

Brantford Public Night Success



Photo By Tim Harpur

Once again, residents of Brantford and area turned out in good numbers to attend our public information and observing night on Saturday October 4th. More than 70 visitors attended this popular annual event.

The HAA was well represented too with about a dozen members helping with their scopes, binoculars and advice.

Some equipment was up inside for people to look at and ask questions. Outside, half a dozen HAA members had scopes trained on Jupiter and were amazing the crowd. Some enjoyed the views and the information they were get-

(Continued on page 2)

From The Editor's Desk

It was a long summer consisting of mostly rainy weather that kept astronomy enthusiasts indoors at night. It was not until nearly the end of the season when we had a week of clear skies and fair weather. All summer, Jupiter was king of the skies and was often the only object worth looking at. Too bad it was so low in the sky.

Now, however, the days are getting shorter and the observing time is growing. This is perhaps the best time of the year for observing as it is still warm enough to keep hypothermia at bay, and all night observers get a good look at the winter skies.

Now, if we could just do something about the damn clouds and rain!

Tim Philp, Editor



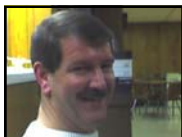
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15th Anniversary Dinner Tickets

There are still tickets available for the HAA dinner.

Check out the details on page 16 and get your tickets while you still can.



Brantford Public Night a Success!

By Don Pullen (Continued from Front Page)

ting there so much that they didn't come in for the presentations.

But even so, it was a packed house in the Tim Horton's theatre as Tim Philp welcomed the group and Glenn Muller gave an interesting presentation about setting up your own backyard observatory. He covered the most basic (a few patio stones set up in the best-sheltered location), to fancy and expensive options (such as additions to one's house or garage). Afterwards, Tim returned to cover

some of the things that people can see with astronomy and showed a short presentation on the relative size of objects in the solar system and Milky Way. He patiently answered lots of questions from

the audience and the 10 or so cub-scouts that were there.

Afterwards, the remaining people moved out to the museum area and outdoors to ask HAA members questions more about what they had heard inside and look through the scopes. There were lots of clouds, but between some of the breaks we had, we were able to show everyone some good views of Jupiter and 3 of its moons. (The fourth was hidden behind the planet.)

One resident brought out her 4.5" Bushnell reflector scope which she had received as a gift. Tim Philp and I gave her a hand in setting it up to see her first object through it. She was very excited to see Jupiter. We spoke for a while and gave her some advice about how to upgrade her mount and pick a couple of good starting eye-pieces. Happily she's on her way to start enjoying the night skies.



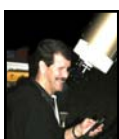
Photo By Don Pullen

I think we can expect to see some more new faces at our meetings since everyone had a good time and really enjoyed the information they received. HAA members were in their element happily answering all kinds of questions about telescopes, planets, stars, meteors, the quiet sun and the end of the world!

Once again we extend our thanks to the staff of the Brantford Tourism and Information Centre for their support and enthusiastic assistance during the evening. And of course to the people of Brantford who make it all worthwhile.



Photo By Don Pullen



Treasurer's Report— By Don Pullen

(Unaudited)

Cash opening Balance (11 Sept 2008)	\$ 2890.72
Expenses	\$ 141.14
Revenue	\$ 1034.00
Closing Balance (30 Sep 2008)	\$ 3783.58

Notes:

Major expenses included: HAA Brochures (\$15.51), Newsletter printing (\$70.63), Bank charges (\$55.00)

Major revenue sources included: Memberships (\$580.00), 15th Anniversary Dinner Tickets (\$384.00), HAA hat sales (\$30.00), 50/50 draw (\$40.00)



From the Chair

by Mike Spicer

Our club's **Annual General Meeting** each October has a brief, but important, business aspect. Members receive reports from the Chair, the Treasurer and the Membership Director. The questions that must be answered are: During the last year, has the club met its amateur astronomy objectives? Has the club spent within its budget and is it financially healthy? Is the club continuing to grow in numbers and activity? How has the club been active in the community? The annual meeting reports should provide this information, and you the members are free to ask questions.

I reported in September, how the Council has worked hard on your behalf since its election in 2007. At the AGM you will hear from your Membership Director that the paid membership of the club has increased considerably over the year. Previous Event Horizons and web site postings have kept you up to date on all of the club's activities and public outreach in the last 12 months - we have been very active! Our club Treasurer will provide you with details of the budget set by your Council, how the budget has been followed, our sources of income, our club expenditures, and how our balance at year-end is much improved over last year.

Members are free to question your officers about any specifics, but I think you will be pleased with the health and activity of our club. Election of the new Council will follow. The proposed slate is unchanged from what was published in the September newsletter, with the exception that Ed Smith has withdrawn his name. I am sure we all wish Ed a quick recovery from his impending surgery; we have all enjoyed observing with him during the last year.

October begins the 2009 membership renewal period.

Those standing for election to Council have paid their \$25 (individual) or \$30 (family) fees already as the bylaws

require. We ask that you pay your membership fee for the coming year as soon as possible, too - the club annual membership fee is what keeps us going. Some members generously give more than required by paying \$50 for a Royal member designation or \$100 as a Club Friend. For such generosity the club can give a charitable donation tax receipt for the amount in excess of the standard membership fee, with thanks. Other members have donated books, magazines, posters, coffee, photocopying, stamps and yes, even telescopes - so the club can carry on as it does from month to month. Most generous of all are those who donate their time and energy to club activities and here I do not just mean those who sit as active Council members. I mention those who spend hours putting together interesting presentations for our meetings, who come out to club observing activities and especially those who help out at public nights; who drive others to meetings or who carry and help set up equipment; those who play such a big part in making things seem to run effortlessly and smoothly. Lastly, you members who come out in support by attending our meetings, that is the "thank you" that makes the hobby worthwhile.

How are membership fees spent?

They cover the cost of hall rental for our meetings, producing all the paper copies of our monthly *Event Horizon* newsletter and mailing it to members who do not have web access; printing 1,000 or more copies of our club brochure each year for distribution to libraries, stores and activity centres in the region; paying for necessary liability insurance at club activities - in case of accidental injury to a member of the public or the club; support for Binbrook Conservation Area, the Clear Sky Chart and the Dark Sky Association; communication with others via mail and maintaining our web site; setting up special events such as our 15th anniversary dinner; defraying some of the costs for obtaining out-of-town speakers; ensuring we have door prizes and

other minor attendance enticements; signage for advertising the club at events; maintaining the digital projector and a club bank account.

What do you get for your membership fee?

There's entertainment at meetings and afterwards; a friendly group to welcome visitors and new friends; a great source of professional and amateur astronomical expertise; timely updates to whet your observing appetite; people who share observing or imaging interests; a great variety of equipment to look through; a telescope "loaner program"; reduced costs of magazine subscriptions; the best monthly astro-magazine-format newsletter in the country; free monthly give-aways; knowledgeable people to keep you company on the observing field; weblogs and journal entries to keep you abreast of what others are doing... and for you to post what you are doing; group trips to local and distant events; information for the beginner or the experienced observer; tools and workshops to repair or upgrade your telescope if needed; why, for many of the members, it's also a social club with bbq's, shopping excursions, equipment swapping and other shared interests. It might be the best hobby there is - the sky's the limit! You can be involved in our activities as little or as much as you prefer; you can be an occasional astrotourist or contribute significant scientific data for professional use; there's no shortage of things to do. No astronomical equipment is needed to be a member, although - be warned! You'll soon be drawn toward a lot of high-end instrumentation and find yourself up a lot at night.

Your membership contributes to spreading astronomy to the public and growing in astronomical expertise yourself. Many of us think it's the greatest informal astronomy organization there is - the Hamilton Amateur Astronomers. Join us!



To Lake Superior... and Beyond!

By Steve Germann

I was impressed by the dark skies at Cherry Springs State Park, in Pennsylvania, and went there in late May, with some HAA members for the Cherry Springs Star Party. It was great, and the skies were dark. The park is well suited for astronomy.

There's a huge 115 MB bitmap of North America, with colours representing the amount of light pollution at any location. It's at the link:

<http://www.lightpollution.it/dmsp/artbri.html> and the links within.

Knowing that Cherry Springs is dark, and seeing it is classed as 'Gray' on the map, I decided to investigate what can be seen from someplace classed as 'Black' on the map.

Well, it turns out that many Dark Sky Preserves, especially in Canada, are in the Grey and Blue zones, but not in the black zone.

Armed with the dark sky map, and Google road maps on the web, I sought out the nearest place in the black zone that can be reached by car.

For the record, almost the entire land mass in Labrador is in the black zone. However, it's a fair drive from here. The closest place to Hamilton, reachable by car, that is in the black zone, is a stretch of the trans-Canada highway, between Sault Ste Marie and Wawa, where the Lake Superior Provincial Park is.

It's a huge park, even by Ontario standards, more than 80km in the north-south direction.

I started planning a trip where the GWS, I, and some companions, could travel there, camp for a few days, and experience the darkest skies Ontario has to offer.

Here's a few of the attractions under dark skies.

Gegenschein: That's a reflection of sunlight off microscopic dust in the solar system. There's a tiny increase in reflection straight back towards the sun. This causes a part of the sky opposite the sun, at night, to have a faint glow. The area is about 10 degrees in diameter.

Zodiacal light: This is caused by sunlight reflecting off the rest of the dust in the solar system. I have seen this light recently at Cherry Springs as well. It's almost bright enough to resemble the dawn, but extends in a triangle shape, high into the sky.

Aurora: Well, this year, the sun is so placid, no aurora come as far south even as Lake Superior, so that's for next time.

Low surface brightness objects: I was especially keen to view M33 with a dark sky background, so as to see more detail and more extent. Ditto M31.

Meteors: Dark skies will allow visibility of fainter meteors, increasing the hourly rate, even for sporadics.

With a few false starts, and black fly season, out of the way, I eventually had it all together. Ray Badgerow and I were to head up for the new moon in September. It was no mean task loading up the VW with the GWS, and all my normal camping gear, plus Ray's gear, and keeping the passenger seat available for Ray himself. Normally I would have filled that with gear too.

I sacrificed 2 chairs and a ladder, and managed to fit all the rest into the back seat and trunk.

So, after a 12 hour drive, (with stops in Barrie and Elliot Lake for shopping), and we were there. We arrived Thursday evening, near but after sundown. The park was dark. I had a very hard time discerning a path to the beach. We decided to set up the GWS at the campsite, even though we would only have the zenith for viewing.

The beach turned out to be in sight of the Trans Canada Highway, so not as dark as it could have been.

Thursday evening was clear till about 2 AM. Then clouds started blowing in from Lake Superior. Friday evening was clear almost all night. Sunday evening was clear till about 1 AM, and then clouds blew in from the south.

Not bad, really, considering the season, and that it gets dark by 9 PM.

I looked for gegenschein in the sky on Friday, not knowing really where to look and thought about



To Lake Superior... and Beyond! —Continued

By Steve Germann

which part of the sky i would consider the brightest. We had no trouble finding Neptune and Uranus, and of course Jupiter, and the familiar milky way objects were at hand. On Friday night, we tried for Pluto, and found the star field, but could not discern any light coming from the expected location of the Plutoid. We went to Wawa, and used the internet to verify that my CDC was working properly, and that Pluto was expected where CDC reported it. Sunday provided another chance to try to see Pluto. Perhaps due to the season and atmospheric

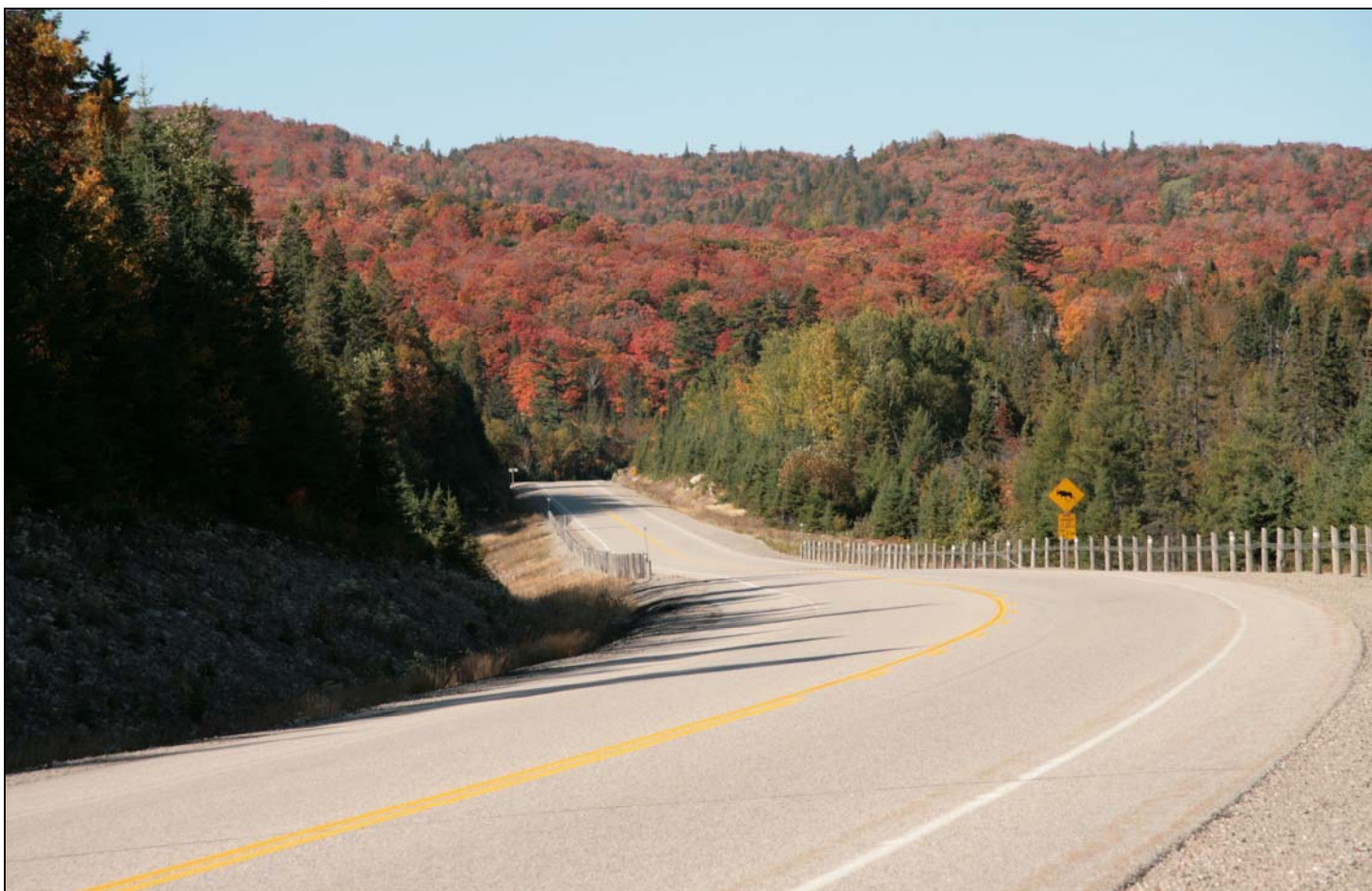
extinction, it so low in the sky that it could not be seen, even with the GWS. I now doubt my sighting of it earlier in the year, since it's considerably dimmer than any of the stars in the field I saw in September.

This being a provincial park, there were other amenities besides the dark skies, and Saturday and Monday, we benefitted from the scenery and the canoeing. Another was the other campers. We had the chance to explain the sky and show off some common sights like the wild duck, eagle, and

swan, to groups of campers on Friday and on Sunday evening.

The park closes at the end of October, and it was not busy. There were at most 12 campers there at any given time. Imagine the opportunities for sidewalk astronomy in August!

I am sure that I will be returning to LSPP next summer, but perhaps a bit earlier in the season, say, late July. It was a great trip, and I am also thankful for the pleasant and knowledgeable company that Ray provided.



Lake Superior Provincial Park provides some beautiful scenery and some of the darkest skies that you can find. Member Steve Germann chronicles his visit to the park and the enjoyment of some of the darkest skies you can find nearby. The Fall colours are great too!

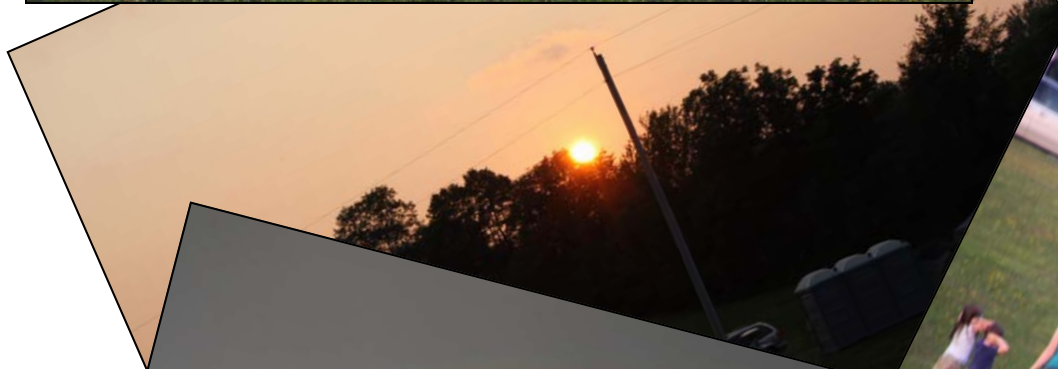


A Starfest Photo-Journal

Photos by Don Pullen



The HAA Banner flies proudly marking our campsite from the vantage of a hill overlooking the park



Somewhere, over the rainbow...



Sunset over River Place Park
Host site of Starfest



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Tech Tip—Cooling Your Telescope

By Glenn Muller

Fall nights seem to cool rapidly and this not only makes it difficult for your scope to acclimatize but can also result in early, and heavy, dew. Most astronomers combat this with dew shields and other dew busting equipment.

Although my 12" reflector has a small fan attached to the rear of the primary, which does an adequate job of keeping the mirror near the ambient temperature, I feel it lacks the horsepower to quickly rid the mirror of the "stored" daytime temperature. My solution has been to place a 10" room fan

behind the mirror on a medium fast setting. The resulting breeze can be felt coming out of the top of the OTA which is a good sign that the tube is also being cleared of the pesky tube currents.

The last time I did this I noticed that the coating of dew, that had already formed on the OTA, dried up while the big fan was doing its thing - which got me to thinking.

A light breeze will generally keep dew at bay, so when I was ready to observe I put the big fan on a stand and had it

oscillate to get some air movement within the confines of the observatory. Although reflectors are easier to protect from dew than other scope configurations I did notice that dew did not reform on the OTA while the fan was operating. Dew did eventually form on the finder objective but I still feel this was at least delayed somewhat.

On the down side, the fan also tends to cool down the observer, but it is nice not to have everything you touch soaking wet :)



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The Sky this Month—by Greg Emory

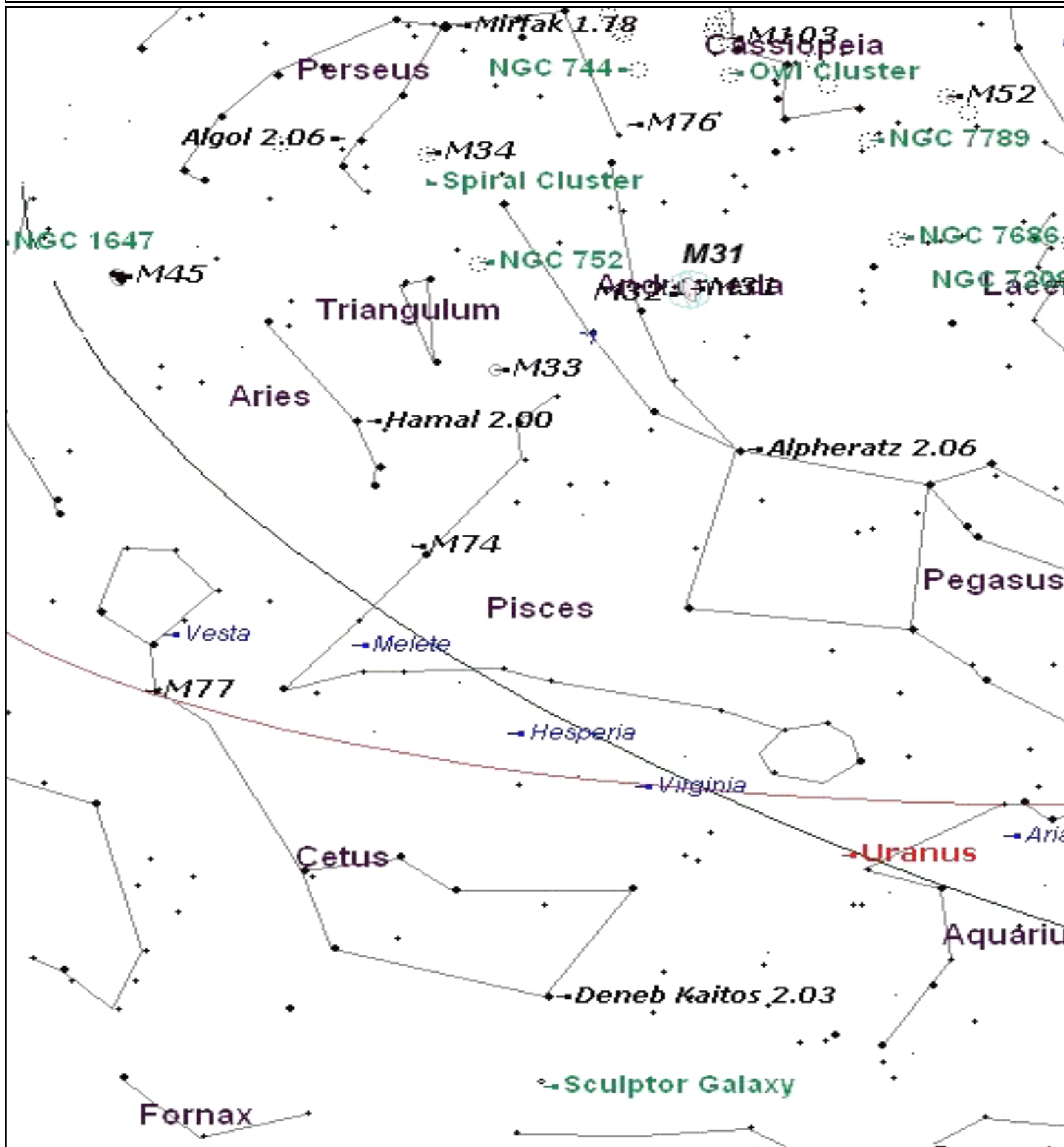
The Skies of Autumn feature **Pegasus** and the rising waters. **Pisces**, **Cetus** and **Aquarius** are prominent in the Southern and Eastern Skies. The Great Square of **Pegasus** is directly over head in the centerfold map (set for October 15 at 10:00 pm)

To the north we have **Cassiopeia** and **Perseus**. Between the two constellations there are many objects to see. Four Messier objects are **M52** and **M103**, as well as **M76** and **M34**. **M76** is a planetary Nebula “ The Little Dumbell” whereas the other three objects are **open clusters**. This region of the sky has many wonderful **open clusters**. Two of my favourite actually appear as one to the naked eye. Looking to the region of sky just between **Cassiopeia** and **Perseus** you can see a little smudge. That smudge is actually the **double cluster** which is – you guessed it two clusters. The **double cluster** is actually inside the boundary of **Perseus** and consists of the two **open clusters Chi** and **h Persei** (**NGC 884** and **NGC 886**). The **clusters** are viewable together in a wide field. Compare the diameter , number of stars and the roundness of the two **clusters**.

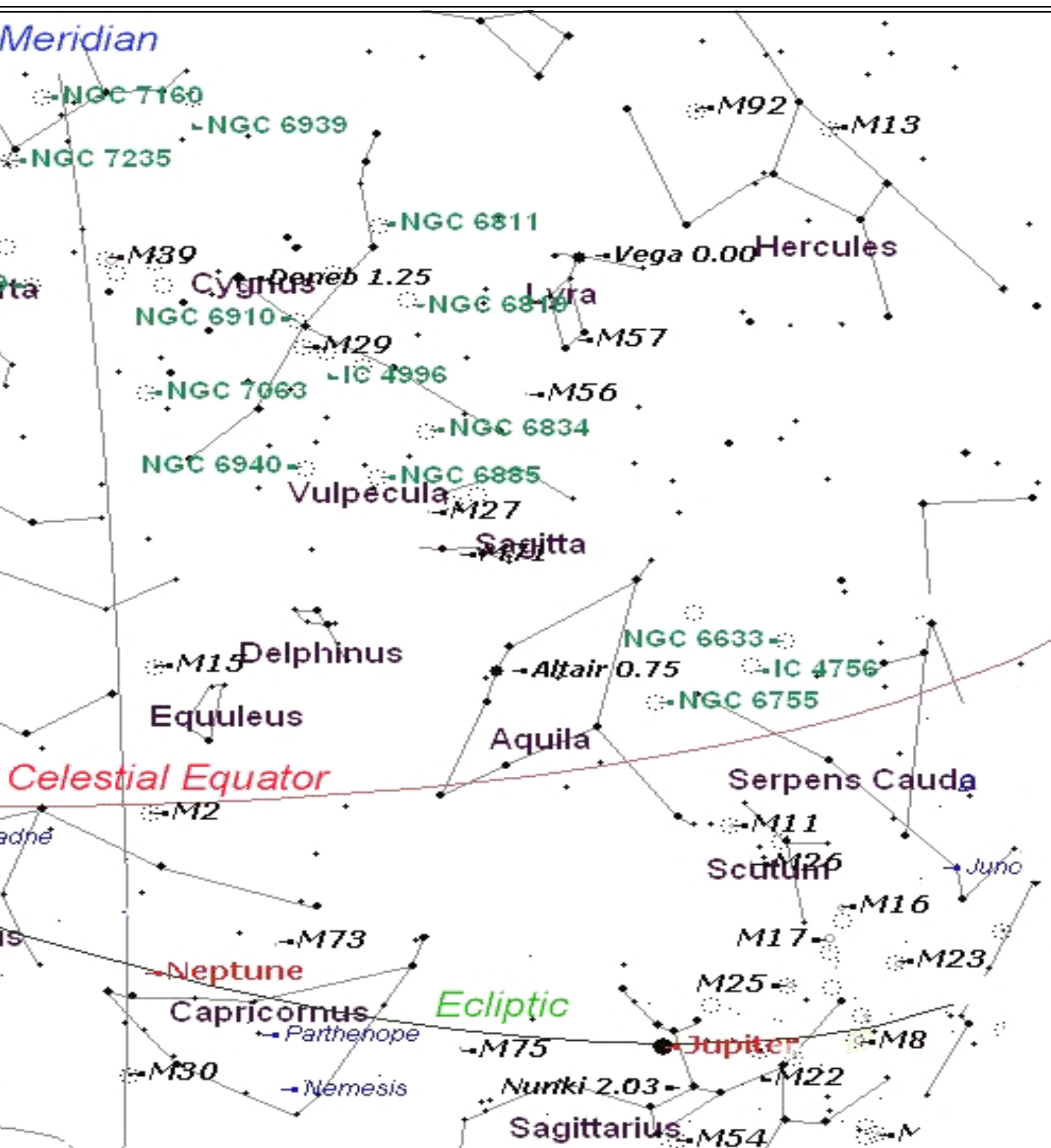
Moving south we have **M74** in **Cetus**. **M74** is a spiral type **galaxy**. We are getting into the time of the faint fuzzies and barely imaginable. The **galaxy M74**, is a harbinger of Spring – well not really but give me some leeway on this one. For those of you who do not share the joy of the upcoming winter, fear not. In not too long of a time, someone will be speaking or writing about making sure that you start observing early in order to see **M74**. That talk or column will be in February/March. Looking at **M74** now, in some wild stretch of the imagination is like fast forwarding through winter – just try to forget about the 3 foot snowdrift piling up around you!

While admiring **M74**, a short trip to the north finds **M33** in the constellation **Triangulum**. **M33** is a beautiful face on **spiral galaxy**. One problem some have when viewing **M33**, is that the image is not nearly as bright as the handbooks or computer tells you it is. The face on spiral is a diffuse object that does not jump out of the sky at you, on a dark night from a good site it is nice.

The Sky th



This Month





Through the Looking Glass

by Greg Emory

As we look at our computers it is easy to underestimate the difficulty and the work that went into predicting the motion of the planets. The work and difficulty cannot be expressed in today's standards however.

We have grown up with the technology and the innovations which makes this easy. Today a high school student can easily calculate the position of the planets with a precision that

escaped the historic greats of astronomy. And to prove that I am as smart as a high school student, I have calculated the positions of the planets with this easy method, and it is easy.

Before I let the cat out of the bag, and don't worry about the cat a famous physicist will take care of that for me, let's describe what makes the planets, and other space debris, orbit the Sun in the way that it does. The simple answer is gravity. But this does not answer the question why do the planets follow the paths that they do?

Every object that is bound to the Sun will orbit in a circular, elliptical or parabolic orbit. These terms just describe the shape of the orbit. The planets orbit in elliptical paths. An elliptical orbit differs from a circular orbit in that the elliptical path is just a stretched or elongated circular orbit. An ellipse has two points near the center called foci (focus is singular). The Sun will be located at one of the foci. The planet now follows the elliptical orbit around the Sun, the Sun being located at a foci, is closer to one end of the orbital path than to the other. This is why the Sun is closest to the earth during the Northern Hemi-

spheres winter months. Figure 1 shows an exaggerated orbit.

The description of this orbit requires two parameters, the major axis (the length of the ellipse) and the eccentricity (deviation from a circle). With these two pieces of information and no other planets or bodies in the solar system besides the Sun and planet, we can solve this exactly. But there are many other bodies in the

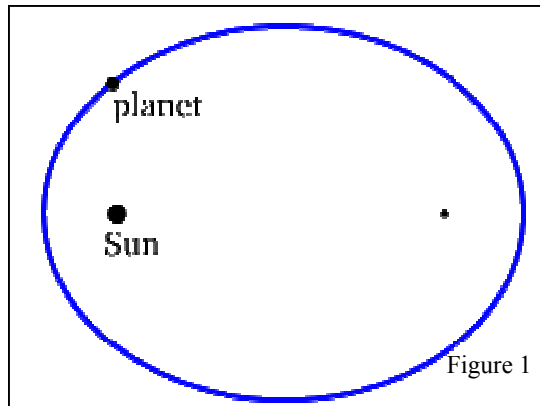


Figure 1

solar system all of which pull and tug at one another. This complicates matters enormously.

We also need one more parameter to describe our orbit in Figure 1 as a consequence of the other bodies in the solar system. For a single planet and the Sun, the planet and the Sun will always be in the same plane.

Once another body is added, the plane of that planet and the Sun will most likely be at an angle to the orbital plane of the original planet and sun. We can describe this angle with

the letter i , the angle of inclination. For most of the planets these angles of inclination are relatively small. Another angle is also included to account for the fact that the semi-major axis of the orbit may not be pointing in the same direction. See Figure 2.

A method for calculating the orbits of the planets with quite a high accuracy was first developed by Newcombe and simplified for hand calculator use in the late 1970's by T. van Flandern and K. Pulkkinen called "Low precision formulae for planetary positions", originally published in the Astrophysical Journal Supplement Series, 1980.

The method describes every orbit as a combination or series of sine and cosine terms. The values of each term depend upon what extra pulls or tugs an individual planet or body feels from the close neighbours. The outer planets (beyond earth) tend to have a large amount of correction to account for Jupiter, Saturn and the other large bodies in the area.

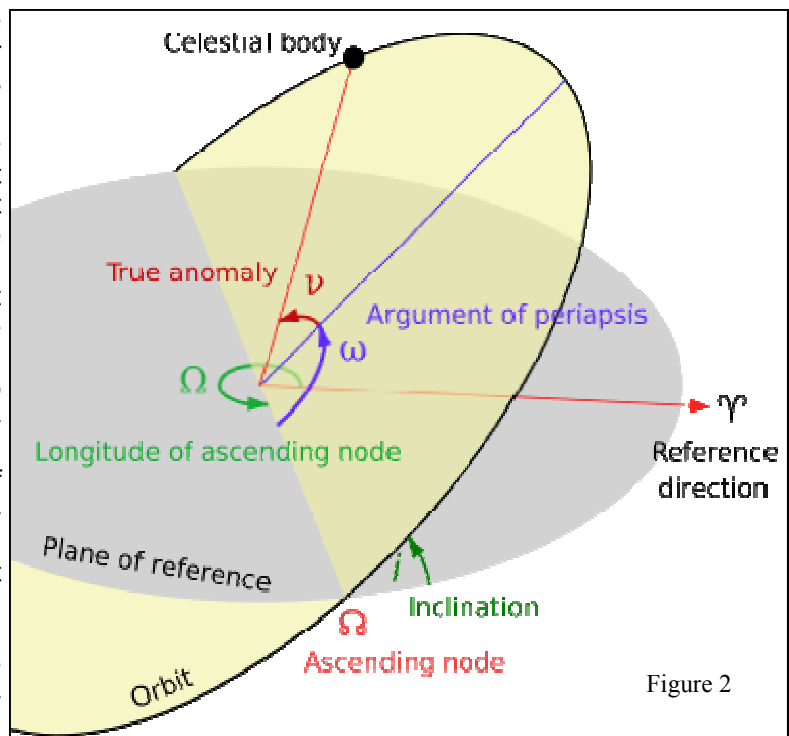


Figure 2



Why Study Astronomy?

by Tim Philp

Recently, a friend of mine asked me why I like to study astronomy. It is one of those questions that you get asked at a social gathering that, on the surface, seems to be an obvious question, but it was one which I had never really properly considered.

As one who is not usually at a loss for words, I found myself in an uncomfortable situation. After all, I write about astronomy, I do astronomy, and I even teach astronomy, surely I could explain why I do these things. After stammering out some reply that must have satisfied my questioner, the conversation moved on; however, I was left thinking about the question.

Certainly astronomy provides one with an opportunity to learn about many things. Physics and chemistry are so completely interwoven throughout the study of astronomy that it is difficult to get a true understanding of natural phenomena in the sky without seeking knowledge of these subjects, and yet there is the sheer beauty of the heavens.

Ever since man has first looked to the sky, there have been questions about what we see there. What are those bright lights in the sky. Of course those questions were asked long before our cities flooded the sky with light pollution and we lost our view of the sky.

Seeing the starry heavens from a dark-sky site is an experience that will stay with you as long as you live. I am often amazed by the reaction of a youngster who has grown up in the city and never seen a star-filled sky. Such reactions are wonderful to behold. "Wow!" is the most subdued reaction that you get from a first-time skywatcher.

We can only imagine the reaction of primitive man who did not share our scientific understanding of the night sky as he gazed at 'this brave o'erhanging firmament, this majestic roof fretted with golden fire' as Shakespeare called it. Lacking our under-



Why look you upon the ground while the Universe wheels about you?

standing, many legends, myths, and religions were created to tame what could not be understood due to a lack of scientific traditions.

But what wonderful and profound understanding came when a scientific eye was turned to the skies! Suddenly the fear of the unknown was replaced by knowledge and we started to see our place in the universe. And what a shock that was to a human race accustomed to viewing the world through the lens of their own self-importance.

Not only was man a puny creature crawling upon the surface of a small and unimportant mote of dust, but the vast universe was totally and completely indifferent to his presence. What a shock that realization must have been when it was first revealed through the light of scientific reason!

There has been recent controversy about the start of operations of the Large Hadron Collider in Europe. This machine is designed to concentrate incredible energy within a very small area to allow us to probe the origins of the universe.

Some people have made the ridicu-

lous claim that it will cause the destruction of the Earth. Every second of every day, the universe deals with energies that make man's puny efforts childlike in comparison. The universe is the greatest physics laboratory and experiments using the energy of entire stars happen every second someplace in the universe.

Astronomy has helped us answer some of the most difficult questions that we have asked ourselves. We all want to know where we come from. At first, that question may only relate to the mechanics of sexual reproduction. As we grow older and more sophisticated, the question takes on a more profound meaning.

Not only do we want to know where we came from, but, in a broader context, we want to know

where everything comes from. Our bodies are made of elements forged in the heart of exploded stars. The calcium in your bones, the iron in your blood and the carbon that is the basis for all life as we know it was once inside a star that blew itself up and scattered the elements throughout the universe. We are indeed, in the truest sense of the word – stardust.

Where did the stars come from and what caused the Big Bang that started the evolution of the universe? What existed before the Big Bang and what will be the fate of the universe? These are questions at the cutting edge of physics today and astronomy is the key science that is providing the clues that may evolve into answers.

Perhaps that is why I love astronomy so much. It is such a rich science that not only provides beauty, but also truth in an uncertain world subsumed by man's petty squabbles. Who cares about them when the universe is spread before you waiting to answer man's timeless questions.

That is why I love astronomy.



September Meeting Highlights

By Mike Spicer

Hamilton Amateur Astronomers filled the Spectator Auditorium Friday evening 19 September. Half the membership turned out, plus many new faces and some notable guests.

HAA Chair Mike Spicer brought the meeting to order at 7:30 with a welcome and a breakdown of the night's agenda. Our club Observing Director Prof. Greg Emery started the evening with his "Sky this Month" presentation, identifying the evening constellations and highlighting some interesting objects in each.

Our club Chair made several announcements: the HAA calendar contest closes 30 September; the HAA annual Telescope Contest ends

19 November, enter the contest from the web site; the public observing at Brantford Tourism Centre will be held Friday October 4th; HAA's annual general meeting and elections will be held October 10th; our 15th anniversary dinner will be held at the Mandarin on October 17th, tickets are available at \$32 each.

Mike Spicer presented on binocular observing, followed by a brief question-and-answer period with reference to his article on that subject in September's Event Horizon newsletter. Mike steered interested members to Tim Philp, who makes parallelogram binocular mounts for sale at \$100. Mike also mentioned a number of publications for binocular observers, pointing to a table display at the back of the auditorium

During the break there was a flurry of new memberships (welcome!), the sale of tickets and other matters were handled by Jim and Don at the welcome table, while members

to the McCallion Planetarium and we expressed our eagerness to schedule a showing this fall for club members.



The September meeting brought out all the usual faces and a good group of newcomers. The HAA is a VERY healthy club!

perused the items on display, sale and freebie tables at the back, dis-

drew six winning door prize tickets - congratulations to the winners!



Dr. Mike Reid spoke about the re-opening of the McCallion Planetarium at McMaster University. He is the area co-ordinator for the International Year of Astronomy.

cussing matters over coffee and admiring the club's new glow-in-the-dark public event sign.

The main speaker of the evening, Dr. Mike Reid, Associate professor of astronomy at McMaster University, updated us on renovations

Dr. Reid is contact person for CASCA's 2009 International Year of Astronomy in this area. He invited HAA to help out with some of the IYA plans by providing hands-on observing assistance and he provided us with a tentative calendar of IYA events, including the "100 hours" in early April, 2009.

Our 50/50 draw surprised and pleased winner Heather Neproszel. Jim Wamsley with help from Alexandra Tekatch,

Mike Jefferson as President of the Hamilton Association for the Advancement of Literature, Science and Art invited members of HAA and friends to attend York University Professor Paul Delaney's presentation "Understanding Mars" on Saturday, November 1st at 8 pm Rm 1A1, Ewart Angus Bldg, McMaster University. Thanks, Mike.

As a final good-bye until our Annual General Meeting on 10 October, everyone was invited to join members at Kelsey's for drinks and discussion.

HAA is the only active astronomy club in our part of the sky!



Member of the Month—Mike Spicer

by Ed Smith

(Editor's Note: We don't usually have the same person as member of the month more than just once, however, Outgoing club president Mike Spicer has been such a part of this club for so many years, it is good to get a different perspective on him from a newer member. So, with that in mind, here is Ed Smith's Member of the Month, Mike Spicer.)



Mike Spicer October 2008 Member of the Month (Redux)

the club for 2008 taking over from another knowledgeable member Glenn Muller. When called upon to fill in for the current Observing Director he was always able to make his usual high quality presentation.

My hat's off this month to HAA's outgoing President Mike Spicer. The fact that I am a relatively new member having only just completed one year as a member, I find myself selecting The HAA Member of the Month for October.

While there are many friendly and helpful members of the club Mike was one of the first to approach me during one of my early visits to Binbrook. He sort of ambled over where I was trying my best to make out just what I was looking at through my 12" Dob. He introduced himself and after a cou-

ple of questions he ascertained just how green I was. Next he asked if I had seen M13. My response was of course negative. With this Mike replied "I'm not much of a Dob Man, but let's give it a try". WOW!! There it was. He then proceeded to show me around the sky. Mike was the Observing Director during the my first few months with the club. His power point presentations were some of the best I have seen over the years. Later he was to become President or Chairman (if you prefer) of

Mike was always offering up information and news on the HAA web site, again providing interesting bits to pique the minds of the club members. During the year Mike would give the other members of the Board the opportunity to conduct portions of the meetings thus giving them some experience at leadership. This is a mark of a true leader who shares the duties of the monthly meeting. While Mike has moved out of the Hamilton area it is my hope that he continues to share his knowledge with us. Thanks Mike.

HAA 15th Anniversary Dinner!

The Mandarin Restaurant
1508 Upper James Street
Friday evening October 17th
7:30 pm

Dinner is the usual sumptuous Mandarin all-you-can-eat buffet. John Gauvreau will present a review of the HAA from its inception in 1993 to the present. Special presentations will be made to a number of honoured guests and supporters of our club. There are a number of excellent door prizes and Certificates of Merit

Tickets are \$32.00 each with a cash bar.

Tickets will be available at the welcome table during our September and October HAA meetings.

This is an opportunity for members and guests to celebrate with us, the growth and success of Hamilton's only active amateur astronomy club over the past 15 years, looking forward to the future!

HAA Telescope Contest

1. The contest is open to the public, excluding HAA members but including the children (age 9 - 16 inclusive) of HAA members.
2. The contest runs from 1 September until 9 pm Sunday evening, November 19th and the winner will be announced and the telescope awarded at the HAA meeting, December 12th.
3. Enter the contest by submitting a composition of 300 - 600 words on

a subject in amateur astronomy or telling what you would do with the telescope if you won it. The entry can be emailed to: chair@amateurastronomy.org but must also be emailed to [edi-
tor@amateurastronomy.org](mailto:editor@amateurastronomy.org)

4. To be valid, the entry must be received by both chair and editor before the closing date and must have the entrant's name, age, mailing address, telephone number and email address for contact purposes.

All entries become the property of Hamilton Amateur Astronomers and may be published in the club newsletter, Event Horizon, at the editor's discretion.

5. The contest is open to members of the public of all ages who reside within the area bounded by Grimsby - Cayuga - Brantford - Cambridge - Milton - Oakville so the winner will be "one in a million".



The HAA, Astronomy, and Me

by Jim Wamsley

I have only been involved in astronomy for just over 3 years, and have found that it has become more than just going out to dark sky sites, attending star parties and observing the heavens on my own, or with a few friends. Don't get me wrong, viewing DSO's, Messier objects and the Planets and discussing these with good friends, as well as sharing the views through their telescopes is extremely rewarding, but thanks to my involvement with the HAA I have found that sharing my excitement with the public has become even more rewarding.

Even though my knowledge of the night sky is still extremely limited, I have found that I can impart this knowledge and more importantly the excitement on to many people. The enjoyment I get from watching someone looking through a telescope for the first time at the moon and seeing the expression on their faces is possibly the greatest reward anyone could share with another.

The HAA hosts many "Public Nights" through the course of the year which have been well publicized and has been successful in drawing many interested people to our viewing sessions. Through these sessions we have been able to help people who have purchased telescopes of one description or another and have had problems getting the most use from their equipment. These "Public Nights" are also instrumental in showing young people the wonders of the night sky.

Perhaps I have become addicted to the thrill of this excitement and have found a new way to "get my fix". Reading an article in the "Sky and

up our scopes, at the aforementioned site at about 9 p.m. and Jackie joined us shortly thereafter.

We quickly found that we were reaching a totally different segment of the population, than we reach at our "Public Nights."

The people that peered through the telescopes that night had never even thought about the night sky, or what was to be seen through a telescope. Some thought that they may be able to see the Lunar Landers on the moon. Others would ask "Are there Aliens up there?". Most were just blown away by the view to be seen. We have had people who have stopped to take a look, disappeared for a while, only to reappear with their whole family.

Since starting out on my "sidewalk astronomy" adventures, I had an invitation to a country festival to offer astronomy to their patrons. This, being a daytime event, offered an opportunity to share solar viewing to the public. I borrowed a couple of Coronado personal solar telescopes from Anne Te-katch and Tim Philp and broke out the solar filter for my telescope and invited my friends John and Jackie to help me out again. This again proved to be extremely rewarding, seeing the look on the faces of the kids, and in meeting many new people, possibly sparking an interest in astronomy.

Hopefully, sharing my thoughts on what astronomy means to me, will inspire others in the club to take their telescopes out into "the light of the public" and not just seek out the dark skies that we all love.



You can never be sure who will show up at a public event! Here 'Lord Simcoe' observes the sun in a 'newfangled' device.

Telescope" this summer entitled "Street Level Stargazing", the author seemed to have the same addiction as myself. I decided then and there to pursue this thing called "Sidewalk Astronomy". Feeling a little timid on tackling this alone, I invited other "Rabid" astronomers namely John Gauvreau and Jackie Fulton to assist me. They quickly agreed to come on this adventure with me.

After searching for a good location, being a high traffic public place with a good southern view (not worrying about street lighting) being visible to passers by the most important prerequisite, we selected a site in front of a Tim Horton's in a small 'parkette' in Dundas. Selecting the best time to start our project, we felt first quarter moon would be appropriate. The moon is always a spectacular sight, particularly for first-time observers. Equally prominent in the sky, Jupiter shines brightly close to the moon. John and I set



Messenger from Mercury—Latest Images!

by NASA

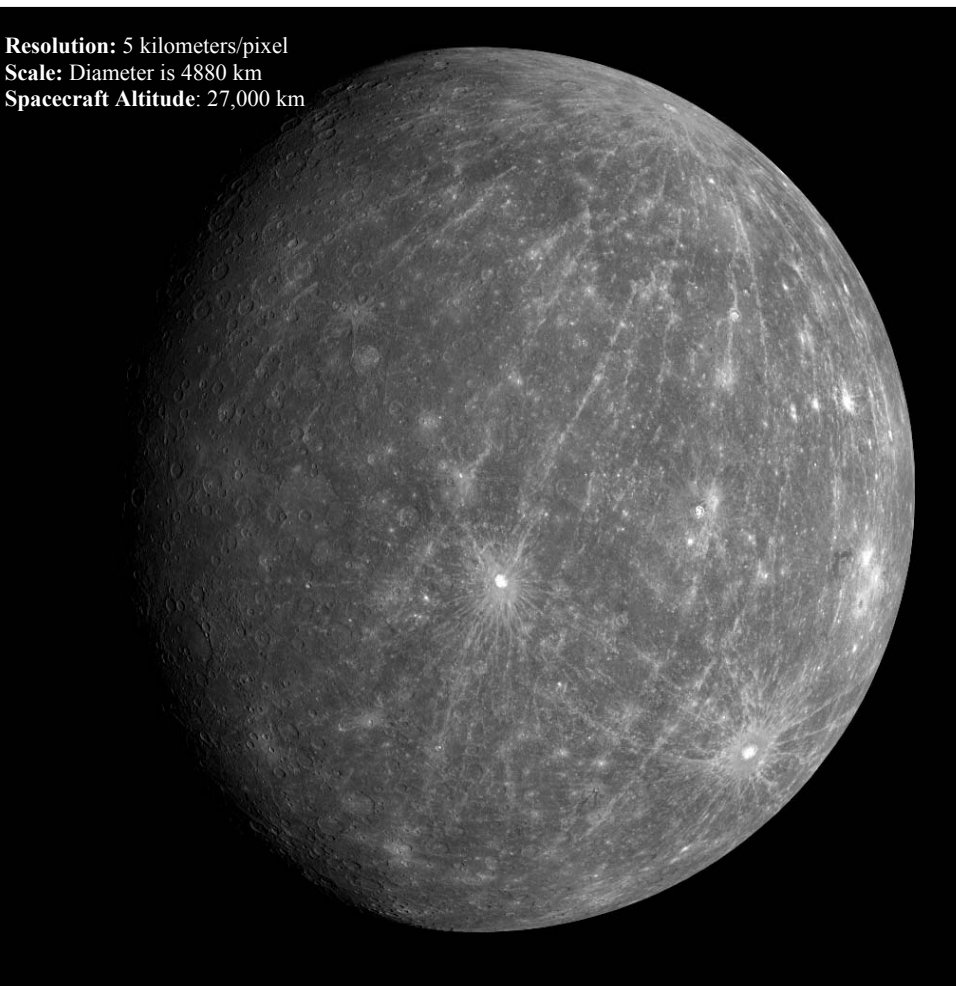
On October 6th, at 4:40 am EDT, MESSENGER successfully completed its second flyby of Mercury. The images taken during the flyby encounter began to be received back on Earth.

The spectacular image shown here is one of the first to be returned and shows a wide angle camera image of the departing planet taken about 90 minutes after the spacecraft's closest approach to Mercury.

The bright crater just south of the center of the image is Kuiper, identified on images from the Mariner 10 mission in the 1970s.

For most of the terrain east of Kuiper, toward the limb

Resolution: 5 kilometers/pixel
Scale: Diameter is 4880 km
Spacecraft Altitude: 27,000 km



The Messenger spacecraft's latest view of Mercury taken as it made its latest pass by the planet on its way to eventual orbit. About 1/3 of this image contains features never before seen on previous missions to the innermost planet.

Credit: NASA/Johns Hopkins University Applied Physics Lab @ Carnegie Institution of Washington

(edge) of the planet, the departing images are the first spacecraft views of that portion of Mercury's surface.

A striking characteristic of this newly imaged area is the large pattern of rays that extend from the northern region of Mercury to regions south of

Kuiper. This extensive ray system appears to emanate from a relatively young crater newly imaged by MESSENGER, providing a view of the planet distinctly unique from that obtained during MESSENGER's first flyby.

This young, extensively rayed crater, along with the prominent rayed crater to the southeast of Kuiper, near the limb of the planet, were both seen in Earth-based radar images of Mercury but not previously imaged by

spacecraft.

As the MESSENGER team is busy examining this newly obtained view that is only a few hours old, data from the flyby continue to stream down to Earth, including higher resolution close-up images of this previously unseen terrain.



Extreme Starburst!

By Dr. Tony Phillips

A star is born. A star is born. A star is born. Repeat that phrase 4000 times and you start to get an idea what life is like in distant galaxy J100054+023436.

Astronomers using NASA's Spitzer Space Telescope and ground-based observatories have found that the galaxy gives birth to as many as 4000 stars a year. For comparison, in the same period of time the Milky Way produces only about 10. This makes J100054+023436 an extreme starburst galaxy.

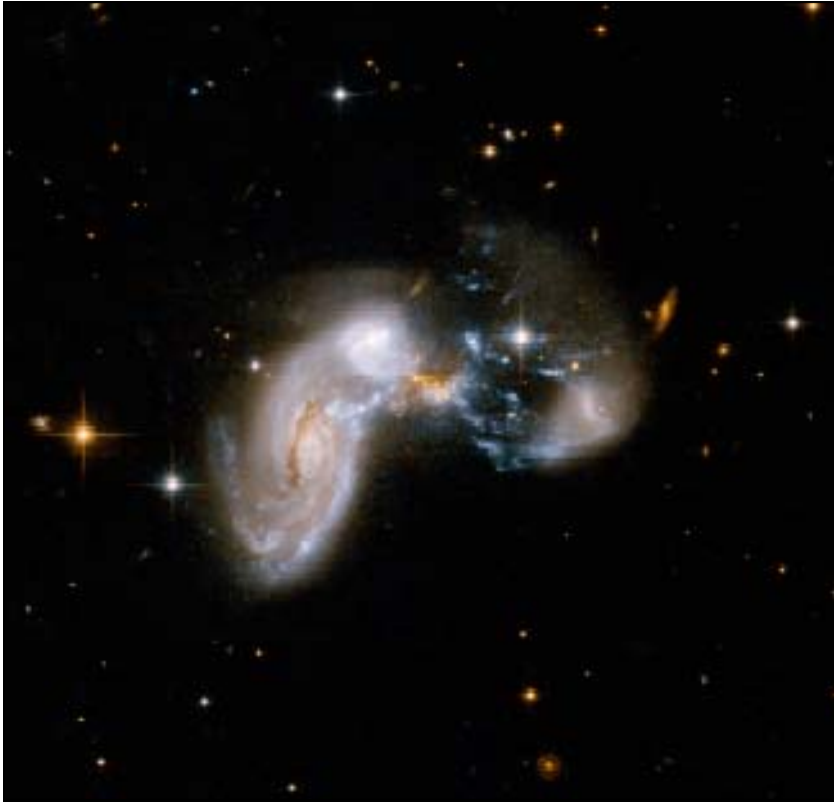
"We call it the 'Baby Boom galaxy,'" says Peter Capak of NASA's Spitzer Science Center at the California Institute of Technology in Pasadena, CA. "It is undergoing a major baby boom, producing most of its stars all at once. If our hu-

man population was produced in a similar boom, then almost all people alive today would be the same age."

Capak is lead author of a paper entitled "Spectroscopic Confirmation of an Extreme Starburst at Redshift 4.547" detailing the discovery in the July 10th issue of *Astrophysical Journal Letters*.

The galaxy appears to be a merger, a "train wreck" of two or more galaxies crashing together.

The crash is what produces the baby boom. Clouds of interstellar gas within the two galaxies press against one another and collapse to form stars, dozens to hundreds at a time.



The "Baby Boom" galaxy loosely resembles the galaxy shown here, called Zw II 96, in this Hubble Space Telescope image. This galaxy is only 500 million light-years away, while the Baby Boom galaxy is 12.3 billion light-years away.

This isn't the first time astronomers have witnessed a galaxy producing so many stars. "There are some other extreme starburst galaxies in the local universe," says Capak. But the Baby Boom galaxy is special because it is not local. It lies about 12.3 billion light years from Earth, which means we are seeing it as it was 12.3 billion years ago. The universe itself is no older than 14 billion years, so this galaxy is just a youngster (Capak likens it to a 6-year-old

human) previously thought to be incapable of such rapid-fire star production.

The Baby Boom galaxy poses a challenge to the Hierarchical

Model of galaxy evolution favored by many astronomers. According to the Hierarchical Model, galaxies grow by merging; Add two small galaxies together, and you get a bigger galaxy. In the early years of the universe, all galaxies were small, and they produced correspondingly small bursts of star formation when they merged. "Yet in J100054+023436, we see an extreme starburst. The merging galaxies must be pretty large.

"Capak and colleagues are busy looking for more Baby Boomers "to

see if this is a one-off case or a common occurrence." The theory of evolution of galaxies hangs in the balance.

Meanwhile... A star is born. A star is born. A star is born.

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

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www.amateurastronomy.org

Article Submissions

The HAA welcomes your astronomy related writings for the Event Horizon newsletter. Please send your articles, big or small, to:

editor@amateurastronomy.org

The submission deadline is two weeks before each general meeting.

The Event Horizon is a publication of the Hamilton Amateur Astronomers (HAA) The HAA is an amateur astronomy club, for people of all ages and experience levels, dedicated to the promotion and enjoyment of astronomy . 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.

2008 HAA Council

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Councillor	Ann Tekatch
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Next Meeting

November 7th, 2008

7:30 PM @ The Spectator

Observing site for the HAA provided with the generous support of

Binbrook Conservation Area..

Come out observing with other members and see what a great location this is for stargazing, a family day or an outdoor function.
Please consider purchasing a season's pass for \$70 to help support the park.

www.conservation-niagara.on.ca/conservation_areas/binbrook/binbrook.html

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