



New Year Starts with a Bang! - by Mike Spicer

The New Year got off to a wonderful start at the Spectator Auditorium on Friday evening, 12 January. Over four dozen of our club members and a lot of newcomers (welcome!) arrived before 7:30 pm despite cold weather and bad driving conditions. A number of new memberships were taken out (welcome to the H.A.A.!). Our display tables held give-aways including several books generously donated by Ray Badgerow and a lot of Sky & Telescope magazines. Objects for sale included some breathtaking astro-prints by Tim Harpur. Perhaps the biggest splash coming in was the chance to see the new look Event Horizon for January 2007. Members devoured the info and praised the issue's editor, Tim Philp for producing an excellent newsletter.

Our pre-meeting entertainment show "You Might Be An Astronomer If..." evoked laughter while the presenters hooked up their equipment for the evening's proceedings. At 7:30 Chairman Glenn brought the meeting to order with announcements, including details of future meetings and our Club's association with Parks Canada, thanks to the efforts of Publicity Director Jackie Fulton.

Our annual Telescope Clinic was held at the Teamster's

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Saturn, 7 March 2006
Nexstar 11 @ F/20, Toucam
2,000 frames in Registax Ver. 3
Taken from the patio in Hamilton
Mike Spicer, Hamilton Amateur Astronomers

Saturn puts on a great show for the next few months as it climbs higher in the sky. It is sure to be a popular object at public events this year!

From the Editor's Desk

Author! Author!

Welcome to the second Event Horizon that it has been my privilege to be the editor. Putting this newsletter has been a fun experience and I look forward to doing many more.

It is important to remember that this is YOUR publication. What appears here will, I hope, help you understand and enjoy your hobby. I am always interested in comments from members about the content and any new feature suggestions. As well, I am most interested in getting material from the membership. Come on! You guys can write a short article for the EH!

Tim Philp—Event Horizon Editor

Pssst! Need a Telescope?

Interested in a telescope but don't know what to buy? Members are welcome to a loaner 5" reflector telescope complete with electronic controlled alt-az motors. See our observing director, Mike Spicer for more details or email observing@amateurastronomy.org



Publicity Report by Jackie Fulton

The HAA is involved in a lot of community outreach: Public Observing nights in Hamilton, Brantford and Grimsby; Astronomy Day; our monthly meetings; our telescope contests just to name a few. As Publicity Director I thought I'd let you know of some new HAA community programs. Hamilton Amateur Astronomers is an active club!

Canadian Marine Discovery Centre

HAA now has in place a partnership agreement with the Canada Marine Discovery Center at Bayside in Hamilton. That relationship continues to develop. In 2007 HAA will hold four main observing events at that facility, starting with the Total Lunar Eclipse on March 3rd.. CMDC has asked HAA to help develop their educational program in Astronomy. HAA will have input into CMDA's elementary and secondary school curriculum and programs for every grade level of the school system. This expands our

promotion of astronomy to all ages through greater public access. The HAA is excited about working together with the Center to achieve our common goals.

Donations

An HAA member has come forward with the name of a prospective donor. We really appreciate the work this member has done and continues to do on our behalf. A meeting is being arranged in the short term. Meanwhile there is paperwork to be done. Your input into what HAA might best do with donation funds would be welcome!

Chedoke Children's Rehab Program

Chedoke Hospital's Children's Developmental Rehabilitation Program in Hamilton has inquired about the HAA being able to assist them in their recreation programs. Chedoke Hospital provides fitness and rec-

reational services for over 1000 children and adolescents. The HAA has responded and is awaiting a meeting date.

New Promotional Pamphlets

I'm sure you are all familiar with the HAA blue brochure. With all our developments, a new HAA promotional pamphlet is being designed with more recent photos. A lot of time and work has gone into the new format and content. I think you'll find they are very professional-looking indeed. Thanks to those who gave so generously of their time.

Your input is always welcome on any aspect of our Club's outreach programs. I still hear new members saying they only just heard of HAA though our community work or they would have joined much earlier! Let's get the word out: HAA is the active club!

January Meeting Continued

Hall on Friday evening 26 January. Members and visitors brought out their scope set-ups and information was exchanged over hot coffee provided by Gail Muller. After all, our club is all about sharing!

Glenn announced that our next Public Day is scheduled for the afternoon and evening of March 3rd, the night of the Total Lunar Eclipse. We'll be setting up - rain or shine - at the Canada Marine Centre at Bayfront. Good weather means telescopes to see the eclipse, bad weather will have A/V presentations in the Centre's beautiful theatre. All are welcome to this free event! Mike Spicer presented "The Sky This Month" for Jan-Feb, with

emphasis on observing and imaging Comet McNaught and the planet Saturn. You can see ALL the slides in his presentation in the "Tools" section, or by clicking:

www.amateurastronomy.org/Picts/mikespicer/Jan2007/

At half-time Miss Alexandra Tekatch drew two door prize tickets for portable heat generators to keep the winning observers toasty-warm during those cold, windy January nights (so we expect to see you guys at Binbrook).

Our Main Speaker for the evening

was Eric Briggs from Toronto. Eric demonstrated some of the work he has done on "The Moon for Microsoft Flight Simulator", results to be seen in the future at AVSIM Online. Eric generated a lot of interesting questions from the audience and his talk was very well-received. Perhaps Eric, a noted astro-imager and discoverer of a supernova, will agree to speak again in the future.

Our club heard of the passing of Jackie Fulton's mother and we wish her our condolences.

After the meeting, members and guests retired to the monthly repast at East Side Mario's for dining and discussion. H.A.A. is a fine club!

You might be an astronomer if...

- Your watch is accurate to 1 second and glows in the dark
- You can spell Chandrasekhar, Hyakutake, and Syzygy
- You know the significance of “Oh be a fine girl, kiss me now”
- The streetlights near your house ‘burn out’ frequently
- Your digital camera lenses are permanently set to ‘infinity’
- You pronounce Maria with emphasis on the first syllable
- You stay up until 3 because you saw a star at 11 PM
- Your radio is permanently set to CHU, and it beeps
- You know the Star Wars Death Star is called “Mimas”
- You don’t think rings around planets are a rarity



Chair’s Report by Glenn Muller

Next to outright computer geeks, if there’s one group that embraces technology it’s got to be astronomers. Aside from the obvious fact that gathering data from the edge of the Universe is practically impossible without sophisticated machines, by our very nature we just love electronics!

While I know a couple of amateur stargazers who manage to survive without an Internet connection, it is rare to find one without a computer. Our tastes in optical equipment may vary from the basic tube on a modest alt-az mount to a CCD-equipped Ritchy-Chretien with GPS alignment and GoTo capability, but, no matter which part of the spectrum you prefer chances are good that you’ve got a gadget or two on hand.

Although I like the simplicity of my dob/newt, its first upgrade was the addition of Rigel’s electronic bull’s eye finderscope. And I rarely hunt for billion-year-old photons without booting up a laptop for the convenience of Cartes du Ciel and my Excel logsheet.

Gail and I recently jumped into the

world of “handhelds” with a Palm PDA (personal digital assistant) for me, and an MP3 player for her. We use them to listen to podcasts which are audio files presented by special interest groups. There are several astronomy-related sites and we’ve found that the sound bytes are a nice way to stay current during the daily commute.

Books can also be enjoyed this way and many sites offer, for free, every genre in either audio or text format. I’ve downloaded several astronomical publications from the first half of the twentieth century and the science volumes have provided a fascinating insight as to how the limited data of the day was interpreted.

The science-fiction stories, corny by today’s standards, also shed light on the author’s points of reference. Rockets with thick iron walls, and space suits made of canvas, leather, and fur are cast among paragraphs describing tractor beams, replicators, and thought-transference machines most of which employ vacuum tubes and radium.

Speculation of intelligent life on planets such as Mars or Venus is a recurring theme, as is the evolution of such creatures. One evening as I dozed, my mind unleashed to wander at will, it occurred to me that our technology is probably affecting our own evolution.

Personal mechanical aids suppress our need to develop great strength, endurance, gills or wings – though some argument could be made for an extra pair of hands. It has been suggested that the next version of our species will have telepathic powers, but what’s the point when we already have the Blackberry™.

Listening to podcasts while driving is a good example of how we are becoming more adept at information assimilation and multi-tasking, although I suspect that computers will soon do the driving for us.

Like any silicon junkie, I want to know where all this technology will take us but, until we get there, I quite like using it to find out where we’ve been.

Clear skies!

Event Horizon—Ten Years Ago - Clyde Tombaugh Dead at 90

LAS CRUCES, N.M. — Clyde W. Tombaugh, discoverer of the planet Pluto and father of the astronomy research program at New Mexico State University, died Friday, Jan. 17, at his home in Las Cruces. He was 90.

“He was truly one of the great men of science,” said Jack Burns, associate dean of arts and sciences and former astronomy department head at NMSU.

Tombaugh was 24 years old when he made world news in 1930 by discovering the elusive ninth planet using a photographic telescope at Lowell Observatory in Arizona.

He remained active long after retiring as a professor emeritus in 1973, lecturing on an occasional basis and going to his office regularly. In the 1980s, he went on an extensive lecture tour to raise money for an astronomy endowment at NMSU.

Tombaugh is survived by his wife, Patsy; son, Alden Tombaugh, of Las Cruces; daughter, Annette Tombaugh, also of Las Cruces; five grandchildren and eight great-grandchildren.

Born on Feb. 4, 1906, on a farm near Streator, Ill., Tombaugh moved with his family to a farm near Burdett, Kansas, during his high school years. He shared his father’s keen amateur interest in astronomy, and when he wanted a telescope more powerful than his 2 1/4-inch Sears Roebuck model, he began grinding mirrors and making his own.

Using a hand-made 9-inch telescope, he made meticulous sketches of Jupiter and Mars and sent some of them to the Lowell Observatory. He thought he might get some advice from the professionals. Instead he was offered a job. It happened that the observatory was looking for a good amateur astronomer who could operate a new photographic telescope.

Tombaugh was hired in 1929 as a junior astronomer to join in the search for a “Planet X” beyond Neptune, a search begun in 1905 by Percival Lowell. Working through the nights in a cold, unheated dome, he made pairs of exposures of portions of the sky with time intervals of two to six days. These were scrutinized under a device called a

Blink-Comparator in hopes of detecting a small shift in position of one of the hundreds of thousands of points of light – the sign of a planet among a field of stars.

On the nights of Jan. 23 and 29, 1930, Tombaugh made two such photographs of the region of the star Delta Geminorum. On the afternoon of Feb. 18, comparing the plates with the Blink-Comparator, he detected the telltale shift of a faint, starlike image. The discovery was confirmed with subsequent observations and announced to the world on March 13, 1930.

Tombaugh continued searching the skies at Lowell Observatory over the next 13 years, with time out for a college education. No more planets showed up, but he discovered six star clusters, two comets, hundreds of asteroids, several dozen clusters of galaxies and one super-cluster.

During those same years, he entered the University of Kansas on a scholarship (1932), married Patricia Edson of Kansas City (1934), earned his bachelor’s degree in astronomy (1936) and went on to get his master’s (1939).

After teaching at Arizona State College (now Northern Arizona University) and the University of California at Los Angeles, Tombaugh moved to New Mexico in 1946 to become chief of the Optics Research Laboratory at White Sands Missile Range, where German V-2 rockets were being tested. He came to New Mexico State University in 1955 and started the Planetary Group, an astronomy research program.

He was instrumental in designing and obtaining funding for the university’s Tortugas Mountain Observatory, a 24-inch telescope that captured its first images in 1967 and is still in service taking data for the National Aeronautics and Space Administration.

Tombaugh was largely responsible for the astronomy program becoming a separate department at NMSU in 1970. Today the department is a member of the Astrophysical Research Consortium, which owns and operates the Apache Point Observatory in New Mex-

ico’s Sacramento Mountains. NMSU manages the observatory.

Tombaugh remained active long past retirement and never lost his passion for stargazing. When the Smithsonian Institute asked if it could have for its museum the telescope he made in 1928, “I told them I was still using it,” he said in an interview. The 9-inch telescope, with which he made the drawings that impressed the Lowell Observatory staff, was built with parts of discarded farm machinery and a shaft from his father’s 1910 Buick. Tombaugh ground the mirrors himself.

Until frail health prevented it, Tombaugh continued observing the heavens through that 9-inch telescope and a larger one he made himself, from his back yard in the Mesilla Park community of Las Cruces.

While he was in his 80s, Tombaugh toured the United States and Canada with his wife, Patsy, giving 75 lectures during a three-year period to raise money to bring astronomers to NMSU for post-doctoral research. The Tombaugh Scholars Fund now is a permanent endowment.

“We have 120 applicants for the Tombaugh Scholar position that is open for the fall,” said NMSU’s Walterbos. “That’s an indication of how important this scholarship is.”

Tombaugh, the former farm boy with a fondness for corny jokes and puns, delighted in recounting the tale of his discovery of Pluto, which he compared to finding a needle in a haystack. It was tedious work but better than pitching hay on his father’s farm, he liked to say: “I’d had my hay day.”

By the time he retired, he and his NMSU astronomy staff had confirmed the rotation period of Mercury on its axis, determined the vortex nature of Jupiter’s Great Red Spot, and developed a new photographic technique for the small Earth satellites search he was supervising.

Of the decades of discovery since he made the history books, and the thousands of hours spent at his telescopes, Tombaugh often said: “I’ve really had a tour of the heavens.”



Who Needs the Cottingley Faeries? by Robert Cockcroft

Once people get over the common misconception that you're not interested in horoscopes, you're often faced with the question of how you became interested in astronomy. For me, as I'm sure it is for many, it's a passion that's continued from childhood – indeed from a time before when I can remember. However, there's one event that I'd like to share with you that I can clearly recall and which captures the spirit in which I pursue my studies in the field today.

As we would often do, my parents, my sister and I would sit in our back garden with nothing more than several layers of clothing, a sleeping bag and a deck chair each. The darkness in our area was great for observing, but I'd always make sure that I was safely sat between the others so that anything hiding in the shadows of the garden couldn't get me. Stories of ghosts and ghouls had always been around in our village of Cottingley, especially since the famous hoax with the photographs of faeries in 1917. With my sights directed skyward, though, I'd soon forget about being

spooked. We'd watch the constellations swing over the trees, and count the number of satellites, meteors and planes that we'd collectively see. My sister and I would compete to see who could detect the satellites first, with my parents rarely seeing them until we pointed them out because of their failing eyesight. This particular evening we were awed into creating a new category to tally.

Being used to the flashing lights of planes passing overhead, when we first saw this object out of the corners of our eyes it was just assumed to be a plane. But there was something wrong with the flight path. It was zig-zagged. There were a few flashes seen in one direction, you'd continue to predict the next flash, but it unexpectedly turned up ninety degrees away from where you thought it would – and from there it would continue for a few more flashes before doing the same thing again. This regular pulsation veering off at right angles every few flashes held us fascinated and unnerved from our lowly positions.

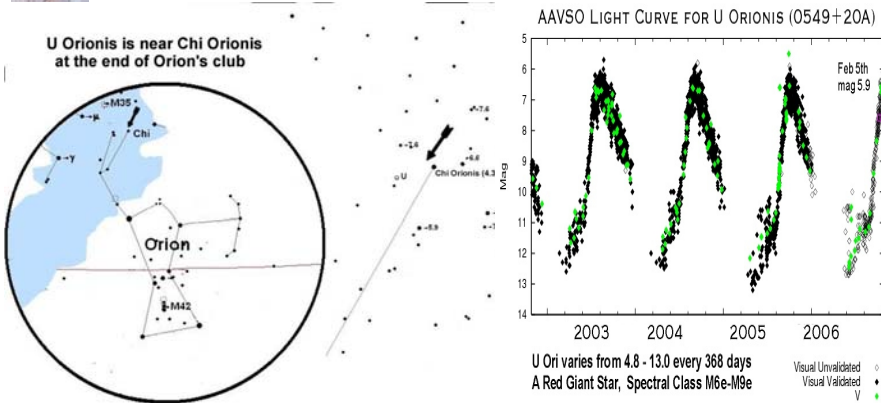
Suddenly the unknowns in the garden's shadows paled in comparison the unknowns in the sky.

Once the object had flown out of our field of view we stayed out later than normal hoping to see it again if it returned. It was to no avail, so, at my parents' call for bedtime, we all went inside. However, I couldn't sleep because I felt a new perspective – imaging possibilities that hadn't before been made so real.

It's easy to speculate on the number of things that this object could have been. And that's exactly what the local village newspaper did the following day after receiving many calls from residents who had witnessed the same thing my family and I had. But, at the time, other people's opinions didn't matter to me; my mind had been given a huge push forward in imaging exactly what was out there. And that's why you'll find me with a telescope today: still trying to discover for myself all the wonders in our Universe.



U Orionis Peaking—by Mike Spicer



It Seemed Like A Good Idea At The Time—by Glenn Muller

Within every amateur astronomer there lurks a latent scientist, and I don't mean the character who thinks it'd be neat to discover the next great comet, though, he's in there too. What I'm talking about is that

urge to validate our scope time with something more than just gazing into Space.

Astrophotographers can rationalize that their version of M42 could reveal as yet unseen features but, for the rest of us, any semblance of real science needs a different approach.

I decided I'd like to take some distance measurements such as separation between double stars, or the width of moon craters. Perhaps even size up a comet's coma or the length of its tail.

The standard instrument for doing this sort of thing is called a filar micrometer; a somewhat expensive piece of equipment that has given way, lately, to the eyepiece reticle micrometer. This latter instrument consists of a scale, etched on a lens, which is either incorporated as part of an eyepiece or, like a filter, screwed onto the bottom of the ocular.

My instrument of choice became the Meade Wireless Illuminated Reticle Astrometric 12mm Eyepiece, a mouthful that costs about twenty dollars a word. This funky gadget is a basic 12mm Plossl eyepiece with 3 different scales etched on its bottom

lens and a little red LED light attached to the side to highlight the markings.

I put it on my birthday list and, when I didn't get it, promptly added



it to my Christmas list – surely Santa loved me even if the rest of my family didn't. On December 25th, under the tree and nicely wrapped was a little box from Meade. But my eyes, trained from years of

spotting slight details, noticed a shortage of words.

Peering through the lens it took just a second to realize I was holding a Meade Wireless Illuminated Reticle 12mm Eyepiece. The physical difference was, instead of three cool-looking scales, this eyepiece just had the parallel pair of crosshairs used to guide a scope while taking another picture of M42.

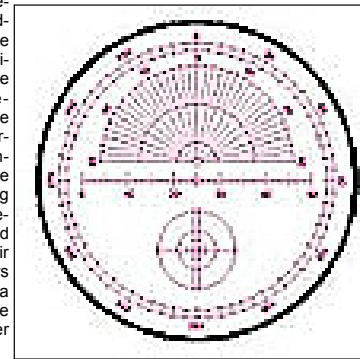
You may say it's the thought that counts but what scores points with me is a friendly return policy so, after Boxing Day, Gail and I drove into Toronto and effected an ex-

change. Finally, I had the scientific apparatus that would mollify the inner me.

Two small watch batteries power the wireless illuminator, and the red LED light is bright. Actually too bright, and, on mine, the dimmer function didn't work. Reports on the Internet suggested there might be a common defect in the switch so I temporarily solved the brightness problem with a few circles of red acetate over the LED.

First light was the nearly full Moon which made my modification a moot point. After few turns of the built-in diopter, the scales showed up nicely against the bright lunar surface. The craters, however, only reached focus at the extreme inner limit of my focuser.

I turned to a star. Still in focus but I could tell dim targets would have a hard time competing with the scales which seemed to lose their sharpness when lit up. The instruction



sheet suggested using a barlow when working with tight doubles, and I thought this might also solve my focuser problem. Instead, it would deliver the knockout punch to my aspirations.

From the start, the weak spot in my set-up had been my beloved dobsonian. That simple, efficient mount with which I can grab DSO's as if snaring butterflies in a net just

doesn't have the tracking mechanism necessary to keep an object centered long enough to make an accurate measurement.

Orion 9x50 Right-Angle Correct-Image Finderscope for my 6" reflector, and a Rigel Quickfinder for Gail's Starblast.

Now there are certain people who would trade in the scope to make the eyepiece work but I'm not



I've already found the new finderscope to be an improvement over the straight-through 6x30 model. It's more comfortable to use and will pay off in Aces at star parties when I have to keep a target in view while standing on the starboard side of the scope. The higher power also helps when searching for dimmer objects; it even gives a decent view of M42 – and what wouldn't I do for a picture of that!



one of them. Luckily, the astronomical community is full of goodwill and the vendors I have dealt with are no exception. For a few extra dollars I exchanged the eyepiece for an

scope. The higher power also helps when searching for dimmer objects; it even gives a decent view of M42 – and what wouldn't I do for a picture of that!



The Sky this Month—by Mike Spicer



Approaching Inferior Conjunction (Feb 23rd) Mercury is a waning crescent approaching the Sun in February; in March it reappears in the East before sunrise, reaching Western Elongation on Mar 22nd,

when it will be much brighter than nearby Mars but just 10 degrees above the horizon at dawn.



A beacon of the early evening in the West, the gibbous Venus is brilliant at almost mag -4 despite its small apparent size (11"). Try to catch the thin crescent Moon near Venus on the evening of Feb 19th.



In Capricornus, Mars is a relatively small (diameter just over 4") and faint (magnitude 1.3) morning object very low in the SE sky before sunrise.

Mars was in conjunction with the Sun last October. It is slowly moving W of the sun throughout 2007. Opposition is not until Christmas Eve, when Mars will be a bright disk almost 16" in diameter high on the meridian in Gemini.



In Ophiuchus and about as low on the Ecliptic (-22 Declination) as possible, Jupiter rises in the SE near midnight and sits very low on the horizon. The planet is the brightest object in the morning sky at magnitude -2. Observers will notice the planet's fascinating disk is over 33" in diameter and increasing with each passing month until Opposition on June 5th. Indeed, a telescopic observer can easily follow Jupiter through the daytime sky once the planet has been located (easiest before dawn).

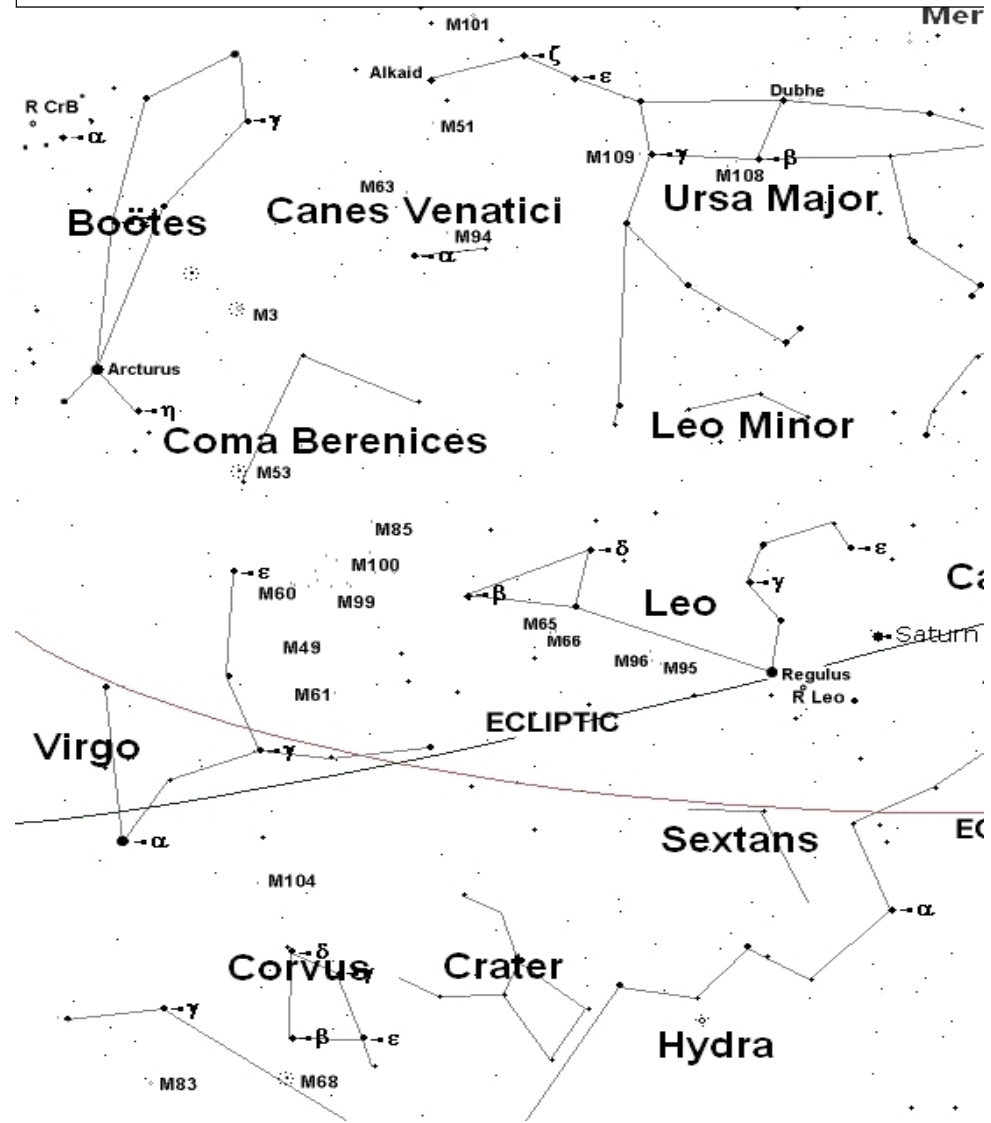
The **Galilean moons** are easily visible in binoculars. Callisto's orbit carries it above or Below Jupiter, but the Eclipses and Transits of Io, Europa and occasionally Ganymede will fascinate telescopic observers. In Feb-March the moons will dim considerably before an Eclipse begins, as they enter Jupiter's cone of darkness (the sun's shadow) before passing behind the disk of the planet.

Similarly, the shadow of Io, Europa and Ganymede will precede the Moon across the planet's disk during a transit. The distance between a Moon and its shadow will diminish as the planet approaches Opposition. Observers report that the small black shadows are much easier to see than the Moons themselves, against the cloudtops of Jupiter.

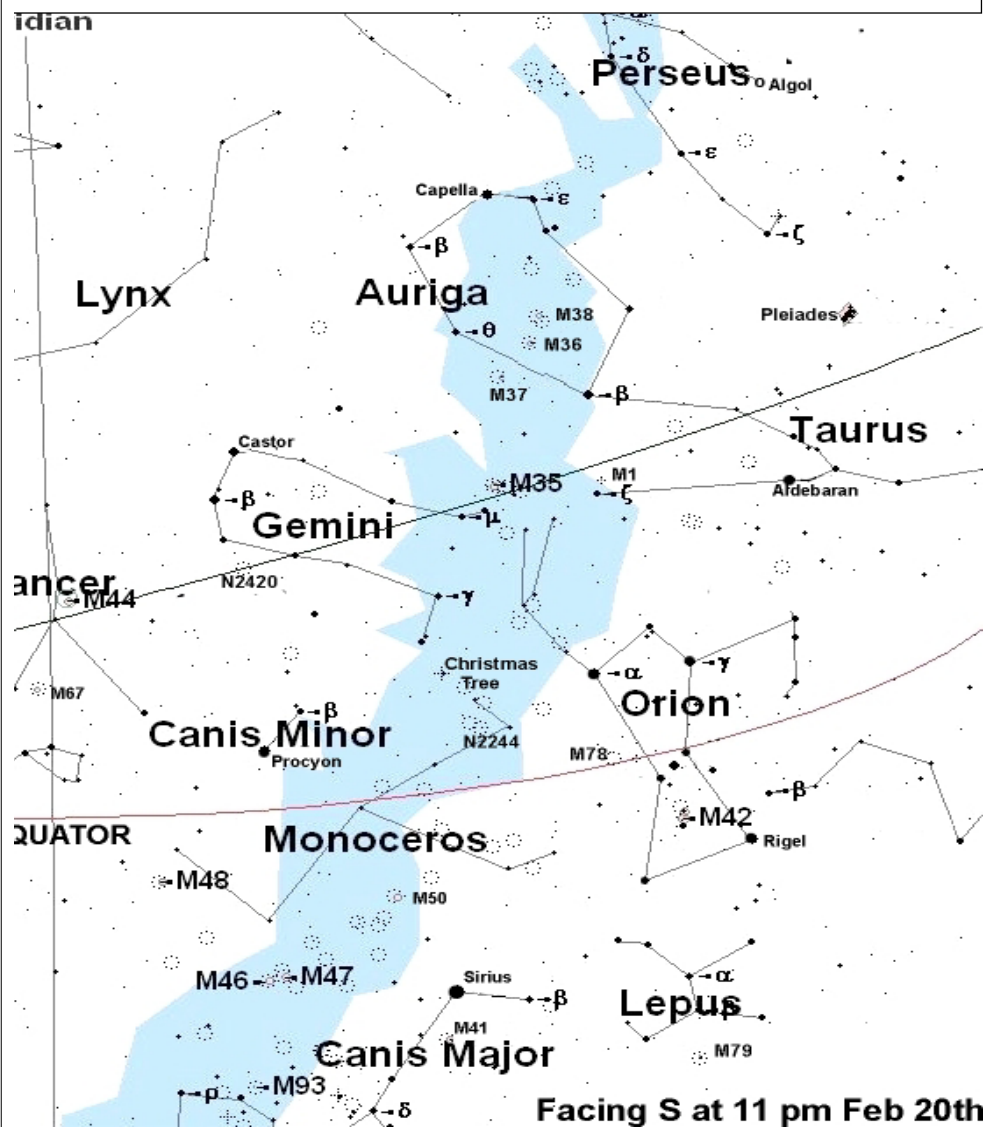
Look for transits of Io on Feb 12, 14, 19, 21, 28 and

[Continued on Page 10](#)

The Sky this Month



This Month



The Sky this Month (Continued)

March 2, 7 and 9th; transits of Europa on Feb 11, 22,

March 1 ... and on the morning of March 8th there is a double transit of Europa and Ganymede to watch.

The **Great Red Spot**, Red Spot Jr. and dark barges near the Equatorial belts on the disk of Jupiter are a constant source of interest to telescopic observers and imagers. Look for the Great Red Spot before dawn on Feb 11, 13, 14, 16, 18, 20, 21, 23, 25, 28 and March 2, 5, 7 and 10. Remember that the GRS has the colour of pink salmon and appears to be somewhat detached from and S of the South Equatorial Belt.



Saturn: is at Opposition on February 10th in the constellation Leo, high in the sky all night and at almost magnitude -0.1 the brightest it will be for many years to come (it is near perigee, and of course the rings are closing). With a disk over 20" in diameter and the planet over 55 degrees above the horizon near midnight, this is the month to capture images of Saturn!

Saturn's rings are certainly a showpiece of the night sky. This is the last year for a really good look at the rings until 2011 as the tilt of the rings will increase to over 15 degrees in April before continuing to decrease. Saturn's rings will be edge-on in early 2009. This month a 3" telescope should show the 4,500 mile wide Cassini division between the outer A ring and the brighter, inner B ring of the planet.

Titan is visible as a yellowish 8th magnitude "star" in binoculars or a telescope; the 9th and 10th magnitude moons Rhea, Tethys and Dione hang around the planet just outside the rings, visible in small telescopes; 11th magnitude Enceladus and 12th magnitude Mimas are harder to see, being in the glare of the planet. Iapetus has an inclined orbit that carries it into Transit and Eclipse with Saturn this year; indeed, Iapetus will be eclipsed starting at 8 pm on Feb 13th! On the evening of March 2nd Saturn passes through a star field and will appear to have several more "moons" around it.



Uranus: Low in the SW after sunset, the 5.9 magnitude greenish-blue disk of Uranus is just over 3" in diameter. It remains just 1.5 degrees W of third magnitude Lambda

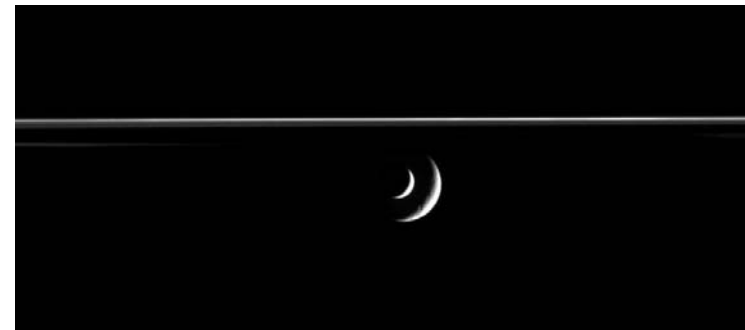
Aquarii; on Feb 9 and 10, Venus, Uranus, Lambda Aqu and Mercury will make a 7 degree long line in the sky. Uranus will be in



Neptune: In Capricornus, is in Conjunction with the Sun on Feb 8th and will not be visible until much later in the Spring



Minor and Former Planets Variable Stars and Supernovae: I will post anything interesting on our web site.



TRANSIT!

We are used to seeing transits of Jupiter by its 4 large moons, however, here is a rare Cassini photo of Enceladus Transiting Rhea!



Tech Tips by Tim Philp

As astronomers, we are very concerned about keeping our night vision. Due to the way the eye functions, it only takes a fraction of a second for you to lose your dark adaptation when the eye is struck by a bright white light.

Of course, the best way to remain dark adapted is to eliminate as much light as possible. That includes the idiot with the bright headlights.

However, we still need to see what we are doing. We can preserve our night vision if we only use dim red light to keep us from tripping over our telescope tripods.

While you can put red plastic over

an ordinary flashlight, the frequency of that light is not well-controlled. Sometimes there is enough non-red light being emitted by these devices that you can actually ruin your night vision without realizing it.

Better is to get a small LED flashlight to provide illumination. These devices tend to have a more pure red light that can preserve night vision, however, you need to make sure that you don't shine this light directly into your observing partner's eyes. That can be painful!

Most LED flashlights that come with headbands allow the beam to be adjusted downwards. This prevents you from zapping your observing

partner with intense red light when you look at him or her.

Another possibility is to bring along an eyepatch. While that may make you look like the star of the next pirate movie, it will preserve your night vision in the covered eye.

Your eyes react differently to light levels and if you can keep the eye that you observe with covered, it will remain dark adapted even if the night vision in your other eye is gone.

Of course, if you use a binoviewer, you had better resign yourself to keeping both eyes closed, or get used to one-eyed-viewing!

Member of the Month— Anthony Tekatch by Jackie Fulton

The face you see here is one that is probably vaguely familiar from HAA monthly meetings. This is Anthony Tekatch, and I am here to tell you there is far more behind that humble quiet veneer.

Anthony is Ann and Bill Tekatch's nephew, Alexi's cousin. With the addition of Cathy, who is Anthony's wife, the Tekatch's make astronomy a family affair. He became involved with the HAA when Ann asked him if he could help with our website. Anthony is trained in electronics and had been a member of the Hamilton Computer Club for a number of years. Ann assumed he'd know something about websites and she was right! And so with that, Anthony became one of our own.

Anthony Tekatch is a very talented man. He designed and sells an educational poster of the Electromagnetic Spectrum. Recently Anthony teamed up with Doug Welch and together they developed the popular SQM Sky Quality Meter. An-



thony also takes great pride in, and speaks proudly of, his telescope, made by his Aunt Ann. T.

Over the years some of us may have taken Anthony and his talents for granted. He is the cog in our communication wheel. He is always there for any and all members, handling all HAA relentless requests with ease. Not only is he our web master, but Anthony has been the Editor and unsung hero of the Event Horizon for the last 4 years. His first edition "hit the streets" in February 2002. Without him and the help of Bob Christmas and Gail Muller there would not have been an EH. Each and every month Anthony set aside many hours of his own time on your behalf. It was not an easy task.

And don't be fooled by his quiet demeanor either. Under that facade lies a man of mischief and humor. Glenn Muller will attest to that.

It is for his tireless effort I would like to thank Anthony Tekatch, from all of us, for everything he has done and continues to do behind the scenes for the Hamilton Amateur Astronomers. You are appreciated,



2007 Telescope Clinic an Outstanding Success by Mike Spicer

Hamilton Amateur Astronomers hosted the 2007 Telescope Clinic at the Teamster's Hall Friday evening 26 January.

A cold end to a snowy day with slippery roads didn't stop over 30 mem-

bers and guests from coming out to the post-Christmas telescope clinic. H A A puts on a Clinic every year to demonstrate the tele-

scopes our members use, and to offer help to those who have trouble with their scopes or who want information on what kind of telescope to buy.

As I looked around the hall at 7:30 pm it was exciting to see the upgraded equipment that Jim W. and Don P. displayed, set up beside newcomers' telescopes and some that needed a little "tweaking". Glenn offered assistance collimating Casey V's handmade and much-used eq newtonian, for example. "Thanks!"

Our members were out in force with examples of binocular setups like the binosurface mirror combo and the ever-popular binocular parallelgram mount, plus every major kind of telescope: newtonians, maksutovs, cassegrains and refractors large and small, apo and achromat. We discussed the advantages and disad-

vantages of each, the merits of go-to and dobsonian; whether wooden tripod legs were better than aluminum or steel.

There were some very large, expensive telescope setups... bal-



anced by some beautifully simple, easy to use little refractors that attracted more than their share of attention. Perhaps that's the great



success of clinics... you get to see club members who want you to enjoy their hobby as much as they do.

Small problems can be fixed, a few helpful comments can set someone on the right path, the undecided can hear practical evaluations of the advantages and disadvantages of each type of telescope.

A little collimation here, a little smoothing the focuser there, a replacement setscrew or a bit of velcro... making small improvements and happy faces. There were a number of interested visitors looking for advice before buying a telescope - very wise! And a lot of positive comments about recent HAA meeting presentations and of course, the Event Horizon. We gave out HAA business cards (map to Binbrook on the back!) and pretty blue HAA brochures, while we planned the hundreds of new brochures we will need in the coming months - HAA is all about outreach!

Such a friendly environment to examine a variety of telescope systems and talk with other observers! As always, Gail ensured there was coffee and a pleasant welcoming face and by 10 pm the scopes had

been packed away carefully into cars, the coffee table had been wiped off, chairs put away and Glenn had mopped the floor one last time before locking up.

Another successful event by Hamilton's active astronomy club! Thanks to all who came, and for those who stayed home... there's always next year's clinic.



A Great Big Wreck by Dr. Tony Phillips

People worry about asteroids. Being hit by a space rock can really ruin your day. But that's nothing. How would you like to be hit by a whole galaxy?

It could happen. Astronomers have long known that the Andromeda Galaxy is on a collision course with the Milky Way. In about 3 billion years, the two great star systems will crash together. Earth will be in the middle of the biggest wreck in our part of the Universe.

Astronomer John Hibbard isn't worried. "Galaxy collisions aren't so bad," he says. A typical spiral galaxy contains a hundred billion stars, yet when two such behemoths run into each other "very few stars collide. The stars are like pinpricks with lots of space between them. The chance of a direct hit, star vs. star, is very low."

Hibbard knows because he studies colliding galaxies, particularly a nearby pair called the Antennae. "The two galaxies of the Antennae system are about the same size and type as Andromeda and the Milky Way." He believes that the Antennae are giving us a preview of what's going to happen to our own galaxy.

The Antennae get their name from two vast streamers of stars that resemble the feelers on top of an insect's head. These streamers, called "tidal tails," are created by gravitational forces—one galaxy pulling stars from the other. The tails appear to be scenes of incredible violence.

But looks can be deceiving: "Actually, the tails are quiet places," says Hibbard. "They're the peaceful suburbs of the Antennae." He came to this conclusion using data from GALEX, an ultraviolet space telescope launched by NASA in 2003.

The true violence of colliding galaxies is star formation. While individ-

ual stars rarely collide, vast interstellar clouds of gas do smash together. These clouds collapse. Gravity pulls the infalling gas into denser knots until, finally, new stars are born. Young stars are difficult to be around. They emit intensely unpleasant radiation and tend to "go supernova."

GALEX can pinpoint hot young stars by the UV radiation they emit and, in combination with other data,

sizzling with new stars, ready to explode.

So what should you do when your galaxy collides? A tip from GALEX: head for the tails.

To see more GALEX images, visit . Kids can read about galaxies and how a telescope can be a time machine at space-place.nasa.gov/en/educators/galex_puzzles.pdf.



This GALEX UV image of the colliding Antennae Galaxies shows areas of active star formation, which is not in the tidal tails as one might expect.

measure the rate of star birth. "Surprisingly," Hibbard says, "star formation rates are low in the tidal tails, several times lower than what we experience here in the Milky Way." The merging cores of the Antennae, on the other hand, are

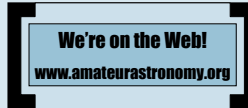
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Special Notice

As you may have noticed from our latest financial report, we need to curb our club's expenses. One of our largest expenditures is the club newsletter, Event Horizon. The cost to print and mail the newsletter is almost \$1500 annually! At a recent council meeting, it was recommended that the newsletter no longer be mailed to members. Any-one with Internet access can download the latest newsletter (and any previous ones) from the club's website: www.amateurastronomy.org. Having the newsletter available online also allows us to publish it in full colour.

If you do not have Internet access, **you will still be able to pick up a paper copy at each meeting.** Copies of the newsletter will also be available to any newcomers at our meetings. **If you do not have Internet access, and cannot attend the meetings, please call Ann Tekatch at 905-575-5433 and she will place you on the special mailings list.**

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.

2007 HAA Council

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Next Meeting of the HAA is March 9th, 2007
7:30 PM @
The Hamilton Spectator

Meeting space for the Hamilton Amateur Astronomy Club provided by
Teamsters Local 879
and
The Hamilton Spectator

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.

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