



Event Horizon

**Volume 19, Number 5
March 2012**

From The Editor

Just as I was putting the final touches to this month's newsletter, I received an email from Charles Baetsen. Charles has scanned missing issues of Event Horizon to pdf files and we will be posting them to the website shortly. By the time next month's newsletter is ready, every single issue of Event Horizon ever published should be available on our website! Many thanks to Charles for helping us complete the collection.

In this issue, along with our usual informative and entertaining monthly columns, David Tym provides us with a report of his recent trip to the Lowell Observatory along with some great photos.

Enjoy!

Ann Tekatch
Editor@amateurastronomy.org



Chair's Report by Bob Christmas

As we come into March, we leave what has been a mild winter, and we cross the Vernal Equinox to enter spring, and, to that end, public outreach season gets under way with the HAA's first public telescope night, which is scheduled for March 31, 2012 in Grimsby.

But before I get to that, a few words about February's monthly meeting, which featured Ian McGregor from the Royal Ontario Museum in Toronto, which has its Maya exhibit until April 9. Ian talked about the Maya of Meso-America, giving an overview of Maya culture and mythology, their numerical system, and their calendar. It was a captivating talk, and it drew an audience of 108 people to our meeting! Ian brought with him several books about the Maya, and a replica of the Dresden Codex, an ancient Maya book about mythology and astronomy, which includes tables for the motion of Venus, that resides in a library in the German city of the same name. This is a fascinating topic to say the least. As noted on HAA's Facebook page, we are nearing the

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Chair's Report (continued)

end of the "13th baktun" in the Maya calendar, and there's a very vague reference on one obscure Maya stele in Mexico about something happening on December 21, 2012, the end of the 13th baktun, but that's about it. Many versions of the Maya long count calendar actually go up to 20 baktuns, so there's still thousands of years left! Thanks go to Ian for coming to our club and giving this informative and fascinating talk!

This brings me to all of the events the HAA has on deck this upcoming month.

The March general meeting will be on Friday, March 9 at The Spectator Auditorium, and we have longtime HAA member and Past Chair Mike Spicer as our main speaker. His talk will be entitled "March Madness".

For our members, on Thursday, March 15, we have booked a pair of shows at McMaster University's McCallion Planetarium, "A Tale of Two Voyagers" at 7pm and "2012: Mayan Clocks and Modern Science" at 8:15pm. At the time of writing, there are still seats available for both shows, and tickets are \$5 per person per show. You can purchase them at the March meeting on Friday the 9th. Once again,

thanks to Andrew Bruce for organizing and booking these shows for us!

As I mentioned above, on Saturday, March 31, many HAA members plan to be at the Gateway Niagara Information Centre in Grimsby for our first public night of 2012. We will be in the parking lot with several telescopes for the general public to peer through. The moon, Jupiter, Venus, Mars, some deep-sky objects, and, later on, Saturn, will be visible for getting views of, so if you have a scope, feel free to bring it to Grimsby on that night, and come join us!

As spring approaches, the winter sky is beginning to make way for the early spring sky, Venus and Jupiter are closing in on each other in the Western evening sky, Mars is getting higher in the night sky and Saturn rises in the East later on. We're also approaching that short window of the year when all of the Messier objects are visible in the sky through the course of one night, hence, the "Messier Marathon" is coming upon us once again. There's lots up there to enjoy this late winter and early spring, so happy observing everyone!

Clear Skies!



December Treasurer's Report by Steve Germann

(Unaudited)	
Opening Balance	\$7373.55
Revenue	\$1120.00
Outlays	\$ 708.14
Closing Balance	\$7785.41

Major revenue included:

Memberships \$140, Sale of Assets (17 inch mirror) \$600, Fleece Jackets \$205, 50/50 \$55, Planetarium ticket sales \$35, Christmas Dinner \$75, and ATM supplies \$10

Major expenses included:

Purchase of ATM supplies \$46.59, Fleece jacket purchase \$177.35, Planispheres \$384.20, BASEF prize (Jim Winger Award) \$100

Masthead Photo Credit: Photo taken SuperBowl Sunday, February 5, 2012, at Binbrook Conservation Area through 7" Maksutov telescope using a Canon 40D dSLR by Don Pullen. Processed slightly by the editor to brighten it for publication.



Trip Report to the Lowell Observatory by David Tym



*Clark Dome at Lowell Observatory
All photos by David Tym*

On a recent trip last November through the American Southwest my wife and I made a much anticipated stop in Flagstaff, Arizona to visit the Lowell Observatory; home of the 24" Clark Telescope and location of Pluto's discovery. As night descended on Flagstaff we were welcomed with a clear evening sky and made the drive up Mars Hill to the observatory. Situated west of downtown Flagstaff the main Lowell Observatory facility sits 2,200 meters above sea level under very decent night skies, which benefit from three decades of anti-light pollution legislation. Founded in 1894 by Percival Lowell, the observatory is one of the oldest in the United States and set the standard for locating observatories on elevated locations away from city lights. Back in Lowell's day, I can only imagine with envy the quality of dark sky observers must have experienced nightly.

The centerpiece of the observatory is the Clark Refracting Telescope built in Cambridgeport, Massachusetts in 1896. Weighing in at 13 tons including the mount, pier and counterweight, the Clark Refractor has a 24" objective with a focal length of 384" producing an f/16 instrument. Adorned with brass knobs, gears and wheels, the instrument has an aesthetic from days gone by and is now only used for education and astronomy outreach.

Our tour guide had the Clark scope pointed at Jupiter for the evening and the raw resolving power of the 24" aperture was very impressive. On display with remarkable clarity were details in Jupiter's cloud bands hidden from smaller instruments. Although the Great Red Spot was not in view, another smaller storm could be seen on the South Equatorial Belt, adding to the experience. De- (Continued on [page 4](#))

Trip Report to the Lowell Observatory (continued)

spite the marvelous sight, every instrument has its shortcomings and the optics did produce noticeable chromatic aberration; however, this did not distract from the purely non-scientific view we were enjoying.



24" Clark Refracting Telescope observing Jupiter

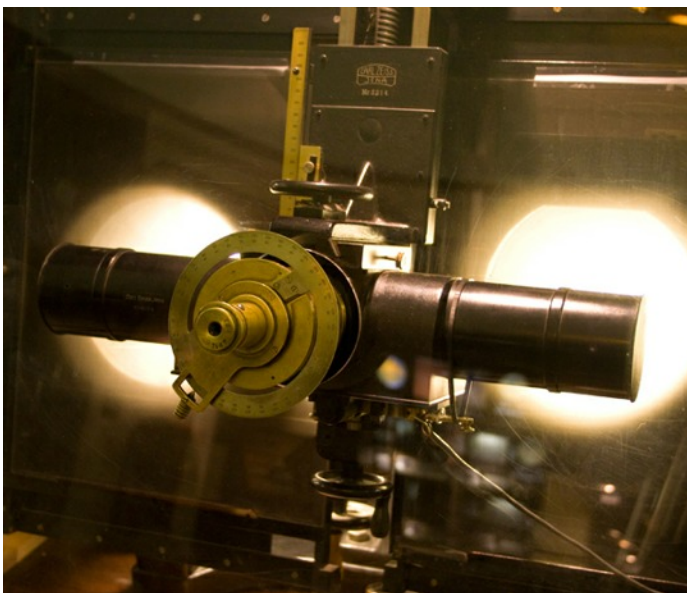
ing between two plates.

The Lowell Observatory is rich in history and responsible for notable discoveries in astronomy. It's fascinating to peer through and touch the same equipment used by historical figures in astronomy. Knowing that you are standing in the same spot as Percival Lowell while he observed Mars or staring through the same equipment Clyde Tombaugh used to discover Pluto can almost put you in their shoes if for only a brief moment. The Lowell Observatory is an excellent astronomy holiday destination and will take you back to the days of giant Refracting telescopes. Its history and the surrounding Flagstaff area are well worth a visit.

*Blink Comparator machine
used by Clyde Tombaugh
to discover Pluto*

Our tour guide explained the history of the observatory and how Percival Lowell spent 15 years studying Mars through the Clark Refractor observing what he thought were canals. Lowell considered these features to be irrigation canals and evidence of advanced life on the red planet. While controversial in Lowell's day these observations were not definitively disproven until the Mariner 4 spacecraft took photos of Mars in 1965. Today, Lowell's observations are regarded as an optical illusion.

Despite Lowell's theories about canals on Mars, he set in motion the program for discovering Pluto in 1906; however, its detection would remain elusive until 1930 when Clyde Tombaugh made the discovery. Using a 13" wide field instrument, Clyde Tombaugh systematically imaged regions of the night sky and then compared sets of images using a Blink Comparator machine. The equipment was on display at the observatory and each image plate would switch into view on the Blink Comparator with a loud mechanical click. Objects moving against the background stars shown on the plates stood out and Pluto's discovery appears as a tiny black dot moving





Through the Looking Glass by Greg Emery

I have no real idea what I am going to write about, so I thought I would ramble on for a few pages and hope that divine intervention would prevail. As I am writing this the latest predicted snow storm produced no snow and we are a few days closer to the end of the "Winter that Wasn't". It may be the lack of snow, or the lack of a true season change, but I have a hard time remembering a stretch of weather that was so overcast and grey. I know for a fact that the last three or four of the clearest nights from my backyard (Dundas Valley) have been when the moon was near full. In January, had a nice clear night near the full moon, took the binoculars out, but that can't compare to the views of a dark sky with a large aperture scope.

With the potentially hectic summer months (if I do go away for a year - there are visas, travel, accommodations....) approaching, I began to think about star parties. A few of the local star parties (local meaning within 8 hour drive) that I would like to go to, or have considered in the past, have poor dates for me. So what is a boy to do? I guess my true options are to go to another star party, go observing on my own or I can stay home and moan and complain about it. So for those of you who know me, Yep I am going to stay home and complain. I figure this is best - if I do go somewhere it will only rain anyways!

There are some neat star parties (a couple of ones that maybe just outside the 8 hour drive criteria), just thought I would share a few.

Having been to the Grand Canyon last year, the North Rim Star Party caught my eye when I was looking up North American Star Parties. The North Rim is about 7000 ft, not populated in a moderately dry location. Seems like a good match for a star party.

2012 Grand Canyon Star Party
North Rim, June 16-23

[Grand Canyon North Rim Star Party](#)

There are several star parties in Pennsylvania. There are two in Cherry Springs State Park. I have not been there, but fellow members of the HAA who have been there speak highly of it. It offers comfortable camping and good skies.

[Cherry Springs Star Party](#)

Cherry Springs State Park, PA, June 14-17

[Black Forest Star Party](#)

Cherry Springs State Park, PA, Sept. 14-16

There are three other star parties in Pennsylvania, two of which are a little further south. The third is somewhat closer to home.

[The Mason Dixon Star Party](#)

Codorus State Park, near Hanover, PA, July 2012
Observing, Camping, a swimming pool, raffle and no man eating black flies. It makes for a great mini vacation this summer. This location offers a large and level camping and observing area with unlimited space for attendees in southern Pennsylvania with reasonably dark skies. This event will also bracket a new moon to provide optimal observing.

[LVAAS Mega Meet](#)

Pulpit Rock, Lenhartsville, PA, August 2012
MEGAMEET is a PA regional amateur club observing event sponsored by the Lehigh Valley Amateur Astronomical Society. MEGAMEET will take place at the 1600 foot summit of Pulpit Rock on Blue Mountain, north of Hamburg, Pennsylvania, about 30 miles west of Allentown.

[Astroblast](#)

Franklin, PA, September 23-28, 2012

ASTROBLAST is an annual event, first held in June 1994, by the Oil Region Astronomical Society. Our organization is blessed with a remote "dark sky" site located far from the light pollution of large urban areas. The event is held in a large field surrounding our observatory in the Lockwood Campground at Venango County's Two Mile Run Park, near Franklin, PA.

The state of Indiana has a star party listed for May. The site should be far enough south of Chicago and northwest of Indianapolis to eliminate problems from those two centers.

[Spring Star Party](#)

Astro-Acres, Beaver City, Indiana

(Continued on [page 6](#))

Through the Looking Glass (continued)

Anyone interested in history, amateur telescope making, optics or nostalgia has probably heard of Stellafane. I have always wanted to go, but every year seems to come and go without my attending.

Stellafane

Springfield, VT, August 16-19, 2012

On August 17, 1920, fifteen men and one woman signed up to learn how to grind their own mirrors from instructor Russell W. Porter in Springfield, Vermont. After successfully completing their telescopes and using them for a while to explore the wonders of the universe, the men decided to build a hilltop observatory and form an official club. On December 7, 1923, the first official meeting of the Springfield Telescope Makers, Inc. was held. Their clubhouse, Stellafane, was completed soon after.

Locally, we have Starfest near Mount Forest, Ontario. This event is well attended and is one of the larger North American Star Parties of the year. Hosted by the North York Amateur Astronomers it is a popular event with many HAA members going yearly.

Starfest 2012

Near Mount Forest, Ontario, August 16-19, 2012

The North Bay Astronomy Club has several star parties that they are involved or participate in. I have to question the naming of their Star Party in May, however the site location seems awesome.

Spring Frozen Banana Star Party

Mew Lake Campground, Algonquin Park, Ontario, May 10-13, 2012

22nd Annual Gateway to the Universe Star Party

Marten River Provincial Park, Ontario July 19-22, 2012

I always like to try to get away to do some astronomy. My kids and I like Manitoulin Island. The two star Parties there, July (Stargazing Manitoulin) and August (Manitoulin Star Party) are not going to work for me this year. Both parties are hosted at Gordon's Park, Tehkumah, Manitoulin Island. [Gordon's Park Astronomy](#)

If you have never been to a Star Party - pick one and try it. You can go for comfort and hotels or rough it in a tent. Most people opt for somewhere in between the two. Don't like large crowds? Some of the options above are smaller and more familial. Like to mingle, meet new people and be extremely social? Many of the larger star parties are attended by large numbers of astronomers ranging in skill and experience from professional to newbie. I personally opt for the smaller more quiet affairs. Regardless of where I was or when I was there I always met people who did not know too much or were just learning- I also met many people with wonderful experience, equipment and skill who were more than happy to share with me.

I have plotted the locations of the above star parties on a map for you - so you can get an idea of where some of these locations are.

[Star Party Map](#)

Hamilton Amateur Astronomers W.J. McCallion Planetarium Presentation

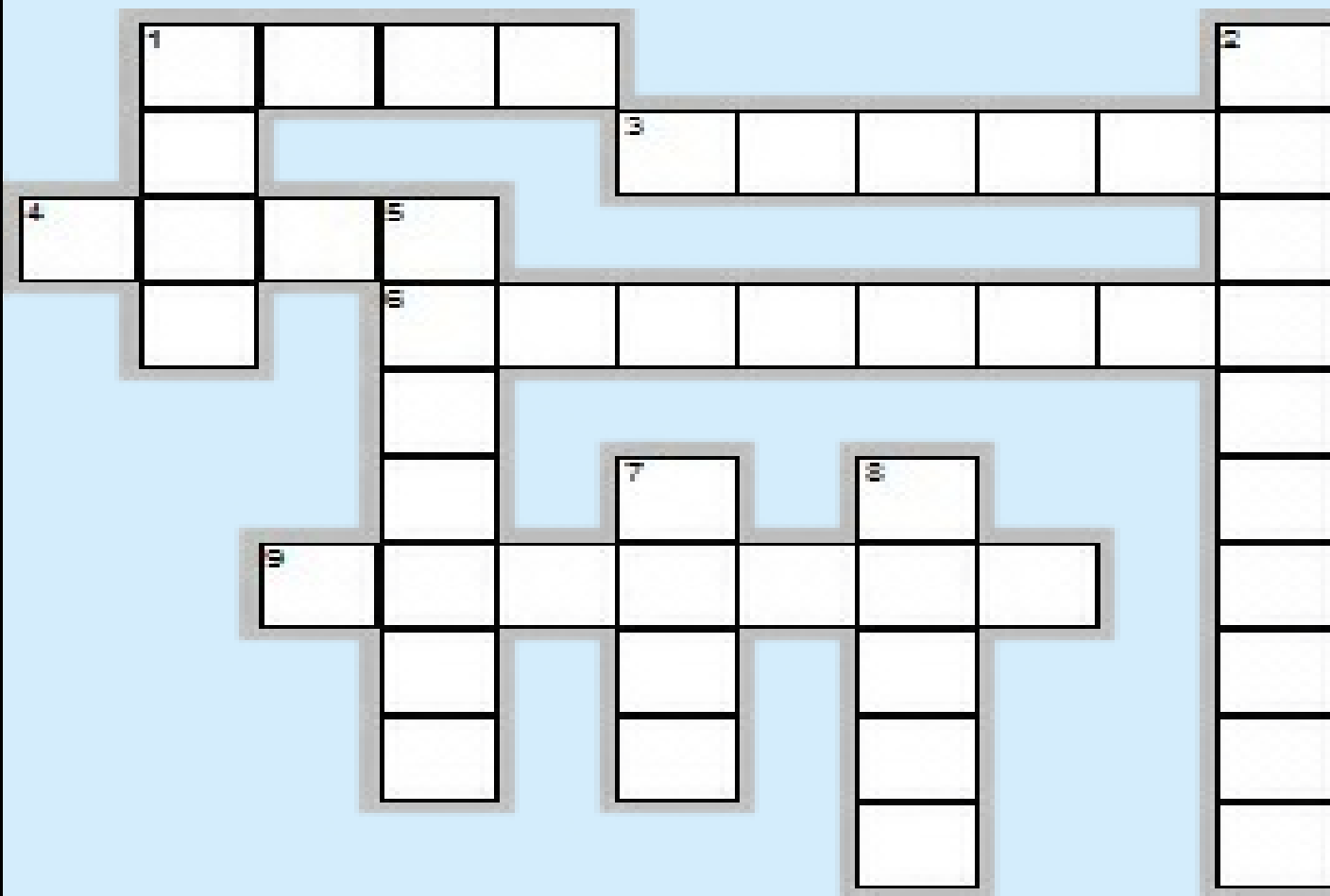
When:	Thursday, March 15, 2012
Where:	W. J. McCallion Planetarium, McMaster University
Cost:	\$5 Per Show (limited seats available)

7:00 pm "A Tale of Two Voyagers" -Between the years of 1977 and 1989, the probes Voyager 1 and Voyager 2 explored the 4 gas giants in our Solar System, along with 48 of their moons. Now approaching the very edges of the heliosphere, the Voyagers represent the two furthest man-made objects from Earth. Come follow in the footsteps of the Voyagers and explore the 4 largest planets in the Solar System: Jupiter, Saturn, Uranus and Neptune. We will also explore their respective satellites, including the difficult decision which sent Voyager 1 off course and out of the Ecliptic.

8:15 pm "2012: Mayan Clocks and Modern Science" -There are many beliefs surrounding the year 2012, often including some cataclysmic destruction of the world. The date itself is connected to an ancient Mayan calendar concluding a 5,125-year-long cycle. During this year, some propose that special astronomical alignments or other phenomena may take place, such as the Earth passing by a black hole, or suffering an impact with an asteroid or rogue planet. Many have written about the subject, but how do we sort fact from fiction? Join us as we explore the astronomy of our place in the universe, and the astronomical events to come in the year 2012. **For Parking Info, visit: <http://parking.mcmaster.ca/>**



Astronomy Crossword by Mario Carr



Across

1. On March 5 this red planet is nearest to the earth.
3. This type of Equinox occurs March 20?
4. On March 8, the full moon is sometimes called this moon?
6. This famous scientist was born March 14, 1879?
9. March 11-13, Venus passes this planet

Down

1. On March 7, Mars is above the . . .
2. On March 27, Venus is at its greatest . . .
5. March 1-9 this planet is visible low in the western evening sky.
7. When the ancient Maya had a ball game it was customary to do this to the losing team.
8. On March 25 and 26 the moon is beside this planet?



February 10, 2012 Meeting Summary by Keith Mann

Astronomers, by and large, are a rational bunch. We are comfortable with the cold logic that tells us that, far from being the center of the universe, we're a speck in one of its many remote corners. Hardly the type, you might think, to pay much heed to apocalyptic frenzies. So why was the guest speaker at the February meeting of the Hamilton Amateur Astronomers discussing ancient Mayan

prophecies foretelling the imminent end of the world?

We're glad you asked. Read on.

When HAA Chair **Bob Christmas** took the podium to open the meeting at 7:30pm, it was to a crowd so large that the usual tables had been removed from the auditorium so as to accommodate more chairs. More than half of those present - to judge by a show of hands when Bob asked - were newcomers, drawn, no doubt, by our speaker's topic.

Continuing (inadvertently, we're sure) the previous month's theme of mixing bad news with good, Bob told us that Winter 2012's "The Sky This Season," which had been scheduled for January 28th at Binbrook Conservation Area had been cancelled due to uncooperative weather. To add insult to injury, our observing director and would-have-been host of that evening, **John Gauvreau**, was home sick and hence "The Sky This Month" was not to be presented. On the upside, though, Bob announced our first public observing night of the season, to take place on March 30th.

Secretary **Jim Walmsley**'s news was more consistently positive. The loaner scope program and the food share program both continue to be very successful, and the HAA-embroidered polar fleeces have arrived. Members are reminded to see Jim if they'd like to book one of the 8" Dobsonians.

But on to the main event. **Ian MacGregor** of the **Royal Ontario Museum** was introduced to much applause. Ian is an astronomer himself, having joined the McLaughlin Planetarium staff in 1977 and stayed until its closure in 1995; he is now the head science teacher and astronomer at the ROM. Given the huge amount of attention that the Mayan culture is receiving these days, the ROM is very

lucky to be running an exhibit on the Maya featuring material from five museums, including items never before displayed.



The crowd at our February general meeting, waiting to hear Ian MacGregor's insightful talk. Photos courtesy of Don Pullen.

No one looking for insight into the Maya could have been disappointed with Ian's presentation. The audience learned of the history, the mythology, the cul-

ture, and the astronomical and mathematical achievements of that fascinating people. Few of us will look at the Orion nebula again without remembering that, to the Maya, it was the place of creation.

So what of 2012 and the inevitable demise of the universe? Hardly worth mentioning. A single, fragmented tablet in one Mayan ruin refers to some event that's to take place at the end of the 13th bak'tun - or, in our calendar, sometime in late December. What event? We don't know - the tablet is incomplete. Armageddon? Unthinkable; in all of Mayan literature there is no mention of such a thing. The end of time? Ridiculous. Other Mayan writings refer to dates as far as 14 billion years in the future. Most likely, the Mayan who carved that tablet so long ago was merely boasting of an empire so great that people would still be talking about it far into the distant future. That prophesy, at least, was accurate.

You see, then, why the astronomers of the HAA were pleased to host a lecture on the Maya and 2012. Hysteria, frenzy, and portents of doom? Look elsewhere. A rational and (Continued on [page 9](#))

February 10, 2012 Meeting Summary (continued)

scientific debunking, and at the same time a yet more fascinating account of an ancient people whose astronomy and mathematics let them imagine a time billions of years hence? That, we are happy to bring you.

After an intermission, a few lucky audience members won door prizes including books and tickets to Maya exhibit at ROM generously donated by Ian. An announcement was made of upcoming shows at McMaster University's McCallion Planetarium on March 15th (2 shows: 7PM and 8:15 PM; tickets are available to HAA members only for \$5 per show). HAA councilor-at-large **Joe McArdle** presented his compilation of Full Moon Rises in 2012 - a valuable resource for those looking to take great moonrise photographs. And, to end the evening, **Kevin Salwach** treated us to a Valentine's-themed "Today in Astronomy."



Ian MacGregor entertaining the crowd.



HAA Helps Hamilton

To support our community, we will be collecting non-perishable food items and cash for local food banks at our general meetings. Please bring a non-perishable food item to the meeting or a donation of cash and help us help others in these tough economic times.

If you would like to help or have any questions about this new initiative, please contact Jim Wamsley at 905-627-4323.



The Sky This Month March by John Gauvreau

Sky Calendar

- March 3 - Mars at opposition - visible all night
- March 5 - Mercury at greatest eastern elongation (evening sky just after sunset)
- March 8 - Full Moon (Full Worm Moon)
- March 9 - HAA General Meeting
- March 13 - Venus and Jupiter less than 3 degrees apart
- March 15 - Double shadow transit on Jupiter (Io and Ganymede) 6:30pm
- March 20 - Vernal Equinox - first day of spring
- March 22 - New Moon
- March 25 - Moon 3 degrees from Jupiter
- March 26 - Moon 3 degrees from Venus (in west after sunset)
- March 29 - Lunar X visible (9pm)
- March 30 - First Quarter Moon

Cancer

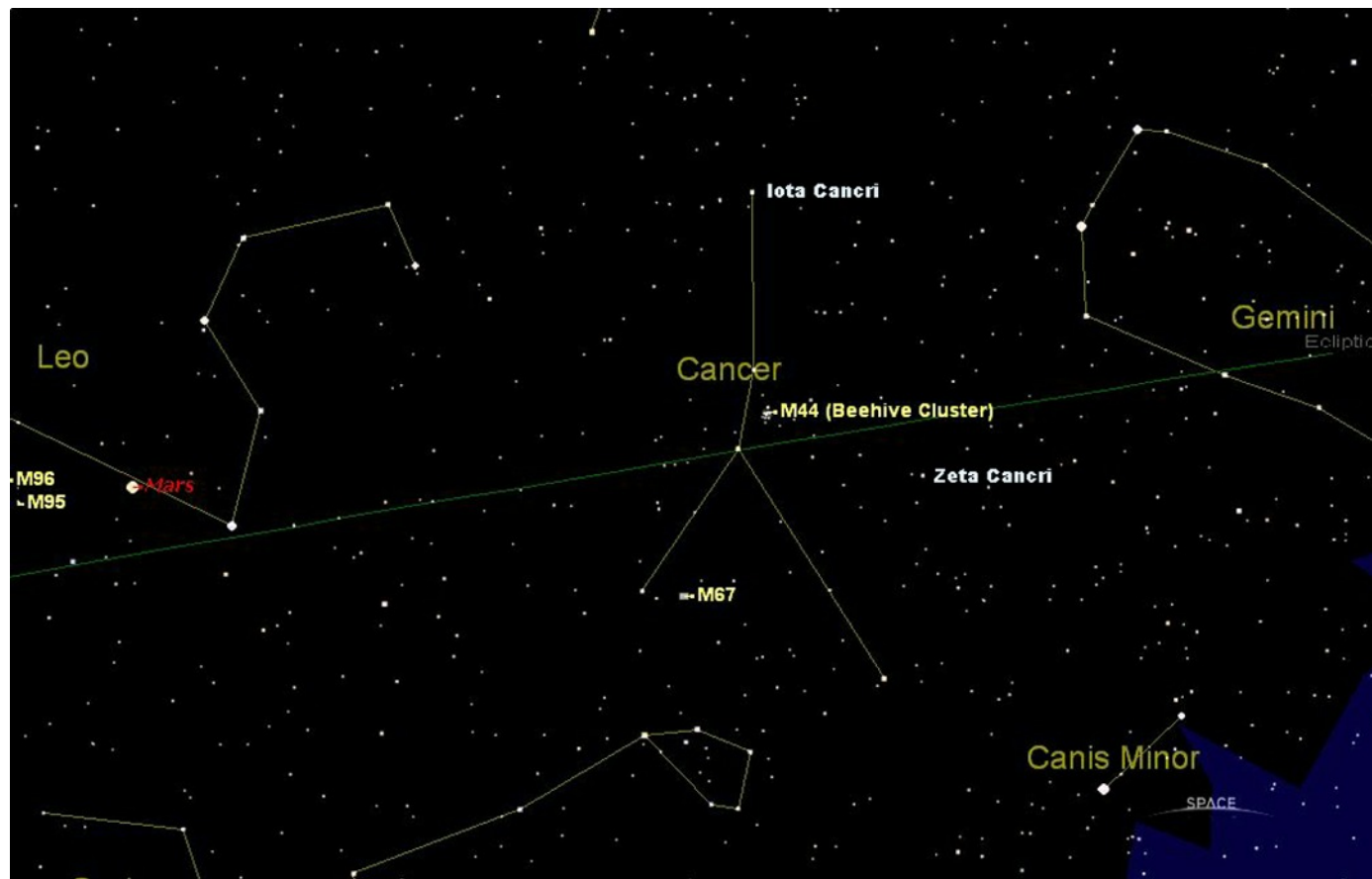
It seems we need hardly anticipate warmer days with the coming of spring, as this past winter has been so mild. But spring does come this month, and so it is appropriate that we turn our attention to a 'traditionally spring' constellation. Cancer the Crab is the first of the Zodiac constellations to be associated with this fine season. Although a small and faint constellation, it is rich in history, mythology and is popular with observers. Let's explore why!

Cancer is one of the faintest of the Zodiac constellations (along with Pisces) having no stars brighter than fourth magnitude. And yet, because it is a Zodiac constellation, it is very well known. **The story of Cancer** begins when the lowly crab was assigned the task of attacking Hercules, and encountered the great hero as he was battling the Hydra (whose constellation is located just below Cancer). Needless to say, the crab was no match for the mighty Hercules, and ol' Herc just stepped on him and crushed him. Not exactly a fate worthy of being told through the ages, and yet Hera (Hercules' step-mother, who was none too fond of Hercules, who was the son of her husband and one of his many mistresses! Boy, those Greek soap operas are something!) thought the effort was noble and placed the small crab in the sky. Apparently the crab's heart and sense of duty was bigger than his small shell.

Interestingly, Cancer is one of two **Zodiac constellations** which are arthropods. The remaining ten constellations comprise 3 made up of mammals (Aries, Taurus and Leo), 3 made up of humans (Gemini, Virgo and Aquarius (and yes, I know humans are mammals!)), 2 of mythological creatures (Sagittarius and Capricornus), 1 fish (Pisces) and 1 object (Libra). So what is the other arthropod? Scorpius of course! Hera might have done better sending a scorpion to battle Hercules, as one had battled, and vanquished, Orion. After all, a scorpion is much deadlier than a crab, but not as tasty.

Despite being so faint, Cancer is **easy to find in the night sky**. It is bookended by two of the most prominent constellations, with Gemini and its bright stars, Castor and Pollux, to the west (on Cancer's right) and Leo and its bright star, Regulus, to the east (Cancer's left). That dark gap in between Gemini and Leo is Cancer. I find though, that it's easiest to identify Cancer not by the stars of the constellation, but by its brightest deep sky object. That's right; I'm saying that it's easier to see a deep sky object in this constellation than the constellation itself! **M44, the Beehive Cluster**, is one of the largest open clusters in the sky. There are a few stars as bright as 6th magnitude and many, (*Continued on [page 11](#)*)

The Sky This Month (continued)



many more at 10th magnitude. On a moonless night you can see the cluster with the unaided eye as a soft glow in that dark expanse (there are rare reports of people seeing individual stars in the cluster, but I've never seen them with the unaided eye). Binoculars or a low power view through the telescope shows a rich star field that delights the stargazer. Any binocular or scope will do. Galileo was the first to resolve the cluster, and we know how bad his telescope was! The cluster appears so large because it is only a little over 500 light years away.

Much farther away is the **open cluster M67**. Much fainter and much more compact, it is due south of the Beehive and makes a wonderful contrast to it. Scanning from one down to the other and back again gives you a chance to visualize the three dimensional nature of objects in space and contemplate the vast distances between them (M67 is about 2000 ly farther away than M44).

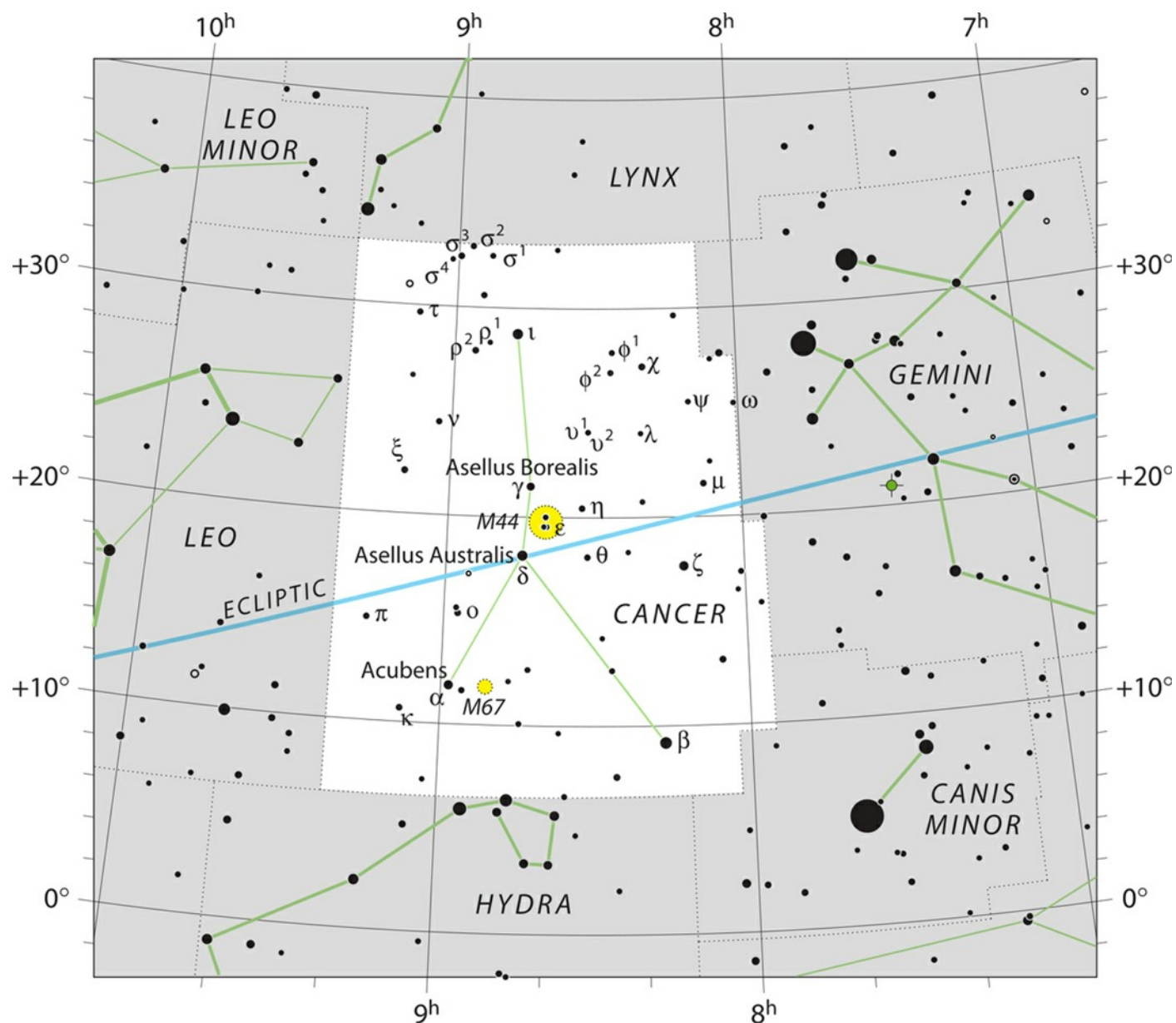
Although the stars of Cancer are faint, there are some fine **double stars** in the constellation. **Iota Cancrī** is one that can satisfy you while waiting for summer and the fine double star **Alberio**. Iota Cancrī is easily split in any telescope, being about the same separation as Alberio and shows the similar colours of yellow and blue. It is fainter than its more famous cousin, but still lovely. **Zeta Cancrī** is actually a triple star that requires a larger aperture and good optics. A pair of



M44- Beehive Cluster

(Continued on [page 12](#))

The Sky This Month (continued)



yellow 5th magnitude stars appear less than an arc second apart with a third star of 6th magnitude about 6 arc seconds away. The primary pair is a challenging split, but if seeing the Beehive with the naked eye is a good judge of sky transparency, then splitting Zeta Cancrri should be a good judge of seeing conditions. Good luck!

In the transition from winter to spring, as we pass from one identifiable season to another, you can wander through the sky from Gemini to Leo, stopping in that empty darkness between the two, and enjoy what Cancer has to offer.

For Sale

Coronado 40mm f/10 hydrogen-alpha Personal Solar Telescope (P.S.T.) with original 20mm eyepiece, owner's manual/instruction brochure and Coronado hard case.

With solar activity on the rise and the upcoming transit of Venus, this hydrogen alpha solar telescope is a must-have for every amateur astronomer.

Price: \$400.

Contact Ann Tekatch
Email: tekatch@sympatico.ca
Phone: 905-575-5433



The Scope Store at Camtech

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the Golden Horseshoe

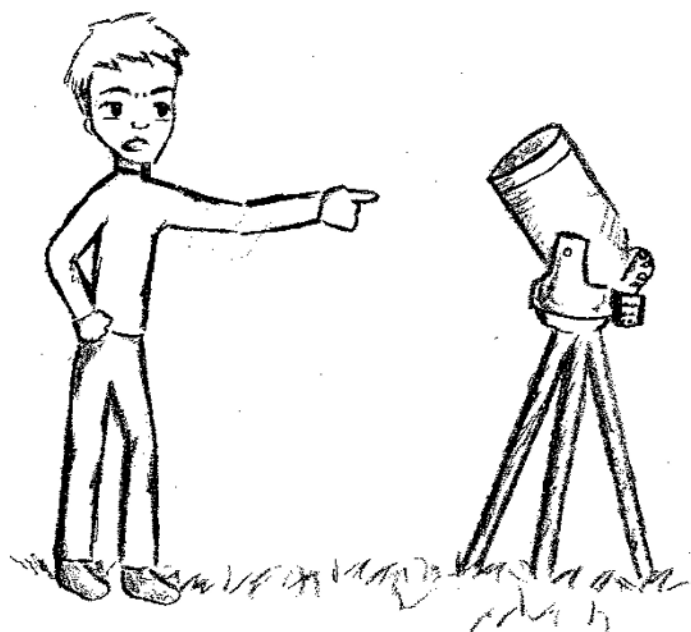
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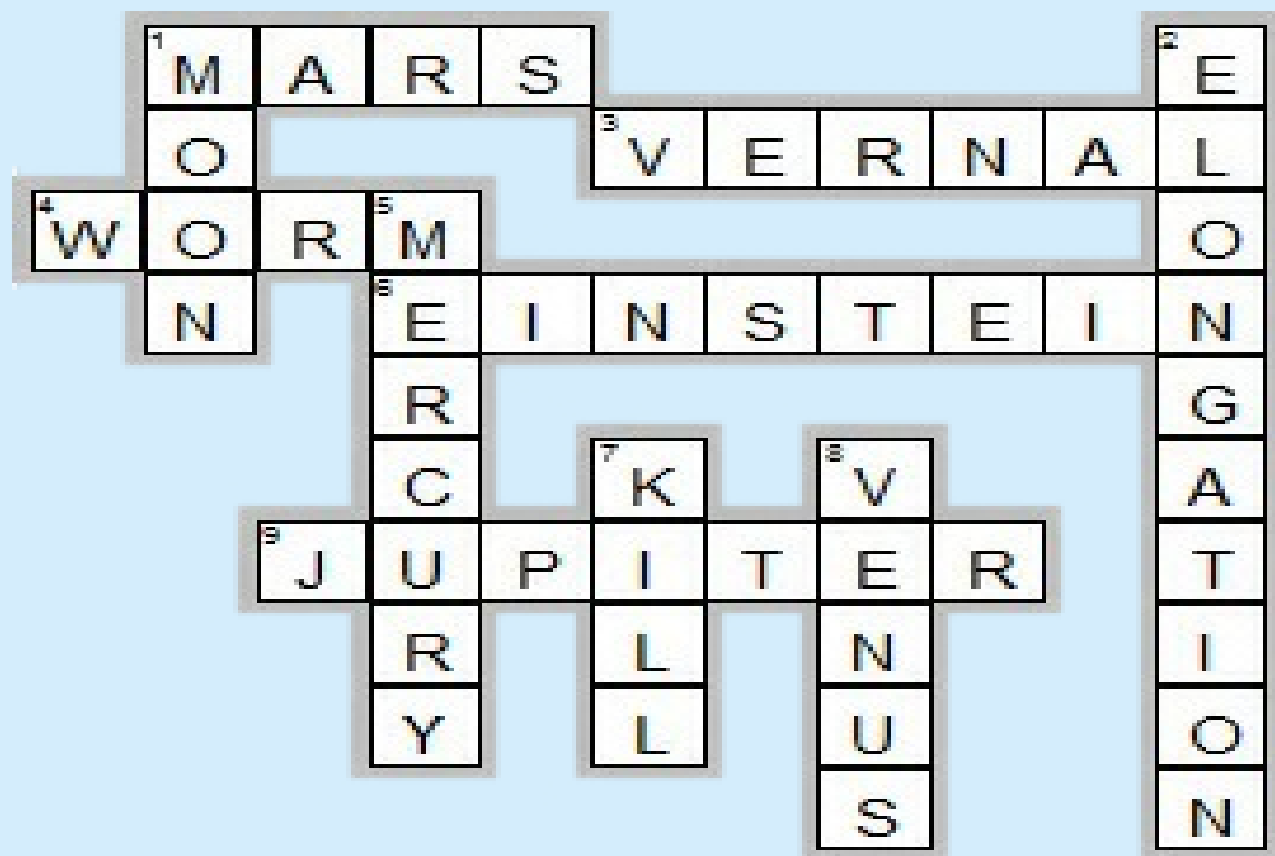
(905) 389-8545

www.camtechphoto.com



Telescope - **GOTO** Tim Horton's and get me a large double-double!

Answers to Astronomy Crossword on Page 8



UPCOMING EVENTS

March 4 - Cosmology Group Meeting, 7:30pm. Contact John Gauvreau for details: observing@amateurastronomy.org

March 9 - General Meeting. Mike Spicer will be the main speaker. Hamilton Spectator auditorium, 7:30pm

March 15 - McCallion Planetarium Shows. Tickets available from Steve Germann treasurer@amateurastronomy.org. See page 6 for details.

March 31 - Public Stargazing event at Niagara Gateway Tourism Centre, 424 South Service Rd, Grimsby, 8:00 pm to 11:00 pm. See our [website](#) for details.

2011-2012 Council

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Newsletter:

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Observing site for the HAA provided with the generous support of the

Binbrook Conservation Area

Come observing with the HAA 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 \$79 to help support the park.

<http://www.npca.ca/conservation-areas/binbrook/>
905-692-3228

