyday life. Being hundreds of kilometres north of Toronto, 30 or 40 miles away from the nearest road, in the stern of my canoe and with my wife in the bow. I enjoy these moments because of the solitude and serenity of the surroundings.

There are many beautiful things in these wilderness trips, and many memorable things as well. From an astronomical point of view, there is nothing nicer than relaxing with a coffee while the embers of the campfire glow faintly, watching the sun set and the stars appear one by one – all to the music of loons. Eventually the stars stretch from horizon to horizon, and are mirrored in the still surface of the lake. They finally reach a limiting magnitude of greater than 6.5. It's at this moment that I realize why I love astronomy

so much.

This summer there will be many opportunities for you to practice your chosen form of astronomy. The evenings will be warmer and therefore more conducive to observing. In August the Perseids will be at their splendid best, and what a treat they are to behold! At the end of August, you will be able to take in *Starfest 2000*. **Doug Welch** is a featured speaker there, and **Steve Barnes** is a featured retailer. For more details, see the *Starfest 2000* website at <http://nyaa-starfest.com>.

Each of you will have your own particular ways of approaching astronomy in the summer. Whether you choose to spend extra time at the eyepiece of your telescope, or attend some of the many star festivals in the area, I wish you all a very enjoyable summer!

Grant Dixon, Chair

HAMILTON
AMATEUR
ASTRONOMERS

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

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Ask Stella : Shake 'N' Bake?

This month, in addition to saying "salutations" to those scores of serious stargazers in the HAA, Stella would like to answer two of Victor Velazquez' seminal questions. Victor writes:

Are there more earthquakes when the earth is closer to the sun or when its farther away from the sun?

I hate to say it, but this one actually stumped me. However, when I asked geologist Bill Cannon, who works for the US Geological Survey. : "As far as I know there is no link between frequency of earthquakes and earth's proximity to the sun."

So that answers that. The second question is a little more global:

Is there intelligent life in the universe besides us?

Now that's a lot tougher. I'd say that the answer to this question depends a great deal on who you ask. When such a question is directed at me (this does actually happen a fair bit at dinner parties) I invoke the old "non-uniqueness" argument. It goes like this.

Humans tend to want to see themselves as occupying a special place in the universe, but when we actually examine the universe closely, we find that our position is fairly ordinary. In the past few hundred years we've found that the earth is not at the center of the solar system, the sun is not at the center of the galaxy, and the galaxy is not at

the center of the universe. Furthermore, the sun is a common type of star. It's not the biggest, the rightest, the oldest, or the most metal-rich. Recently we've discovered that the Sun is not even unique in possessing a planetary system.

Thus, since our position isn't special, it seems likely that humans themselves aren't special either. If life arose here on this planet, it makes sense that it could do so in other places. Now, speculating on how often life arises, or how long it lasts, or whether it becomes "intelligent" is very difficult. People like Carl Sagan have written volumes on these topics. So the best thing for you to do would be to read what other people have written and decide for yourself which arguments make the most sense. As for myself, I prefer to be quietly optimistic and believe that the universe it teeming with all kinds of exotic, intelligent life and that sometime soon we might get to talk extraterrestrial beings. But that view is based more on imagination than fact.


-Stella

Do you have a question that's keeping you up at night? Then send a message to ask_stella@earthling.net.

Ask Stella: your source for astro-facts.

Links of the Month

Here are the last web sites before we take a break for the summer. You really should be outside observing instead of browsing the web though.

The first site, The Sky Guide, is a project of members of the CAS (Columbus Astronomical Society). The Sky Guide, at <http://www.theskyguide.com/> covers many aspects of amateur astronomy, including all levels of observing, equipment and reviews, telescope making, astrophotography, and news.

Next, the Digitized Sky Survey at <http://archive.stsci.edu/dss/> gives you access to the digitized version of the photographic Sky Survey plates from the Palomar and UK Schmidt telescopes. This was created in order to support Hubble Space Telescope operations and provide a service to the astronomical community. Users can easily retrieve image data for any part of the sky from this site.

The last site is a collection of the "Best of Hubble" and is located at <http://heritage.stsci.edu>. The images at this site are incredible. Depending on your connection speed you can choose from images less than 100K in size to over 7MB.

See you in the fall,
Stewart Attlesey

Constellations for the Summer - Vulpecula, Lyra, Saggita, Delphinus

Margaret Walton

This group of constellations, lined up in a row, may be small, but they contain some wonderful objects to look at.

Vulpecula was invented in 1690 by the Polish astronomer Hevelius, who named it Vulpecula cum Anser (Fox with Goose) after a German children's poem that goes like this:

Fox, you stole the goose,
Give her back.
Or the hunter will get you
With his gun.

It probably sounds better in German! Vulpecula culminates at midnight around July 25th.

Lyra is named for the harp invented by Hermes but played by Orpheus. With it, he had the ability to charm every living creature. He persuaded the gods of the underworld to give back his wife, who had died. They agreed, on the condition that he not look back until they had reached the live world. Unfortunately, he looked back at the last moment and his wife was lost to him forever.

The star Vega has been referred to by various early cultures as some variation on the harp theme. Lyra culminates at midnight in early July.

Saggita is an old constellation. The Hebrews and Persians, as well as the Greeks and Romans have described it as an arrow. It may be an arrow shot from the bow of Hercules. It can be seen from anywhere in the world except the Antarctica and its midnight culmination is July 16th.

Delphinus has many stories attached to it, the most common being that of a dolphin. In Greek legend, Delphinus is said to be the dolphin that carried the poet Arion to safety from his enemies. It has also been referred to as a porpoise by the Hindus, a camel by the Arabians and the Great Fish of Johah by the Hebrews.

Objects to See

Vulpecula

M27 (NGC6853). Dumbbell Nebula. This is an amazing object, also visible through binoculars. It is very bright and very large, with a distinctive 'dumbbell' shape. Magnitude is 8.1.

NGC6802. Open Cluster.

This is a large, rich cluster of magnitude 8.8.

NGC6823/6820. Open Cluster/Nebula. This is an open cluster within a large, faint, irregular nebula.

NCG6940. Open Cluster. This bright, large, rich cluster is visible through binoculars. Magnitude is 6.3.

Cr399. The Coathanger. This is an asterism, sometimes called Brocchi's Cluster, and looks very much like a coat hanger. It can be seen through binoculars.

Lyra

Vega. This is the 5th brightest star in the sky and forms the brightest point of the 'summer triangle' (Altair and Deneb being the other two).

Double-Double (Epsilon Lyrae). This is one of the most famous examples of a double star in the sky. The two stars appear as one to the naked eye: through binoculars it can be seen to be a double star. In a good scope each of the stars is itself seen to be a close double, separated by only 2.6" to 2.8". Amateur astronomers often use this as a test of their optics or collimation, to see if the two stars can be split into their respective doubles.

(Continued on page 5)

Vulpecula, Lyra, Saggita, Delphinus

(Continued from page 4)

RR Lyrae. This is the brightest example of a class of pulsating variable stars with periods of less than 1 day. This star has a period of .566837 days and varies from a magnitude of 7.1 to 8.0.

M56 (NGC 6779). Globular Cluster. This is a bright, large, rich, condensed cluster of magnitude 8.3. This can be seen through binoculars.

M57 (NGC6720). Ring Nebula. This is one of the best and well-known examples of a planetary nebula. It is found between the two southern stars of the parallelogram of the constellation and has a magnitude of 9.0. Through a telescope, it looks just like a donut.

NGC6703. Galaxy. This is a bright, small, round galaxy of magnitude 11.4.

NGC6791. Open Cluster. This is a large, faint, rich cluster containing about 300 stars. Magnitude is 9.5.

Saggita

M71 (NGC6838). Globular Cluster. This is a very large, rich, condensed cluster of magnitude 8.3.

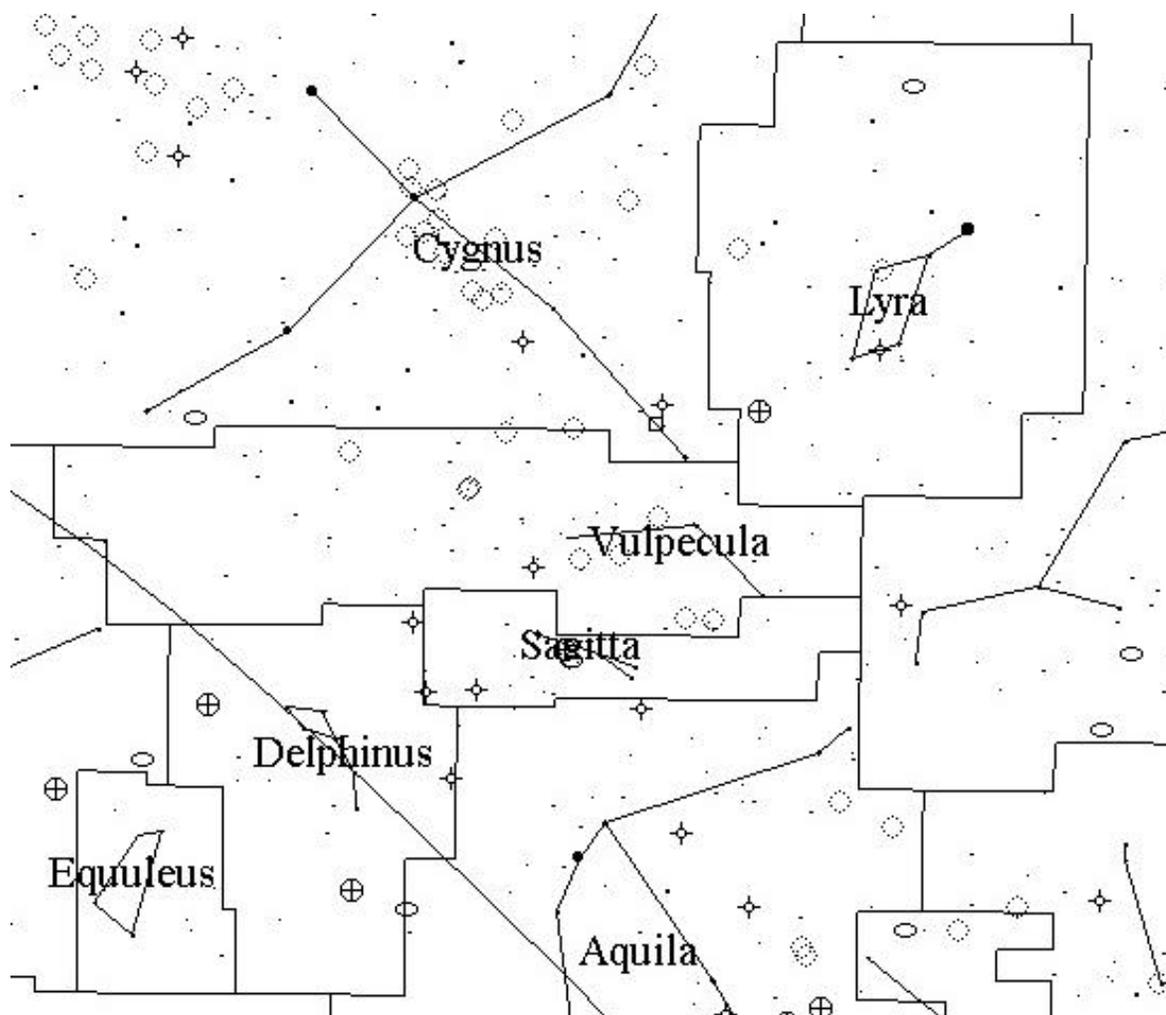
Delphinus

NGC6905. Blue Flash Nebula. This is a bright, small, round nebula of magnitude 11.1. It

has a distinctive blue colour and as per the NGC this is a !!! remarkable object.

NGC 6934. Globular Cluster. This is a bright, large, globular of magnitude 8.9.

NGC 7006. Globular Cluster. This is a bright, large, round cluster of magnitude 10.6. It is one of the most remote globulars in



Star Cruise 2000

(Continued from page 1)

the thunder and lighting show outside the speakers tent. Needless to say, there was no observing that night!

Saturday morning there were 'extracurricular' activities including a Bicycle Cruise and a model rocket launch. Many different rockets were launched from the observing field, some of which obtained quite a good height. There was also a scope set up for solar observing with a hydrogen alpha filter. A large prominence was visible through this, along with smaller prominences and several sunspots. There were more talks Saturday afternoon and evening. The best talk of the party was 'Astronomical Events that may Have Changed History'. The speaker showed how comets, lunar eclipses, solar eclipses and other astronomical events had an influence on people and events in history. His talk was excellent and the only downside was that he didn't have enough time to go through all of his material. Perhaps one of the most original talks was 'Why Shakespeare's Hamlet is all about Astronomy'. The speaker has some powerful reasons to back up his theory, and apparently is no longer welcome in the English Department of his university! Other talks included sessions

on refurbishing a telescope, Hubble, revelations from robotic explorations in the solar system, and the robotic search for meteorites in Antarctica. Saturday night it cleared and we observed until about 3:30am.

Ongoing throughout the star party were several contests – an amateur telescope making contest, various observing contests, a children's scavenger hunt and a sketching contest. Saturday night the door prize drawing was held and there were several doorprizes ranging from the ridiculous (party lanterns for your trailer) to some really nice prizes (15 mm Panoptic). The site itself is very nice. Tall Oaks Campground was the site for the party and they have all the facilities needed including showers. A large open field was the official camping/observing site, with a great southern horizon. If you wished, you could camp in one of their regular campgrounds and have a great shaded, private site for sleeping all day after observing all night.

About 170 people in total attended the star party, and a large percentage of these had large telescopes. The largest there was a 30" homebuilt scope, and there were several scopes larger than 15". All in

Cosmology Discussion Group

Presents our own Doug Welch who will speak on **Modern Cosmology** Saturday, September 16th, 2000, 8pm. In McMaster's Burke Science Building room B148. There will be free coffee, ginger ale, cola, and timbits. We welcome our members to bring a small entree. Everyone welcome, open discussion. For further information call Larry at 529-1037.

Journey through the Galaxy

Saturday, June 17, 2000
 Journey through the galaxy at Stonechurch Vineyards, Niagara-on-the-lake. Stargaze through large telescopes and travel millions of miles in our Star Theatre. Come, experience the excitement 7:30pm to 11pm. Feel free to bring your binoculars and telescope. <http://www.nemy.com> Stargazing, Winetasting.

Carol Legate & John Nemy
 The Pacific Observatory
<http://www.nemy.com>
 905-892-4531

Did you know that...

the Greeks had two names for Venus: Phosporus as a morning star and Hesperus as evening.

Rob Roy



Where were we?

Since no one was able to help us find ourselves, we had to stay an extra week. N18 deg 24.644' W77 deg 08.367' is two metres from the high water mark at Turtle Beach, Ocho Rios, Jamaica. You can understand now why we did not make a fuss having to stay the extra week.

**Oksana and Lou Darcie
 Astronomaires Extraordinaire.**



CALENDAR OF EVENTS

- Saturday, June 17, 2000 7:30 pm
- Tuesday, June 20, 2000 7pm
- June 23, 24, 30, 2000 ~ 8pm
- July 1, 28, 29 ~ 8pm
- Friday, September 8, 2000 7:30pm
- Saturday, September 16, 2000 8pm

JOURNEY THROUGH THE GALAXY - At Stonechurch Vineyards, Niagara-on-the-lake. Contact Carol Legate & John Nemy at 905-892-4531. See article on page 10.

HAA - We will meet at McMaster University, in the Burke Science Building, room B148. For more information contact Rosa Assalone 540-8793

BINBROOK OBSERVING NIGHTS - For confirmation or directions call Bret Culver 575-9492, Marg Walton 627-7361, Rob Roy 692-3245

HAA GENERAL MEETING - At the Spectator Building auditorium.

COSMOLOGY DISCUSSION GROUP - Doug Welch will speak about Modern Cosmology. Contact Larry at 529-1037 for further information.