



# Event Horizon

Volume 19, Number 1  
November 2011



## From The Editor

Event Horizon is a collaboration of many people. The obvious ones are the great authors and contributors whose names you see every month. But there are other people who are just as responsible for getting this newsletter into your inbox.

This month I would like to publicly thank my "I.T. Department", Bill Tekatch. Bill is the one who comes to my rescue when I can't figure out how to convert images or files from one format to another; where to find the files I just downloaded; or what is up with the darn Excel spreadsheet. This month, just as I was applying the finishing touches to the newsletter, our computer crashed, taking the newsletter, its backup and my publishing software with it! A few hours later, the computer was up and running and my EH file had been recovered, safe and sound. Thanks, Bill!!!

Clear skies,  
Ann Tekatch  
Editor@amateurastronomy.org



## Chair's Report by Bob Christmas

November is here, and that means it's the end of the transition from the old HAA Council to a brand new HAA Council. There has been a major "cabinet shuffle" within HAA's governing body this year. Don't worry! All the familiar faces are still here, except many of them have new roles. Don Pullen, who so diligently worked his butt off, keeping HAA's books in order as your Treasurer for the past several years, moves to the post of Second Chair. Steve Germann, who worked tirelessly as your Observing Director these past 12 months, takes the reins of Treasurer, and with his attention to detail, he will do just fine there. The past chair, John Gauvreau, has gone back to the future, and re-assumes the role as Observing Director, which perfectly and demonstratively fits him to a tee. Of course, not all councilors switched duties; some on the council will keep their old jobs. Jim Wamsley stays on as Secretary, Ann Tekatch as editor of the Event Horizon, Mario Carr as Publicity Director, Mike Jefferson as Recorder, and Matthew Mantering as Membership Director.

That brings me to yours-truly. After serving as your Webmaster for the past half-decade, I have moved to the post of Chair of Hamilton Amateur Astronomers. I didn't ask for this job; I was graciously nominated by the past Council, and, after thinking hard about it for a week, I accepted. I'm looking forward (Continued on [page 2](#))

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## Chair's Report (continued)

to my new role and the experience it will bring.

I must strenuously emphasize that this is not my astronomy club, it is your astronomy club. This is a club full of great people from all walks of life, who are passionate about astronomy, many of whom have devoted much of their own time volunteering at the various events the HAA puts on, and their hard work has, and will always be, deeply appreciated. This club couldn't possibly operate without you, the member.

Being a member of the HAA, which is only \$25 a year for an individual membership, gives you numerous perks and privileges, such as access to the Binbrook Conservation Area to do your observing, participation in the HAA Book Club and Cosmology discussions, and the use of club telescopes through our Loaner Scope Program.

There's much to look forward to this upcoming Membership Year.

This month, the 2012 edition of the HAA Celestial

Events Calendar comes out, and, as in previous years, it will be full of astronomical facts, it will list all of HAA's scheduled meetings and events for 2012, and it will feature awesome and stunning photos taken by over a dozen HAA members.

There will be public outreach events over the next 12 months in the Hamilton area, and the HAA will once again host another public event in Binbrook for the Perseids Meteor Shower next August. The HAA will also, once again, run a Telescope Clinic and an Imaging Clinic. Stay tuned for dates and times.

So get on out there, take your scope and/or astro-imaging equipment, or just take a walk in your local park, and enjoy the free show that the night sky puts on up there time and time again.

Clear Skies!

Bob Christmas

### TRIPOD FOR SALE

This sturdy, aluminum telescope tripod was donated to the club and is being made available for the bargain price of \$60. The tripod could be used to support a binocular mount similar to the parallelogram mount built by Jim Wamsley.

Contact Jim Wamsley at 905-627-4323.

Proceeds from the sale will be used to support the club's loaner scope program.



**Masthead Photo Credits:** Comet Garradd (C/2009 P1) by Bob Christmas. Taken under the dark skies of Spectacle Lake near Barry's Bay on September 25, 2011.

Equipment: Canon Digital Rebel 300D; Tamron 300mm f/2.8 telephoto lens; Super-Polaris EQ mount.

Settings: f/2.8, ISO 800.

Exposures: Stack of 8 frames; 16 minutes 41 seconds total.

*Just as this issue was about to be published, I received word that this photo was chosen by Universe Today as their photo of the day! See it here: <http://www.universetoday.com/90281/astrophoto-comet-garradd-by-bob-christmas/>*

*Congratulations, Bob!! - Editor*





## Observing with Prescription Glasses by Matthew Mannering

There have been a lot of articles on eyepieces over the years, but I don't think there have been many regarding observing with prescription glasses. If you're lucky and don't have astigmatism you can usually reach focus at the eyepiece and you don't need to wear glasses at all. For the rest of us, well, you need to wear your glasses.

Now we'll get into the nittygritty. If you're over 45, then you probably have bifocal glasses which just add to the fun and games. Classic bifocals have a line across the lens. This inevitably aligns itself somewhere in your field of view at the eyepiece. Progressive lenses don't work very well either. Unless you can keep very still, the focus will shift continuously due to the nature of the lens. I have found that using 'distance only' glasses at the eyepiece works best. I still need reading glasses at my chart table which is a pain, but at least I can get an image at the eyepiece that stays in focus even if I move my head around.

No matter which glasses you use, you need to keep a couple of lens cleaning cloths stored in your equipment bags. Also, store your distance-only glasses with your equipment otherwise you will forget them more often than not (speaking from experience here). Leave reading or regular glasses somewhere safe while you observe. Coming back to your chart table in the dark and not having your glasses secured, will most certainly lead to you buying a new set.

Picking eyepieces that work with your glasses is a whole other ball of wax. Basically, you need eye relief at the eyepiece of 15mm or more if you wear glasses. Anything shorter than that and you will find it difficult to get your eye close enough to the lens. So when picking your eyepieces, remember to check for eye relief. Also, let's say you really like a 20mm eyepiece from company X. It has great eye relief so you want to add shorter focal length eyepieces in the same lineup. Be aware that in a lot of eyepiece lineups the shorter focal length eyepieces have very little eye relief, so check and try before you buy! The upshot is that you may end up with a case full of eyepieces, all from different manufacturers that work well for you. This is far more important than "having the set". Remember that most club members will gladly let you try one of their eyepieces on your scope to see how it feels.

So you ask the question; what about those super wide eyepieces from Explore Scientific and Televue? It's very true that you have to move your eye around to see the whole field of view when you wear glasses. To get the most out of the super wides, you need to use an astigmatism correction lens that screws onto the top of your eyepiece. But the catch is they only work if it's a Televue eyepiece or happens to be compatible with the Televue threads. These work very well, but there's a down side (isn't there always). You need one (at \$100 a pop) for each of your most commonly used eyepieces or you'll go crazy changing it. No one else can use your telescope while the corrector is attached, so it doesn't work well unless you're alone. I was able to try one of these at Cherry Springs and I couldn't believe the increase in contrast and sharpness across the field and no glasses! In fact it was better than glasses.

Personally, I don't mind moving my head a bit to see the edge of the field of view. When you use a Dob without tracking, the longer the object stays in the FOV (field of view), the less time you spend pushing the scope around. Now, there are some very nice eyepieces out there with a medium wide FOV that also have 20mm of eye relief. There are a lot of people out there that feel that eyepieces with 17-20mm of eye relief are the sweet spot for those of us who wear glasses. Their field of view ranges between 70 and 82 degrees and are excellent all around eyepieces.

Now as an aside, for each person and each telescope type there is usually an eyepiece with a focal length that provides that combination of magnification, eye relief and field of view that optimizes your view of most objects. In general, if you want to buy just one excellent quality eyepiece (read that as expensive), then buy the one that gives you that optimum view. You'll know if you've found it because the view will always make you smile. However, if you're not sure as to what focal length that would be for your scope, ask for help and once again, try before you buy!



## October 14, 2011 HAA Meeting Summary by Bob Christmas



*Tim Philp's talk about ancient, modern and future observatories was well received by the large crowd at our October Annual General Meeting. Photo courtesy of Don Pullen.*

Every October meeting of the HAA is our Annual General Meeting, which means the election or acclamation of a brand new Council for our club. HAA chair John Gauvreau got the AGM at the Hamilton Spectator auditorium under way at 7:30 pm by saluting and thanking everybody in the outgoing Council.

Then, outgoing HAA treasurer Don Pullen gave his 2010-2011 HAA treasurer's report, including the budget year-to-date, income statement, balance sheet and revenue. After that, Don showed a preview of the 2012 HAA Celestial Events Calendar, which will be available later this month.

Jim Wamsley gave his secretary's report, stating that the HAA collected over 300 pounds of food for Hamilton area Food Banks this past year, and giving us an update on the HAA's Loaner Scope Program.

Official business was concluded with John's acclamation of the new HAA Council for 2011-2012.

Then, Mike Jefferson took the floor to inform the audience that the LOFAR II radio antenna, which has collected over 20 million solar activity readings over the past several years, was being retired.

We then took an intermission for the usual mingling and conversations. Afterwards, Alex Tekatch and Matthew Mannering drew the door prizes and the 50/50.

Kevin Salwach gave a brief and informative presentation of several anniversaries on this particular day (October 14) in history. In 1788, Sir Edward Sabine was born, in 1940, Heinrich Keyser died, in 1947, Chuck Yeager broke the sound barrier, in 1967, the launch of Apollo 7 was shown live on television, in 1976, the Salyut 6 space station was launched, and in 1984, Sir Martin Ryle died. Thank you, Kevin, for another excellent talk.

Up next, Tim Philp talked about observatories, ancient, modern and future. He rang off a long list of ancient observatories, Chankillo (c.400 BC), Chichen Itza's El Caracol (c.600 AD), Abu Simbel (c.1265 BC), Kokino (c.1800 BC), Stonehenge (c.2500 BC), the Goseck Circle (c.4000 BC), Jantar Mantar (18th century), Gaocheng (1276 AD) and Uraniborg (1576 AD), most of which served as markers for the summer solstice, winter solstice, the positions of the Moon, Venus and the other planets, and other astronomical events.

He talked about early telescope observatories such as the Paris Observatory (1761), the Royal Observa-

*(Continued on [page 5](#))*

## October 14, 2011 HAA Meeting Summary (continued)

tory at Greenwich (1676), Birr Castle (1845) and Mount Palomar (1908), and mentioned Canada's own David Dunlap Observatory in Richmond Hill, Ontario.

Tim then talked about modern state-of-the-art ground-based and space-based telescopes like those on Mauna Kea, Hawaii (the Keck Telescopes, Gemini, Canada-France-Hawaii, etc.), array radio telescopes, the Hubble & Chandra space telescopes, the Compton Gamma Ray Observatory (CGRO) and the Space Infrared Telescope Facility (SIRTF). He also talked about the future in observatories, such as gravity wave telescopes.

Thanks for this very interesting talk, Tim!

Then it was HAA's outgoing Observing Director and Treasurer-Elect Steve Germann's last kick at the can at the monthly The-Sky-This-Month, this time for October 2011. He started with his own list of October 14 anniversary announcements, such as the birth of Raymond Davis Jr. on this day in 1914, the death of Jean Louis Pons in 1831, who discovered 37 comets, and, in 1892, the first use of a camera to discover a comet.

Steve showed my images of the Andromeda Galaxy and Comet Garradd that I took on September 25 up at Spectacle Lake, as well as his own image of the Big Dipper and Little Dipper he took at Starfest in August.

He showed finder charts for Comet Garradd for the upcoming weeks and months, and gave helpful information the minor planets Vesta, Ceres & Unnomia, and the Orionids Meteor Shower. Jupiter is high in the evening sky, having just been at opposition on October 28.

Steve ended his talk by showing a Telrad viewer and explaining its use in aiming telescopes at their observation targets. A huge, heartfelt thank-you goes to Steve for all his hard work as Observing Director this past year.

John's final act as HAA Chair was to announce the main speaker for November's meeting, who will be Charles Baetsen. Many thanks go to John for a job well done as HAA Chair, and I'm looking forward to John's return as Observing Director!



*Photos from the October 13 AGM courtesy of Don Pullen.*

*Top left: John addressing the crowd.*

*Top right: Kevin preparing to fill us in on special anniversaries.*

*Bottom right: Steve informs the crowd what's up in the night sky.*







### November 2011

November 2 - First Quarter Moon, Lunar X visible

November 6 - Daylight Savings Time ends - nights start earlier!

November 10 - Full Moon (Full Beaver Moon)

November 10 - Mars only 1.5 degrees away from Regulus (morning sky) Compare colour!

November 14 - Mercury at greatest eastern elongation (very low in evening sky)

November 14 - Venus and Mercury only 2 degrees apart

November 17 - Leonid Meteor Shower peak

November 18 - Last Quarter Moon

November 25 - New Moon

November 26 - Very thin crescent moon 3 degrees from Venus

First three weeks of November - All planets visible in one night, although both evening and morning observations required.

There's no question that Saturn has a 'wow' factor that nothing else in the sky can compete with. When people see the rings for the first time there is a sense of not just realism, but real beauty that captivates their imagination and intellect. And of course you can return to Saturn year after year for that same feeling of wonder. But as you gain some experience at the eyepiece you begin to see equal beauty in subtler things. Some time ago Jupiter surpassed Saturn in my mind as a favourite to observe. The constantly changing parade of satellites, the game of peek-a-boo you can play with the Great Red Spot, and the intricate detail of the bands make for a never ending spectacle, bringing constant surprises and joy. Jupiter is at its best right now and not to be missed. Over the past couple of weeks I have had a couple of typical and yet remarkable Jupiter observations.

The first came at the HAA's dark sky observing site, the Binbrook Conservation Area. This beautiful site offers dark skies, solitude and beauty as a courtesy from the Niagara Peninsula Conservation Authority. On this particular night about seven HAA members came out after sunset under a moon just a little past first quarter for a rare clear night this season. I use a fairly small telescope, a 90mm refractor.

Admittedly it has very fine optics, but never be discouraged by the small size of your scope; it's amazing what can be seen with even the smallest optical aid. I started with the moon this night, just because it was so big and bright. In the spring I bought a binoviewer for my scope and had only put it to use once since then. I actually started to think that maybe I had been mistaken to add this item to my observing arsenal. All doubts were cast aside with one view of the moon. It was rich and detailed and had a three dimensional quality that was breathtaking. I only looked at four objects over the course of a nearly 5 hour observing session, which tells you how much I was enjoying each object. I had no trouble staying on the moon for quite some time. After a couple of double star observations, I ended the evening with Jupiter. Now high enough for a good view without too much interference from the atmosphere, Jupiter displayed three of its four Galilean satellites. Named for Galileo who first observed them in the early days of 1610, the now famous collection of Ganymede, Callisto, Europa and Io appear to the left, the right, in front of or behind their parent planet. This night one was to the left, one to the right, one in front and one behind. Such symmetry isn't stumbled upon too often and so *(Continued on [page 7](#))*

## The Sky This Month (continued)

we had our first treat right away. Even better though, the moon in front (Callisto) was casting a shadow on the surface of Jupiter. Falling on one of the dark equatorial belts, we had to discern it from knots and dark patches in the clouds of Jupiter itself. Over the course of even an hour we could see the moons shift position and the shadow traverse the globe.

Only a week later club secretary Jim Wamsley and I were at Mountsberg Conservation Area showing some astronomical sights to the public and we had a second remarkable visit to Jupiter. The sky showed clouds all around the horizon but there was a big hole directly overhead. Although it slowly filled in with cloud over the course of the night, it stayed open long enough for the 60 or so visitors to have nice views of Alberio, the Andromeda Galaxy and the Perseus Double Cluster. At the end of the evening though, when I turned my small telescope to Jupiter, it became apparent to me just how steady the air was. Even though we were looking through a thin layer of cloud by then, Jupiter showed mottling in the polar regions, and a wealth of detail in the cloud belts. Small wisps of cloud, swirls and knots were easily seen all over the disk. It was a nice reminder that some nights that show poor transparency do so because the air is so steady that the fine clouds don't blow away. Those members of the public may not have realized how lucky they were to have such good seeing, but they certainly were amazed by Jupiter and its moons. And so was I. Get out there and see Jupiter for yourself while it's at its best.

On October 24 the largest auroral display in many years was visible in the area. Club members Keith and Suzanne Mann were out testing a fine new telescope when they witnessed the aurora. They described them to me as red and green and spanning the sky, visible even as they were driving to the club's alternate observing site. As the great Canadian astronomer Helen Sawyer Hogg said, "the stars belong to everyone", and such sights are out there for the taking. Well done Mann Family! Let me know of any observations you would like to share with the club, and hopefully I'll see you out there!

[observing@amateurastronomy.org](mailto:observing@amateurastronomy.org)

### Pegasus



*Drawing by Mary Hamilton Frye in 1914 for a book of fables and myths.*

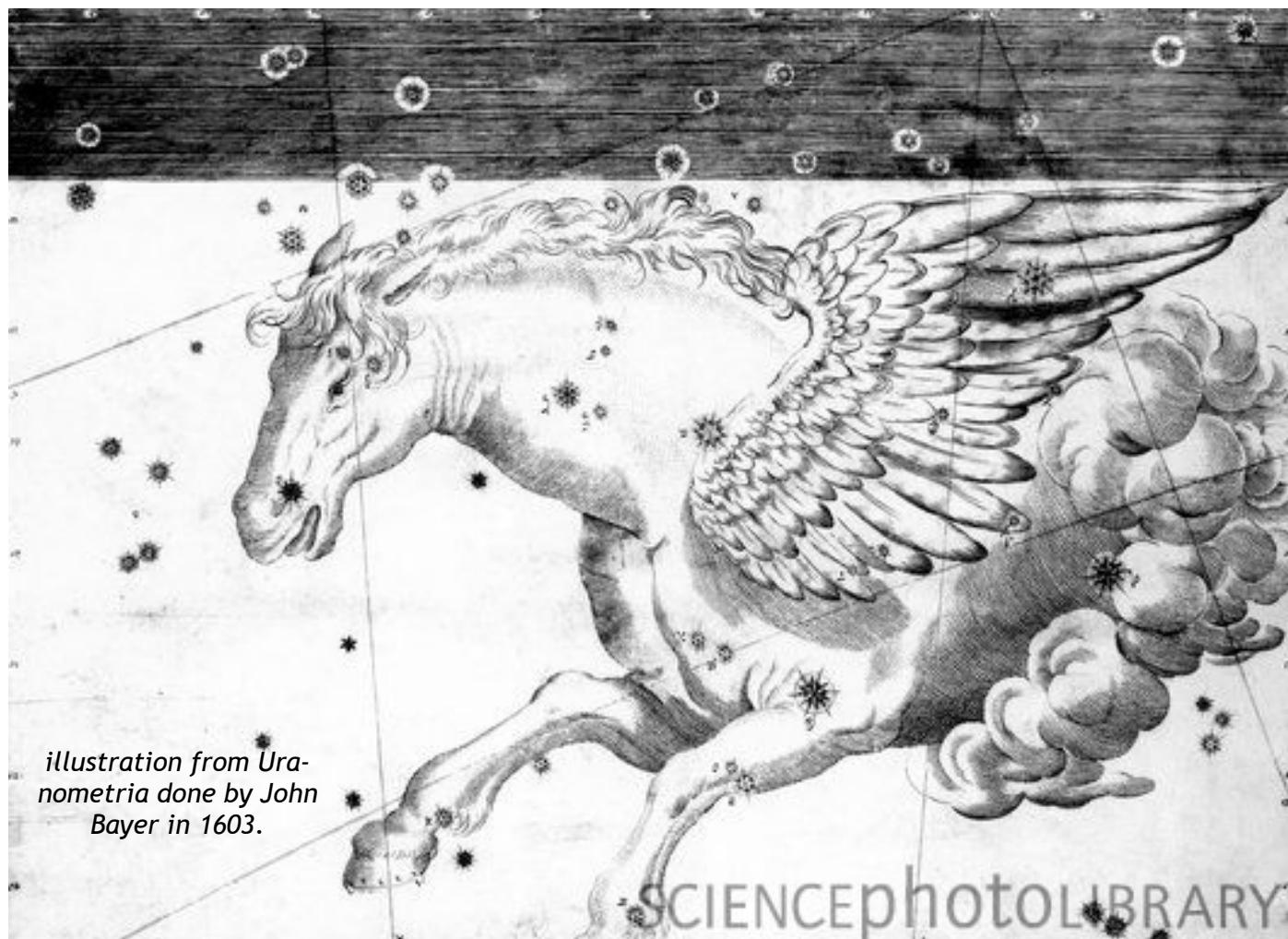
The Horse of Nimrod, as he was originally known, is simply a horse, but so much more. Bestowed with wings and the gift of flight, he captures the spirit of strength and beauty in a way that other, much more fantastical creatures, do not.

He was sired by Poseidon, in his role as horse-god, and foaled by the Gorgon Medusa. Of course, nothing is quite so simple in Greek mythology, and he apparently sprang from Medusa's blood upon her decapitation. Despite this seasonally and appropriately gruesome beginning, Pegasus has always been depicted as a remarkably beautiful creature, almost always pure white in colour, and strong and majestic in build. Upon its first landing on the cliffs high above Corinth, it stamped its hoof once and under this mighty blow sprang the Fountain of Peirene, which was ever after favoured as a watering hole. There are only ruins there now, but period writings say it was a lovely place to stop and visit with refreshing waters that were good to drink. Tamed by Bellerophon, this great mythical beast later became associat-

(Continued on [page 8](#))



## The Sky This Month (continued)



ed with the myths of Perseus and featured in his most famous story surrounding the rescue of Andromeda.

Ptolemy put 20 stars in the constellation, but today we see only half of the great horse, and he appears upside down to those of us here in the northern hemisphere. Historians are not sure what happened to the other half of the horse. Another piece was lost when Delta Pegasi was handed over to the constellation of Andromeda. Only three of the four stars that now make up the Great Square are actually part of Pegasus.

The **Great Square** of Pegasus is the dominant form in the evening sky of November. Throughout the month this large constellation rides high in the south. As mentioned, the Great Square shares a star with Andromeda and is the starting point for those wishing to star-hop to the Andromeda Galaxy, but you can find more than a galaxy with these stars. Just as the winter constellation Orion guides you to other seasonal sights, and just as the

Big Dipper points to such stellar highlights as Arcturus and Polaris, so too does Pegasus point to the North Star. At this time of year Ursa Major and its embedded asterism (a group of stars that we treat as an identifiable grouping, but which has no official designation as a constellation), the Big Dipper, are low in the north, skimming along the horizon, as the bear hibernates through the winter. This makes finding the north star a little trickier than usual. But high in the sky is the Great Square of Pegasus, with the winged horse taking the place of the long tailed bear. Facing south, the square sits properly with a base, two walls and a roof, just as you would draw it on a page. Start at the bottom left star and go straight up to the top left. Keep going up through the constellation of Cassiopeia and overhead until finally you land on Polaris, the North Star. It's a longer trip than the one from the Big Dipper, but if the Dipper is hidden behind some trees or the neighbour's house, letting this mythological horse fly you on this real trip to the pole may just do the trick. (If you (Continued on [page 9](#))



## The Sky This Month (continued)

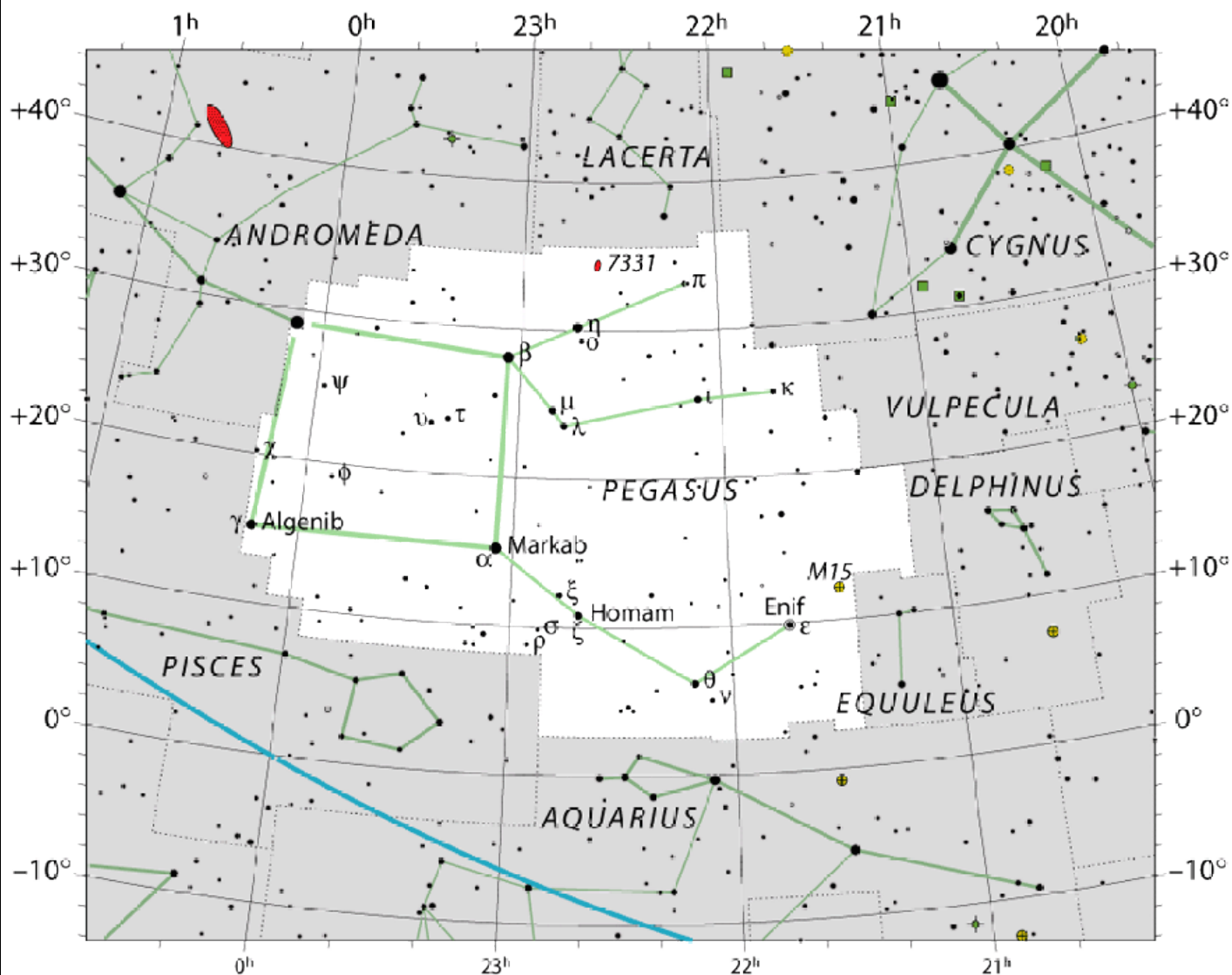
think about it, this also means that if you travel along this side of the Great Square in the opposite direction, from top to bottom, you will come to the south celestial pole). Even more amazing is that this line, leading you to the pole, is very nearly at 0 degrees Right Ascension. This line, connecting the two poles and the equinox points is known as the **equinoctial colure**. The sky starts here.

By following the parallel right hand line of the square from top to bottom, through the stars Scheat (Beta Pegasi) and Markab (Alpha Persei) you are led to the bright star Fomalhaut (Alpha Piscis Austrini).

M15 is the only Messier object in this massive constellation. This globular cluster is easy to find, sitting only 4 degrees from Eta Pegasi, the horse's

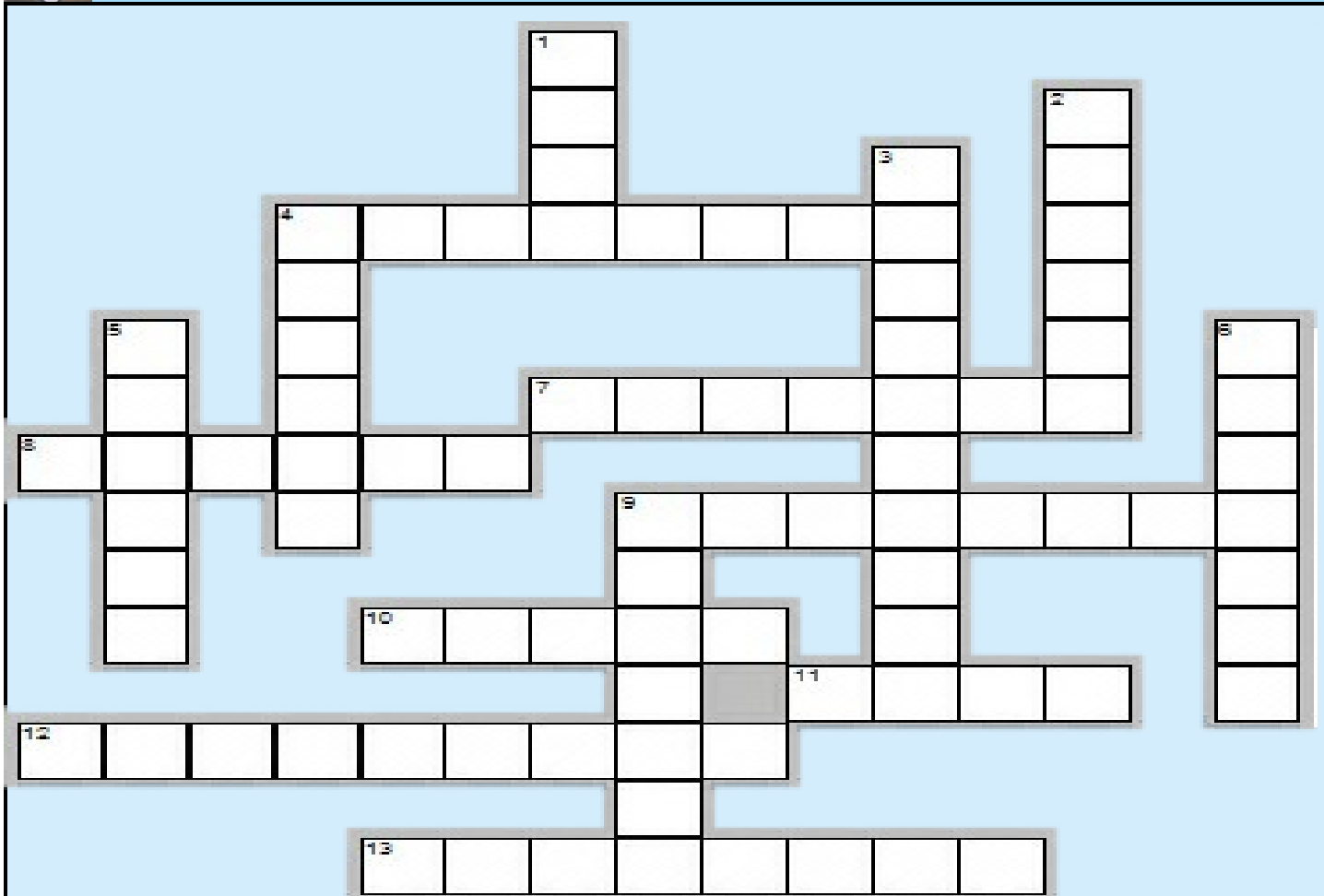
nose. Discovered in 1746 by Jean-Dominique Maraldi, it is a binocular object at magnitude 6.5. It is rich, dense and bright, and a remarkable object in any telescope. Because the core is so tightly packed, try using as high a magnification as you can to resolve it. It's bright enough to take as much magnification as you have in your eyepiece case. The globular is well known for a small planetary nebula in the cluster but this object is too faint to be seen with moderate backyard telescopes. Interesting to note is that M15 is a strong x-ray source, so it may have one or more black holes in it.

Let the great winged horse take you on a celestial flight through the autumn sky. It is one of the emptiest and darkest parts of the night's sky, and yet so recognizable and so worth knowing.





## Astronomy Crossword by Mario Carr



### Across

4. Born Nov. 15
7. On Nov. 23 the moon is at
8. Born on Nov. 8
9. On Nov. 25 this partial solar eclipse can be seen in high latitudes in this hemisphere
10. On Nov. 2 Mercury and this planet are only 2 degrees apart
11. On Nov. 6 Daylight Savings Time
12. On Nov. 1, 1996 traces of possible life from Mars were discovered in this Meteorite
13. On Nov. 29 Venus is at

### Down

1. On Nov. 14, 1971 Mariner 9 orbited
2. On Nov. 8 the moon is at
3. On Nov. 14 Mercury is at its greatest eastern
4. Born Nov. 20
5. November's full moon
6. November's meteor shower
9. On Nov. 15, 1988 this first and only type of this Russian space craft was launched





## November's Treasurer's Report by Don Pullen

This is the final treasurer's report for the accounting year which ended on 31 October 2011.

As a registered, non-profit, charitable organization, we are obligated to file with Revenue Canada each year. This information is available online for anyone who is interested ([www.cra-arc.gc.ca](http://www.cra-arc.gc.ca)). The purpose is to provide full disclosure for people who wish to donate to a charity to see that their money is being effectively used, and ensuring that we are meeting our requirements to the community as a charity. I've always believed in full disclosure which is why I introduced the monthly treasurer reports in the EH. It's our club and our money, so you should know where it comes from and how your council spends it.

We started the year with \$4,753.22 in the bank and ended up with \$5,975.90, which is an improvement of \$1,222.68. This leaves the club in a healthy position for any new activities it may choose to undertake in the future.

Up until 3 years ago, we didn't have to pay for our meeting location so memberships were usually enough to cover our expenses, and most other activities were done on a cost recovery basis as a bonus to our members. But now we rent the Spectator auditorium (\$1,130) which is about half of the money we collect through memberships. Along with our liability insurance (\$706), these 2 combined expenses almost completely consumes the dues we collect which hasn't changed much over the last couple of years. We didn't want to increase membership fees so we've needed to look at other activities to help raise money to keep going.

Several years ago we introduced our 50/50 draw which on average produces about \$350 for the club each year, but this year we did a little better and raised about \$550. Also we've been producing a calendar for our club members. In the past this hasn't really generated much money for the club because our printing costs wouldn't allow us to price it to be very

profitable. However we found a new printer last year who produces a calendar every bit as good as before, allowed us to reduce costs to our members and provide a better return for the club. As a result, we made a profit of \$600. These 2 activities are the primary reasons for our financial improvement over last year.

Thanks to both some donations and a purchase by the club, we've been able to acquire some telescopes and have started a loaner program for our members. This has been very successful so far with all of the scopes being in constant demand. It's a great way for members to try and learn a little about telescopes before making a purchase.

In summary, the club's finances are in good shape. We're meeting our obligations as a charity, we're providing services to our members and the community, and we have enough money in the bank to handle most reasonable expenditures that may come up in the near future. If you have any questions about this report or anything related to our finances, please do not hesitate to contact me.

This is also my last report as treasurer as I've chosen to step down after 4 years. I believe I've made some substantial improvements to our club's operation in my role as treasurer and I have confidence that our new treasurer, Steve Germann, will continue to do a great job. While it can be a challenging position, it's also been fun most of the time and I'm glad to have been of service to the HAA. I'd like to extend my thanks to everyone who's helped me over the past 4 years.

Cheers,  
Don Pullen

## HAA 2010-2011 Income Statement

### 31 Oct 2011

	31-Oct-11	31-Oct-10	31-Oct-09
<b>Income</b>			
Memberships	\$2,070.00	\$1,975.00	\$2,496.00
HAA Calendars	\$2,305.00	\$1,440.00	\$1,372.50
RASC Handbooks	\$0.00	\$0.00	\$85.00
Clothing Sales	\$0.00	\$0.00	\$53.00
50/50	\$542.50	\$326.90	\$405.50
Coffee Fund	\$0.00	\$0.00	\$63.10
Advertising Revenue	\$0.00	\$100.00	\$100.00
Donations	\$780.00	\$884.00	\$430.44
Messier Marathon	\$140.00	\$156.00	\$0.00
Miscellaneous	\$0.00	\$0.00	\$0.00
Prepaid postage 2009	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$5,837.50</b>	<b>\$4,881.90</b>	<b>\$5,005.54</b>
<b>Expenses</b>			
Insurance	\$705.24	\$702.00	\$702.00
EH Newsletter	\$0.00	\$130.54	\$391.59
Brochures	\$59.10	\$73.52	\$47.25
HAA Calendars	\$1,695.01	\$1,402.61	\$1,288.20
RASC Handbooks	\$0.00	\$0.00	\$83.73
Clothing Sales	\$0.00	\$0.00	\$0.00
Donations Expense	\$346.97	\$353.22	\$358.44
Depreciation Expense	\$209.00	\$261.00	\$326.40
PO Box Rental	\$152.55	\$166.00	\$131.25
Speakers Allowance	\$20.00	\$20.00	\$111.34
Office supplies	\$45.04	\$47.40	\$27.77
Postage	\$16.98	\$28.95	\$88.75
Bank Charges	\$5.00	\$0.00	\$0.00
IYA Events	\$0.00	\$0.00	\$441.50
Kids Outreach Kit	\$0.00	\$0.00	\$96.60
Hall Rental	\$1,130.00	\$1,063.33	\$175.00
Prepaid Hall Rental	\$941.66	\$941.66	\$875.00
Miscellaneous	\$41.51	\$0.00	\$0.00
<b>Total</b>	<b>\$4,426.40</b>	<b>\$4,248.57</b>	<b>\$5,144.82</b>
<b>Surplus/Deficit</b>	<b>\$1,411.10</b>	<b>\$633.33</b>	<b>(\$139.28)</b>



**HAA 2010-2011 Balance Sheet**  
**31 Oct 2011**

		<b>31-Oct-11</b>	<b>31-Oct-10</b>	<b>31-Oct-09</b>
<b>Assets</b>				
	Bank	\$5,976	\$3,983	\$3,652
	Cash	\$365	\$0	\$0
	Inventory	\$0	\$0	\$0
	Prepaid PO Box Rental	\$153	\$166	\$132
	Prepaid Mailing Expense	\$0	\$0	\$0
	Prepaid Liability Insurance	\$0	\$0	\$0
	Prepaid Hall Rental	\$941	\$941	\$875
	Accounts Receivable	\$0	\$0	\$0
	<b>Total Current Assets</b>	<b>\$7,070</b>	<b>\$5,090</b>	<b>\$4,659</b>
	Fixed Assets - Equipment	\$1,739	\$1,045	\$1,306
	Total Fixed Assets	\$1,739	\$1,045	\$1,306
	<b>Total Assets</b>	<b>\$8,809</b>	<b>\$6,135</b>	<b>\$5,965</b>
<b>Liabilities</b>				
	Deferred Membership Revenue	\$1,442	\$1,490	\$1,325
	Accounts Payable	\$0	\$0	\$166
	<b>Total Liabilities</b>	<b>\$1,442</b>	<b>\$1,490</b>	<b>\$1,491</b>
<b>Equity</b>				
	Opening Balance	\$4,645	\$4,474	\$4,037
	Retained Earnings	\$1,311	(\$492)	\$576
	Current Year (Surplus/Deficit)	\$1,411	\$663	(\$139)
	<b>Equity Closing Balance</b>	<b>\$7,367</b>	<b>\$4,645</b>	<b>\$4,474</b>
<b>Total Liabilities and Equity</b>		<b>\$8,809</b>	<b>\$6,135</b>	<b>\$5,965</b>

**HAA 2010-2011 Revenue**  
**31 Oct 2011**

	31 Oct 2011	31 Oct 2010	31 Oct 2009
Membership	\$2,710.00	\$2,500.00	\$2,496.00
Calendars	\$609.99	\$37.39	\$84.30
Cash Donations	\$180.00	\$329.00	\$430.44
50/50 Draw	\$542.50	\$326.90	\$405.50
Planetarium Trip	\$39.00	\$50.00	n/a
Total Revenue	\$4,081.49	\$3,243.29	\$3,416.24

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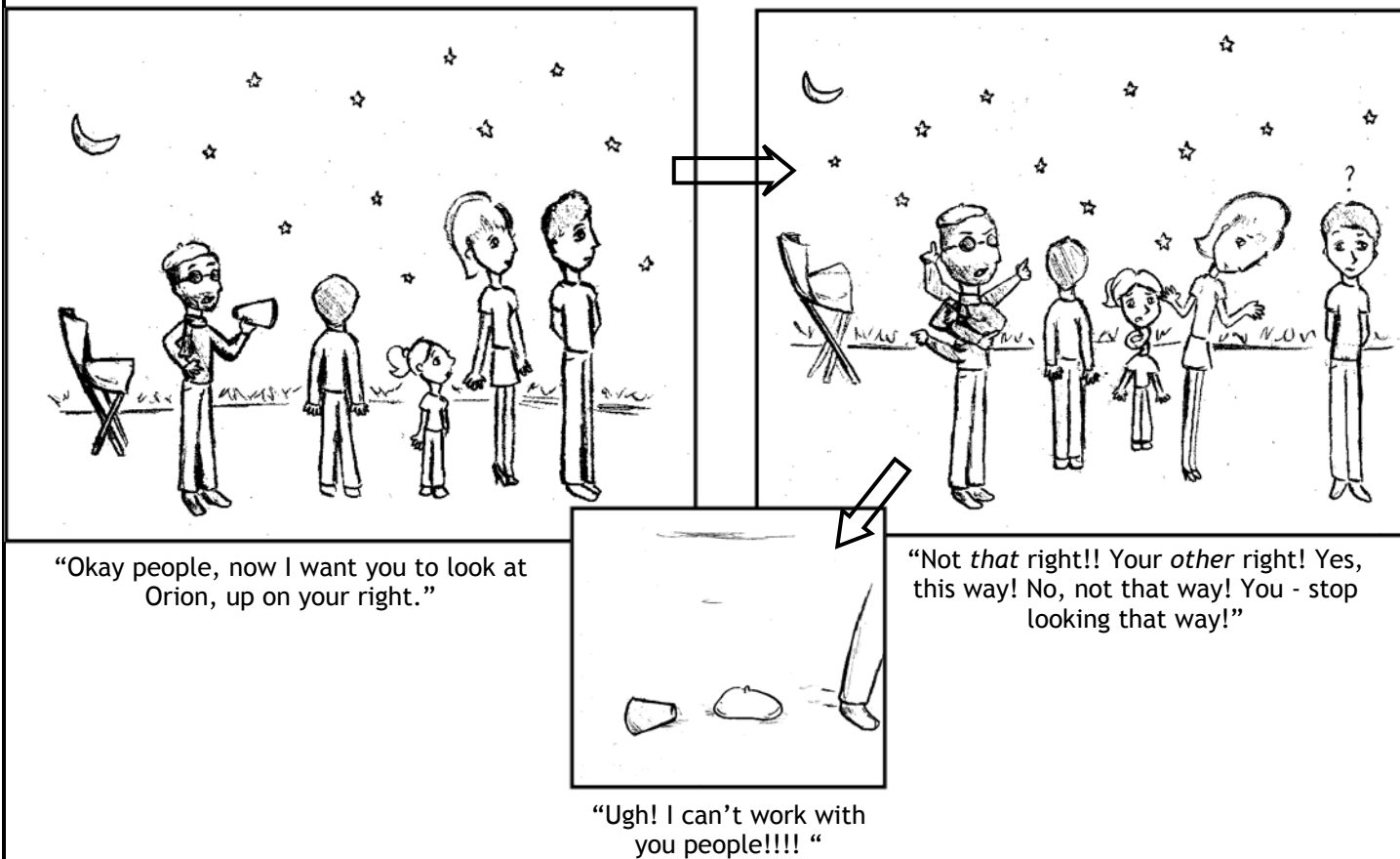
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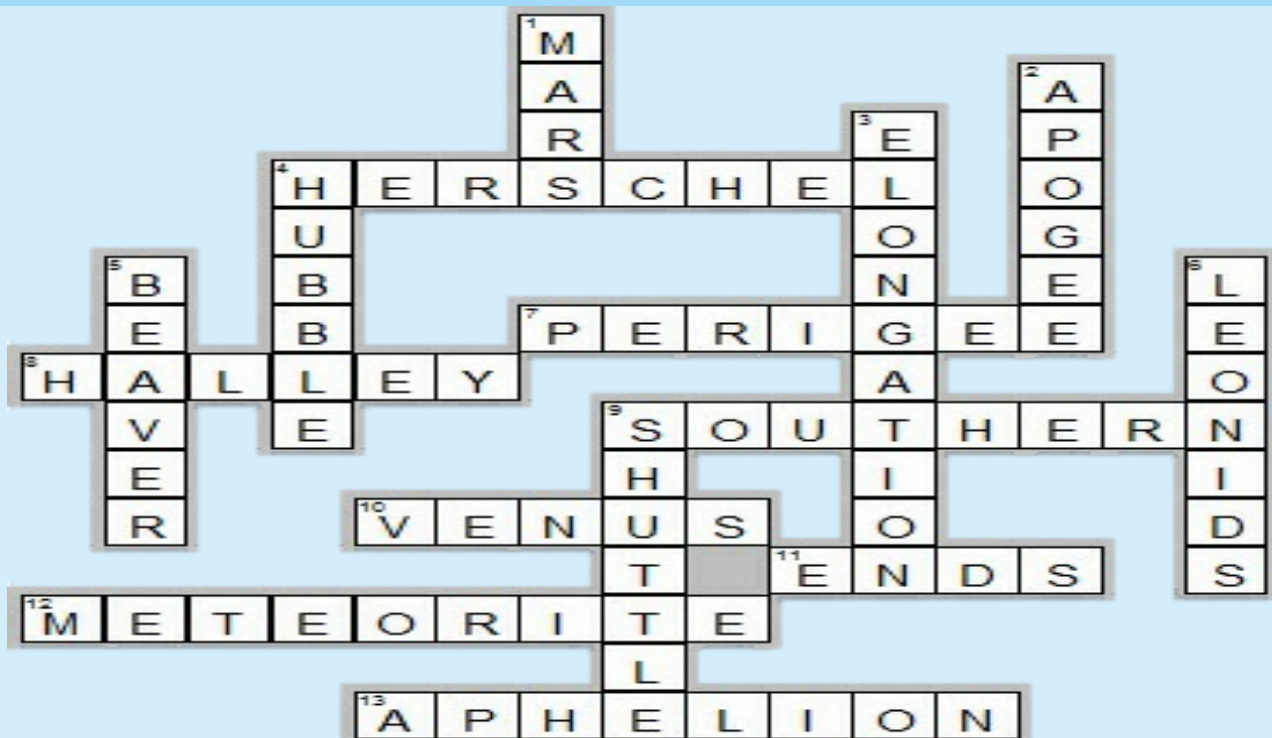




### Observing *Director*



### Answers to Astronomy Crossword on Page 9



## UPCOMING EVENTS

Nov. 7, 2011 - First meeting of the HAA telescope making group, 7:30 p.m. Basement of 75 Main St., Dundas. Contact Ann Tekatch (editor@amateurastronomy.org or 905-575-5433) for more info or directions.

Nov. 11, 2011 - General Meeting in the auditorium of the Hamilton Spectator Building, 7:30 p.m. Charles Baetsen and John Gauvreau will be our speakers.

Nov. 12, 2011 - The cosmology discussion group will meet at 7:30 p.m. Contact John Gauvreau for details: observing@amateurastronomy.org.

Nov. 25, 2011 - Telescope Clinic in the auditorium of the Hamilton Spectator Building - 7:30pm

## 2011-2012 Council

Chair	Bob Christmas
Second Chair	Don Pullen
Treasurer	Steve Germann
Membership Director	Matthew Mannering
Observing Director	John Gauvreau
Event Horizon Editor	Ann Tekatch
Webmaster	Bob Christmas
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