

# Event Horizon

June 2003

Volume 10 Issue 8

## 2003 : An Icelandic Eclipse Odyssey

by Ray Badgerow

I just returned a little over a week ago from Iceland after going to view the May 31st annular eclipse with Mr. Eclipse himself, Fred Espenak and a group from Spears Travel.

Why go to Iceland to see an eclipse that is low on the horizon, in the wee hours of the morning, and in an area of the world known to have erratic and unpredictable weather. Why not?. It was a lot cheaper than going to Antarctica for the total eclipse in November.

My journey started on May 27th when I flew out from Toronto to Baltimore for my connection. However, I had to go through a grilling by an officer at the immigrant line, then have my flight delayed by an hour due to bad weather in the Washington area.

On the bright side, I got to BWI just in time to get my boarding pass, pass through a security and board my Icelandair flight in less than an hour. We flew overnight to Reykjavik.

**Wednesday, May 28th**

**E-3**



Our flight arrived at Keflavik Airport somewhat ahead of schedule, at 6am local time. From my view at a window seat, I had a clear view of the Reykajanes peninsula along with several small volcanic cones and

fissures in the lava flows. This was on the approach to the airport. I was already hooked. After our group got together we met our guides Steffi and Gremmer and started on our journey. Our first stop was the Blue Lagoon, an artificially created oasis in a moss covered lava field from the 13th century (1276 to be exact). Our group was the first there and we did it all too ourselves for 2 hours, including breakfast. You have to admit that after being awake for nearly 24 hrs, going for a dip in the warm mineral rich 40C water it was a refreshing pick me up. I highly recommend it for anyone going to Iceland. With this over, our motley crew set off to Reykjavik for an orientation tour of the city including a few photostops. We stopped for lunch at the Perlan, where some 24 million litres of hot water are stored for the city, along with a revolving restaurant and Saga museum. After this we embarked to check into our hotel, the Radisson SAS, and get some rest. Four members of the group had to go for a horse riding tour. Later that day I went to get some money exchanged, and decide on dinner. I tagged along with several others and we found a reasonable restaurant, Asuka near the waterfront. By the way, I forgot to mention one thing—the weather was clear, smog-free, and 10 degrees C, and yes the 21 hrs of daylight took a while to get used to as well.

**Thursday, May 29th**

**E-2**

Today we begin our exploration of Iceland, with a visit to Thingvellir National Park, site of the world's first parliament, and a sacred national site. Thingvellir is set in a spectacular natural setting, and is geologically interesting, set along the mid-Atlantic ridge, on a vast plain flanked by large faults and fissures, right beside Iceland's largest lake, Thingvallatin. Northward we headed, passing through the valley of Borgarfjordur—the setting of Egil's Saga,

... cont'd on page 3

Chair's report .....	page 2
Eye Candy .....	page 5
Web Watch .....	page 7
Upcoming events .....	page 6

NASA .....	page 8
Calendar .....	page 9
Anniversary Announcement .....	page 10

## Chair's Report

Summer's here! Except, perhaps, for the temperature. We had our first 2003 HAA Silent Lake Star Party on the May 31st weekend. The weather forecast was somewhat ambiguous and a few of our less hardy observers (who shall remain nameless but whose initials are G & G M) decided to wait for the next one.

Nonetheless, a (fool)hardy band of nine of us ended up at Silent Lake Provincial Park on the night of Friday, May 30th and braved rain on the first night and wind and cold on the second, but, alas, no clear skies until Sunday morning. The trip wasn't a loss, however. There were excellent deep woods warblers sighted and wonderful canoeing. A trip across the lake to a dammed marsh revealed an Osprey nest (complete with very protective Osprey) and \*fifteen\* Great Blue Heron nests. We also got within a few feet of two Common Loons. (These are not to be confused with HAA folk which are classified as Uncommon Loons!)

What does the summer hold in store? For one thing, star parties! As usual, there are plenty within a few hours drive. StarFest is in late August and always has a huge

turnout. This year, the Huronia Star Party is trying out new digs. Their star party is in late September. In any case, pick one or a few and give them a try! There is something for everyone, including kids, at these events. It will be hard to beat 2002's string of wildly transparent nights, but here's hoping!

Another thing that this summer brings is Mars! In fact, it will be very close this summer - apparently the closest approach in 73,000 years! (I remember the last one well!) Mars is at opposition at the end of August, so StarFest will be a prime time to view it. One of Mother Nature's many little practical jokes is that closest approaches are \*always\* low in the sky for northern hemisphere observers.

Finally, I would like to thank all of the Council members for their many, many contributions over the past year. This is a great group and they deserve essentially all the credit for that. See you all in September or out observing! Don't forget to chronicle your experiences in Event Horizon!!

Doug Welch

*Doug Welch is the current chair of the HAA and also a founding member. You can find out more about Doug at: [http://www.physics.mcmaster.ca/people/faculty/Welch\\_DL\\_h.html](http://www.physics.mcmaster.ca/people/faculty/Welch_DL_h.html)*



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.

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### Mailing Address:

PO Box 65578  
 Dundas, ON  
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... cont'd from page 1

and it's old whaling station, framed by a backdrop of mountains and glaciers. Following that our group explored the site of Hraunfoss (lava falls), a waterfall hundreds of metres wide that appears out of nowhere over a birch covered lava field, and the nearby Barnafoss (Children's Fall), which has carved strange figures from the rock.



**Friday, May 30th**

**E-1**

We continued to the historic site of Reykholt, where Snorri Sturlson, a famous 13th-century scholar/writer lived. After that we headed to Deildaartunguhver, the site of Europe's largest hot springs. Our group made a short lunch stop before continuing our journey north to Akuyeri, located at Eyjafjordur fjord (Island fjord) where we spent the 2 days at our Country hotel Sveinbjarnargerdi. After checking in and having our multi-course meal several of us waited outside on the deck for the Sun to set over the fjord at 11:39pm that night. Yes, this was a big event. We were after all only 1/2 a degree south of the Arctic Circle. By the way, the sky was clear again, even though the sky was somewhat cloudy over the western side of the fjord.

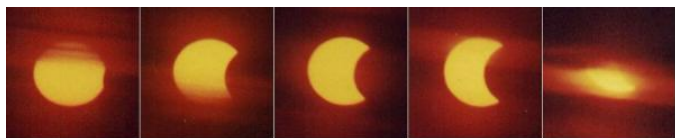
Eclipse Eve, and our motley group headed eastward this morning for the Lake Myvatn area. Our first stop was the site of Godafoss (Falls of the Gods), the site of a spectacular falls along side the Ring Road. We moved inland to Lake Myvatn, a spectacular natural and geological wonder in a tectonically active area of the country. The first stop was at Stukustadir where we hiked around a group of pseudo-craters which were formed some 2300 yrs ago when a lava flow crossed a wetland area and triggered a series of steam explosions. In the distance was the tephra cone of Hverfjall, formed some 2800 yrs ago. The next stop was Dimmuborgir (dark cities), an area of strange and bizarre lava pillars found nowhere on Earth, except in the deep sea. Our group stopped for lunch in the town of Reykahlid, and walked into a lava field that erupted in 1729 that stopped at the door of a church once located there. The next stop was the hill of Namaskard, with its bubbling mud springs and sulphurous smells. Our final stop of the afternoon was the Krafla area which was volcanically active as late as 1984, and the lava fields are still warm. Our stop was the explosion crater Viti (Hell) which was formed in 1724 during a series of events known as the Myvatn Fires (1724-1729). The time was getting late and we returned to hotel for an early dinner. The weather was starting to turn during the day as high cirrus moved in during the morning, and overcast developed by evening.

Before dinner, Fred, myself, and another person got the weather off the internet to plan the main event the next morning.

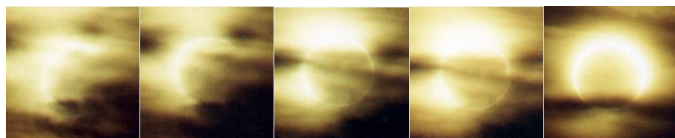
### Saturday, May 31st

### E - Day

Following dinner our group went to bed for a few hours rest in preparation for a 1am departure. I arose at midnight, double-checked my equipment then went to the lobby to await our departure. We left at 1am to reach our prime site on the northern headlands of the fjord near the town of Olafsfjordur. The sky was some 95% overcast, the northern horizon had a bright red colour, and appeared hazy as seen from our hotel. After travelling around the fjord we arrived at our site, a parking lot alongside the cliff overlooking the fjord (some 200m below) to set up. The site also got filled up with several buses and cars as time went on. We were facing the winds coming off the Greenland Sea, and at 8C (46F) this was the coldest eclipse I've been too. The northern sky was covered with layers of haze and clouds as we awaited sunrise at 2:47 am that morning followed by 1st contact at 3:07am. The Sun rose above a layer of fog that was directly over the island of Grimsey (that I couldn't see) into an area of clear sky where the initial partial phases were visible until 3:35am when it disappeared into a cloud bank.



Everyone waited for the Sun to reappear and I took the filter off my camera. The Sun finally began to emerge from the cloud bank just before 4am, mere moments before annularity. Cameras clicked as maximum approached at 4:04 am, all the way through until 4:20 am when the Sun once again disappeared into another cloud bank. The eclipse was over and we were happy. We saw the eclipse against all odds. The crowds began to disperse after the event was over leaving our group one of the last to leave. According to an article in the newspaper Morganbladid published that day there were 1000 people viewing the eclipse that morning. As it turned out very few people in Iceland saw the eclipse due to the weather.



We headed back to the hotel for breakfast and a well deserved rest since I had been up most of the night. It began to rain on our way back to the hotel. Our crew departed the hotel at 11am, and returned to Reykjavik in bad weather, it rained all the way. We didn't care anymore, having seen the eclipse. As Fred told us that day, "We were lucky". There was no sightseeing today due to the rotten weather, and we made a couple of lunch and rest stops before checking into the other Radisson Hotel.

### Sunday, June 1st

### E+1



Today we travelled into the Southwest, and made stops at the geothermal town of Hveragerdi, and visited the greenhouse of Eden. The next stop the lake filled volcanic explosion crater of Kerio where I collected a hand full of lava samples. Our next stop was the majestic and beautiful Gullfoss (Golden Waterfall), a double-tier cascade that falls into a narrow gorge. You could say it is Iceland's version of Victoria Falls. After having a group shot taken here we headed for the hot spring of Geysir, and got splashed by an eruption of its neighbour, Stokkur which erupts every 10-12 minutes. Our last stop was the site of Skraholt, an ancient church site, and Iceland's main cultural centre. The tour bus stopped for a photostop to view some Icelandic horses in a corral while I went out and took some shots of Mt. Hekla in the distance. The weather was clear, and there was a high of 15C, a heat wave. Not knowing about dinner that night I went downtown with a small group and ate at a 50's style restaurant by the harbour. We had

plans to get up early, and plan whale watching the next morning.



**Monday, June 2nd**

**E+2**

Today, I got up early checked out ,and met up our little group only to find out that the whale watching had been cancelled due to high winds. Instead of that,our little group of four spent the day doing the shopping tour of downtown Reykjavik before departing that afternoon.

Upon returning to Baltimore, I stayed overnight before heading home. End of story.

The eclipse of May 31st was the first annular in Saros 147. However, if you wait long enough it will visit the Hamilton area as the series moves southward. On July 1, 2057 an annular eclipse will be visible at sunset as seen from the GTA.

Here's my record : 2 totals(1999,2001) and 3 annulars(1994,2002,2003).

*by Ray Badgerow*

## Member Photos



Cygnus by Bob Botts



Aurora by Bob Christmas



Aurora by Bob Christmas



M44 Jupiter by Bob Christmas



M106 by Bob Christmas

### Upcoming Events

**Item** Future Observing dates

**Dates** July 25,26

August 1,2

August 22,23 (Starfest)

August 29,30

September 19,20

September 26,27 (HAA Fall star party at Silent Lake)

**Date** Friday, June 13th, 2003 (tonight)

**Speaker** Dr. Peter Brown of UWO

**Topic** Meteors: Infrasound and Satellite Data

**Location** Hamilton Steam Museum

**More Info** <http://www.astro.uwo.ca/~pbrown/>

**Details** Infrasound encompasses wave motion in the atmosphere above the natural atmospheric buoyancy frequency (gravity waves 0.01 Hz) and below low frequency acoustic waves (20 Hz). This is the portion of the atmospheric wave spectrum where background noise is a minimum and where low frequency components from impulsive, energetic sources can propagate large distances with minimal attenuation.

In this presentation I will discuss the techniques used for monitoring infrasonic signals in the atmosphere with emphasis on systems deployed as part of the international monitoring system of the comprehensive nuclear test ban treaty. The types of signals detected infrasonically as well as the signal processing which may be used to characterize, locate and detect these phenomena will be highlighted. In particular, the use of infrasound in the geolocation and source energy estimation for detonations produced by fireballs will be emphasized. Determination of the global influx of bolides using infrasound as well as the use of infrasonic source energy estimates as a means to calibrate satellite observations will be discussed.

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**Date** June 27th - July 1, 2003

**Event** Stargazing Manitoulin

**More Info** [www.gordonspark.com/astronomy.html](http://www.gordonspark.com/astronomy.html)

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**Date** October 18th, 2003

**Event** Mountsberg star party

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**Date** November 8th, 2003

**Event** HAA Anniversary Party

**Location** Royal Botanical Gardens

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## WebWatch

**Site** <http://www.stic.net/mattwier/>

**Description** This is a useful site for those new people who would like to know what to expect when looking through the eyepiece of a telescope.

**Submitted by** Bob Botts

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**Site** [www.comet-web.net/~tsutomu-seki/](http://www.comet-web.net/~tsutomu-seki/)

**Description** Tsutomu Seki (well-known for his discovery of Comet Ikeya-Seki) has launched his website in English. Seki has been an inspirational figure in amateur community in Japan for many decades, but many observers outside of Japan may think he is no longer active in observing, as his name is not often associated with recent discoveries. I hope his website will change this soon. He is very active still at the age of 72. He observes literally from dusk to dawn on every clear night, engaging in astrometric measurements of comets and asteroids, and has discovered so many new asteroids. Believe it or not, he regularly swims 1000 meters and a regular entrant to the Japanese Masters Games! His website provides not only his observation results but Seki's inner feelings and philosophy about observing and his life. Very interesting reads, indeed.

His English website is only a fraction of the Japanese version, but is being built up quickly. The website is at:  
[www.comet-web.net/~tsutomu-seki/](http://www.comet-web.net/~tsutomu-seki/)

**Submitted by** Margaret Walton for Eiji Kato, an amateur living on the Gold Coast, Queensland, Australia. [www.geocities.com/eijikato2001](http://www.geocities.com/eijikato2001)  
[www.geocities.com/ballandean2003](http://www.geocities.com/ballandean2003)

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**Site** [www.angelfire.com/id/jsredshift/aintno.htm](http://www.angelfire.com/id/jsredshift/aintno.htm)

**Description** Tough things to see

**Submitted by** Doug Welch

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# NASA's Space Place

## Eggs in the Air

By Patrick L. Barry

The sky will be filled with flying eggs on May 10, 2003, when a thousand students converge on The Plains, Virginia, for the first-ever national high school rocketry competition.



*A Boeing Delta II (7326) rocket launched the New Millennium Program Deep Space 1 spacecraft on October 24, 1998.*

Called the Team America Rocketry Challenge (<http://www.rocketcontest.org>), the competition sets the goal of flying a custom-built, two-stage rocket carrying two raw eggs to a height of exactly 1,500 feet, and then returning the eggs to the ground unbroken. The team that comes closest to 1,500 feet without breaking their eggs will win the national title.

The competition is being organized by the Aerospace Industries Association and the National Association of Rocketry (NAR). NASA administrator Sean O'Keefe will attend the final event.

"The idea is to get kids interested in the world of aerospace," says Trip Barber, director of the competition and vice-president of the NAR. "And they will learn some important lessons about the power of math and science-and cooperation and teamwork-along the way."

To develop their designs, the students first used computer simulator software provided by NAR. Then they had to apply old-fashioned ingenuity and craftsmanship to bring the design to life and flight testing to refine it.

Students constructed rocket bodies using a combination of hobby-store rocket kit parts and custom materials. A typical rocket might consist of cardboard tubes from paper-towel or wrapping-paper rolls, a pre-made nose cone, rocket-kit body segments cut to size, and light-weight, balsa wood fins. But the greatest challenge for many was designing the compartment for the eggs.

Some used plastic Easter eggs as casings, padding the inside with bubble wrap, foam peanuts, or even gelatin. Others decided not to "reinvent the wheel," making a cradle from the egg-crate material used for shipping eggs. Some chose to make larger, more powerful rockets big enough to carry the eggs inside, while others made smaller, more efficient rockets that have a bulging egg compartment mounted on top.

A hundred unique designs will be put to the test in Virginia. Only one will win. But for the students, the real prize has already been won: Learning an approach to problem-solving that works, whether you're launching eggs over a field or sending astronauts to Mars.

In the end, it's all about the future: Future technologies and the kids who will grow up to create them. Many advanced technologies are being developed now by NASA's New Millennium Program (<http://nmp.nasa.gov>). Who will do that work in the future? Perhaps some kids who spent their weekends launching eggs in the air.

Are you a kid? Would you like to build your own rocket? Visit NASA's Space Place and learn how to make a bubble-powered rocket! <http://spaceplace.jpl.nasa.gov/rocket.htm>. It won't take you to Mars, but it's a good way to get started.

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This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration. <http://spaceplace.nasa.gov>



# July 2003

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
		1 Stargazing Manitoulin	2	3	4	5	
6	7	8	9	10	11	12	
13	14	15	16	17	18	19	
20	21	22	23	24	25 Observing Night	26 Observing Night	
27	28	29	30	31			
			For observing info, call Stewart Attlessey 827-9105, Rob Roy 692-3245, Glenn and Gail Muller 945-5050, <a href="http://amateurastronomy.org/events.php">http://amateurastronomy.org/events.php</a>		June 2003 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		August 2003 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



*The Hamilton Amateur Astronomers*  
*proudly announce:*

# *THE HAA 10<sup>TH</sup> YEAR ANNIVERSARY BANQUET*

*When: Saturday, November 8<sup>th</sup>, 2003*

*Where: The Royal Botanical Gardens*

*Why: To celebrate 10 years of success (since inception)*

*What: Cocktails, dinner, guest speaker and door prizes*

*Who: Bob McDonald, Quirks and Quarks (CBC)*

*Bonus Event: Full lunar eclipse that night!*

**MARK YOUR CALENDARS ! (DETAILS TO FOLLOW)**

