Event Horizon

Volume 20, Number 1
November 2012

From The Editor

You may have read Eric Shepherd's letter to the editor in the most recent issue of SkyNews about his dark sky experience at the new Lennox & Addington Dark Sky Site which is north of Napanee. Eric contacted us to ask that we alert our members to a potential problem with this site. You can read the details inside this issue.

Dark Sky preserves and sites seem to be popping up around the province, but few offer on-site camping. There has been some talk about organizing a summer star party for HAA members, but no site has been suggested as yet. If you can recommend a suitable campground within a 4 hour radius of Hamilton, please contact me.

Clear skies,

Ann Tekatch
Editor@amateurastronomy.org

Chair's Report by Jim Wamsley

It's November again, and a start to a new year for the H.A.A. We have a new council, even though it is very similar to last year's council, there are a few changes. Firstly, our Chair, Bob Christmas, has moved to the position of Secretary. Don Pullen, who last year served in two positions, Second Chair, and Web Master, will concentrate his efforts on the very important job of Web Master alone. In the post of Second Chair, Joe McArdle, who, for the past couple of years has been serving quietly in the background, helping diligently with many projects, will now be my back-up guy. The rest of the positions on council have remained the same, with very dedicated people at the helm. Steve Germann, our very capable Treasurer has kept the purse strings taut, while the club wants for nothing. Matthew Mannering, Membership Director, has kept track of things, and served at the door greeting the members and guests at every meeting. Mario Carr, our Publicity and Education Director, has tirelessly seen to it that the local newspapers and media have our notices. As well as appearing on the CHCH TV News, promoting the club, and informing the public of upcoming astronomical events with his interviews. Ann Tekatch, our Editor *(Continued on page 2)*

IN THIS ISSUE:

Chair's Report (continued)

extraordinaire, has transformed the Event Horizon, into the best online, astronomical publication in the country. Mike Jefferson, the club's Recording Secretary, has kept the official record of the council meetings. This job is one that must be the most frustrating in the club; you just have to attend a council meeting to appreciate this. Mike, I will try to keep better order in future, but no promises. The last of the elected members of council for me to mention is the Observing Director, John Gauvreau. What can I say about John? In the past four years, John has been up front at meetings, one year, as chair and three years, as Observing Director. John has kept us informed of all current astronomical events, impressed us with fantastic astro photos from the Hubble telescope, as well as members' photos. His Sky This Month presentations are not only informative, but entertaining. This is possibly the most demanding job in the club, and John has graciously agreed to take it on once more. Lastly, I want to mention the councillors at large. These are the appointed positions, made by council. These people work in the background, doing the jobs that keep the club running smoothly. In this group there is, Brenda Frederick, Harvey Garden, Doug Black, Keith Mann, and David Tym. Joining us this year is Leslie Webb. Unfortunately, Doug Black, can not continue on council for now. I would like to thank all of the above mentioned people for their past service, and for their continued help and support. You are the inspiration that makes the H.A.A. the best Astronomy club in Canada.

As your new Chair, I am hoping to make a few minor changes to the format of the monthly meetings. We will still have a guest, or main, speaker each month. This followed by a club member doing a short talk on astronomy, or science related subject, of their choice (10 to 15 minutes). John Gauvreau, our Observing Director, will then do an abbreviated version, of the Sky this Month, "The Sky Tonight", using Stellarium planetarium software. This will require the cooperation of you the club members to participate. You may believe that you have nothing of interest to convey, but I'm sure other members will find your experiences interesting, be they about an astronomy project you are working on, or simply talking about a new astro purchase. Don't be surprised if I corner you to persuade you to give one of these talks.

We already have several great keynote speakers lined up for the new year, but if there is a particular subject you would like to see covered, or speaker you would like to hear, please feel free to let me know and I will do my best to see it gets covered, or try to get your favourite speaker.

Needless to say, I am very excited about the upcoming year. I truly believe that it will be the best year ever for the Hamilton Amateur Astronomers.

Treasurer's Report by Steve Germann

(Unaudited)

Opening Balance:	$6031.90
Revenue	$ 654.00
Expenses	$ 36.83
Closing Balance	$6649.07

Major revenue for the month was $605 for memberships, $5 donations, and $44 from the 50/50.
Major expenditures were $25 speaker expense, $13.84 office supplies, and -$2.01 correction to a previous speaker expense.

Please see page 14 for year end financial statements - editor

Masthead Photo: Taken by Jim Wamsley at the first meeting of our club's newly-formed astrophotography group. There was a good mix of newbies and experienced astrophotographers at the meeting and everyone learned something new. The next meeting will be in the new year. Details will be posted in this newsletter.

The Sky This Month: November by John Gauvreau

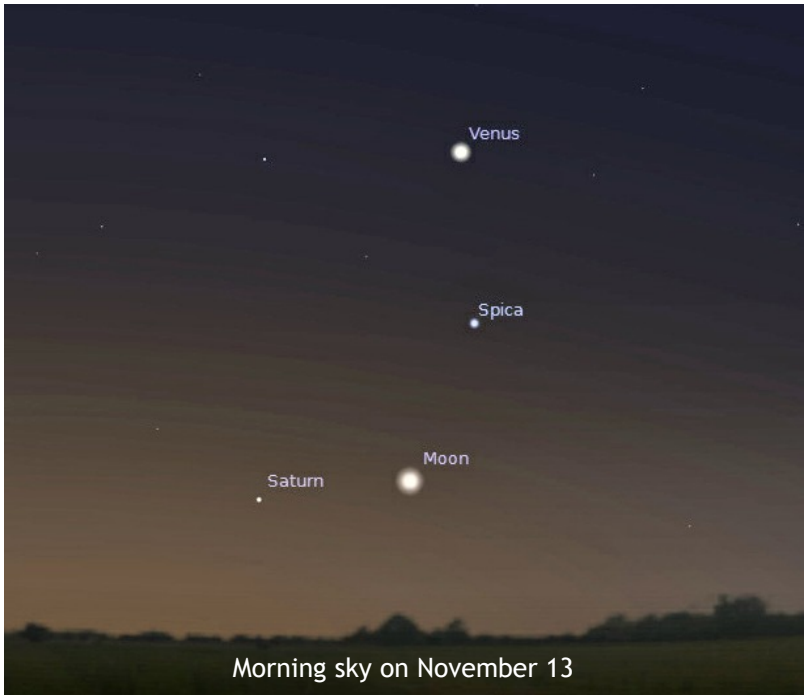
The Sky This Month - November 2012

November 1 - Moon and Jupiter 2 degrees apart
November 11 – Moon between Venus and Spica (morning)
November 12 – Moon 4 degrees below Saturn (morning)
November 13 – New Moon
November 16 – Leonid Meteor Shower
November 20 – First Quarter Moon
November 26 – Venus and Saturn less than 1 degree apart (morning)
November 28 – Moon and Jupiter 1.5 degrees apart
November 28 – Full Moon (the less than super moon!)
November 30 – Mercury joins Venus and Saturn (morning)

Under the Sky

Looking at the above calendar of observing events for November, it seems that nothing much happens for the first week and a half of the month. Hopefully, you get out to see the wonderful conjunction of the moon and **Jupiter** on the night of November 1st. Rising at about 8pm (and then rising at about 7pm after November 4th; don't forget to set your clocks back!), they are a lovely pair nestled between the horns of Taurus. Keep in mind that with Jupiter now rising so early, this is an excellent time of year for Jupiter observing. It is up nearly all night and the weather is not yet so cold that it makes observing uncomfortable. This may be the best opportunity to see Jupiter, so enjoy!

A pairing of the moon and Jupiter is not uncommon at all. As the moon travels its monthly orbit around our planet, it appears to pass each planet in the sky once a month. Sometimes they give each other a wide berth, sometimes the pairing happens in the daylight hours, and sometimes it just isn't that interesting. But each of these pairings, called **conjunctions**, brings an opportunity for a lovely naked eye sight. This month has several, and that Moon/Jupiter pairing is just the first. In the morning hours of November 11 the moon will pass a mere 4 degrees from **Venus**. A pairing of the moon and Venus is always a lovely sight, since these are the two brightest objects in the night sky. This one, although not particularly close, is worth watching for the lovely accessories they have in the sky. Spica sits about 5 degrees below Venus and Saturn sits about 5 degrees below that. By the next morning, November 12, the moon will have moved down just enough to join Saturn. This grouping will make for a lovely photo on either morning, and I would be happy to include any pictures you have in next month's *Event Horizon* or show them off for you at the next meeting. Just remember, all this happens in the early morning sky (6am to 6:30am recommended) and low in the east, but it will certainly be worth getting up for!



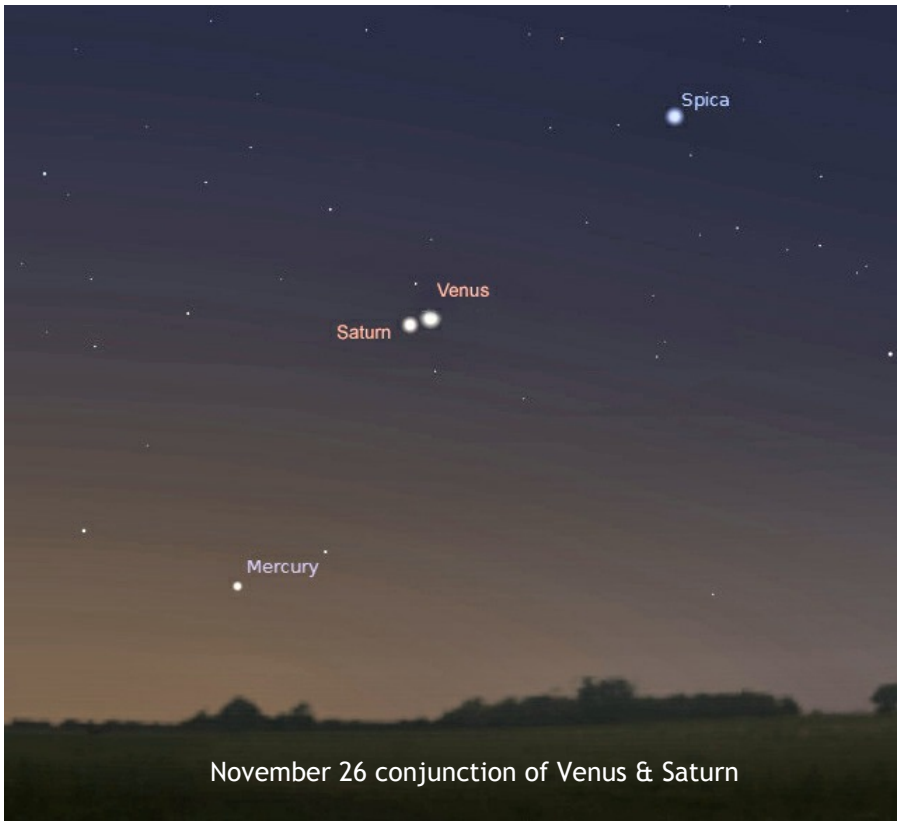
Morning sky on November 13

(Continued on page 4)

The Sky This Month (continued)

Only a few days later we will be enjoying the peak of the **Leonid Meteor Shower**. Considered one of the best showers of the year, it is known for its variability, giving us a merely 'good' show some years, while showing off hundreds of meteors other years. This year's predictions indicate that the shower will be rather weak for the Leonids, but we have been surprised before with sudden outbursts. Remember too that the shower is spread out over a couple of nights, so keep an eye on the sky from the night of November 16th to the 18th (oddly, the night of the 17th may be the worst of the three nights, due to there being two separate peaks in the Leonid shower, one each falling on the Friday night and the Sunday night). We are helped along in our meteor watching by a very small moon those nights. This will help reduce light pollution and allow us to see many of the fainter meteors, but remember that getting away from the lights of the city will help a lot too. (We have been very lucky this year with meteor showers. The Perseids fell on a beautiful, clear, moonless night, the Leonids will fall on a nearly moonless night, and the third great shower of the year, the Geminids in December, will also fall on a moonless night. Let's hope the weather is as co-operative as the moon!).

Another lovely conjunction occurs on the morning of November 26th. This is the one to see this month, as **Venus and Saturn** pass less than a degree from each other. Not only will this be a spectacular naked-eye pairing, but you can actually fit them both in a telescope field of view at the same time. This gives you a wonderful chance to compare albedos, the amount of light that is reflected off the surface of an object. Venus is covered by those beautiful white clouds that make it look so lovely in our night sky, while Saturn is yellow and duller. More importantly though, Venus lies closer to the sun than we are, while Saturn resides more than 10 times farther from the sun than Venus. This should be very evident when you compare views through your telescope. Even so, I have always been surprised in the past when I have had such opportunities, by just how striking the difference is. I will look forward to hearing your impressions. (Bonus observation; can you spot Mercury below Venus and Saturn? It will be very low in the east, but it's there!)



November 26 conjunction of Venus & Saturn

Finally, we end the month with a full moon. After the beautiful full moons of September and October (the Harvest and Hunter moons), this will be a bit of a letdown. Remember the 'Super-Moon' back in May? Well it's six months later now and the full moon is now occurring at the moon's apogee (farthest from the earth) rather than the perigee (closest to the earth). This means that this month's full moon will be the smallest of the year. Let's call it the **'Less-than-Super-Moon'** (The mini-moon? The lesser-lunar? The sub-satellite?). Even so, each full moon is a beautiful sight, and I suspect that anyone will be able to actually tell that this one is smaller and dimmer than the one in May. Enjoy!

(Continued on page 5)

The Sky This Month (continued)

As always, feel free to send me any observing reports, photos, questions, or comments that you would like to share with your fellow members. I'm always happy to hear about your observing experiences. See you out there!

John
observing@amateurastronomy.org

2013 HAA Celestial Events Calendar

The 2013 HAA Celestial Events Calendar will be available for sale beginning November 9 at our General Meeting. Be sure to get your copies early!

This year's calendar features many beautiful photos of the night sky and its celestial wonders. All photos are by your fellow HAA members and proceeds from calendar sales support your club.

Individual copies of the calendar will sell for $15.00 each or 2 for $25.00.

Place your order early by contacting: Ann Tekatch (editor@amateurastronomy.org) or Steve Germann (treasurer@amateurastronomy.org).

These calendars make great Christmas gifts for family and friends!!

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 initiative, please contact Jim Wamsley at 905-627-4323.

Loaner Scope Program - Update by Jim Wamsley

The club's loaner scope program is alive and well. All three loaner scopes have been out in the hands of members all this spring & summer. I have held back two of the scopes (the 80mm and one of the 8" Dobs) for some maintenance and TLC. The second Dob will get this service next month.

Should you want to have one of our loaners to use for a month or so, all you have to do is be a H.A.A. member in good standing, and contact me, Jim Wamsley, at a meeting, phone me at (905)627-4323,or send an e-mail to jimwamsley7@sympatico.ca and I will see you get one of these beauties to use.

Over the past year or so we have had three other scopes generously donated to the club, but for one reason or another has not been suitable for use in the loaner program. We (the H.A.A. council) decided to try and sell or trade these and have recently done so. I, under direction of council, have made a trade with Camtech, (the scopes, for three good quality eyepieces). We also had a wonderful home-made scope donated, which was sold to an appreciative club member.

On the subject of Generous Donations, a couple of weeks ago, I received a phone call from one of the club's long-time members, Dave Gaylor. Dave had an unusual story to tell me, and I was totally blown away by his request. Our conversation started by Dave telling me that he was in the process of moving, and was going to a smaller house and therefore severe downsizing and purging of stuff was required. Over the entire course of our conversation Dave also conveyed that several years ago he had been in a car crash (someone running a red light), and he had suffered a brain injury. The outshot of all this was he wanted to donate his 8" GOTO scope to the club's loaner scope program. Dave explained that due to the injury, he became mentally fatigued easily, mostly at night, and therefore found it very difficult to operate the scope. I was surprised by this donation offer and suggested we could help him sell this scope, as I felt this too generous an offer and he should try and get at least some of his money back out of the scope. Dave made it clear to me that, he felt over the years, he had gotten a lot out of the club, and he wanted to give back. We arranged to meet at my place a couple of days later, and he would drop off the scope.

Up till then, I had been merely blown away by Dave's offer. When he arrived I was stunned. The scope he was giving the club, was essentially the twin of my own scope. An 8" Schmidt Cassegrain scope, on a CG 5 Celestron mount, with a power tank, dew shield, Polar alignment scope, telrad finder, and a set of 7 eyepieces, as well as bags to transport the whole works.

Now this is not the type of telescope that we can loan to just anyone. Members borrowing this scope will understandably need to have greater understanding of the sky, and the setup of a German Equatorial mount. We do have several members with these skills, and I already have a couple of them standing in line, hoping to be the first to use it. "I call dibs", just to make sure it's working well. We also are planning to use this scope for our public education program, putting it to use at Astronomy Day, club public nights, and sidewalk astronomy. I'm sure it will be a very useful tool.

I would like to thank all the people who have contributed to this program, but most especially, thank you, Dave, for your extremely generous donation.

The 8" GOTO scope recently donated by Dave Gaylor. Photo courtesy of Jim Wamsley.

High Magnification Eyepieces: When and *Especially* When *Not* to Use Them

By Matthew Mannering

So, you've bought your first telescope and used it for a few nights. "Hmm", you say to yourself. "That view of Jupiter is very cool! I bet it would be even better and much bigger at some really high magnification!" So, based on what a lot of salesmen would say, (50-60 times magnification per inch of main mirror or objective lens), you buy a really short focal length eyepiece and stuff it in the focuser. "What's this?" Jupiter looks like a featureless, fuzzy blob and no matter how you try and focus it, the image doesn't improve. In fact, everything you try to look at is equally disappointing. This actually happened to me many years ago and it turned out to be a very expensive lesson.

What happened? Well usually it's a combination of several factors. Firstly, the atmosphere is rarely as steady (due to heat) or clear (due to moisture and pollution) as it looks to the naked eye. Eighty percent of the time, sky conditions don't support a lot of magnification. Secondly, there is a big difference between theoretical and practical maximum magnifications. Thirdly, you may be attempting to use a magnification that exceeds the upper limit allowed by the design of your scope. Forty times per inch is a more realistic maximum for most scopes. Fourthly (and this is very rare), you may have bought a defective eyepiece.

So, what eyepiece will give you the most useful maximum magnification for 80% of your viewing nights when skies aren't perfect? Most nights the highest useful/sharp magnification for any scope works out to about 9 to 15x/inch of aperture depending again on the design of your scope. Of course, this is only my opinion.
However, every once in a while the sky is super clear and the air is still. This is when you can pour on the power. So what does respond well to high power? The moon, planets, planetary nebulas, double stars and globular clusters are the best objects to aim for. Large star clusters, galaxies and nebulas don't usually react well to high magnification. You won't be able to see the overall structure of star clusters, nebulas will tend to fade into the sky glow and galaxies will become even fainter and fuzzier.

The extent of high power that you use depends on the mount that your scope sits on. A non-tracking Dob maxes out at about 300x. Above that point the object moves so fast through your eyepiece that the scope won't settle fast enough for you to spend any time seeing it. If your mount tracks, then the skies' the limit! However, you will reach a magnification where the image starts to break down. It will become dim and fuzzy. To avoid this, subtract 10-20% off your maximum magnification (arbitrary on my part). In other words, if the image breaks down at 400x, then restrict yourself to 360-320x. Try other people's eyepieces to find out where the break down begins and then spend your cash on the eyepiece best suited to your scope.

Maximum magnification is also tied to the f-stop of your scope; as the f-stop goes lower, the amount of magnification per inch of aperture decreases. So a Schmidt-Cassegrain or refractor at f/12 can withstand more magnification per inch than a Newtonian at f5.0. That's why people use high f-stop refractors as planetary and double star scopes. The owner's manual will quite often tell you the recommended upper magnification limit for that scope.
You can calculate the eyepiece focal length for the maximum magnification for your scope as follows:

Eyepiece Focal Length (EFL) = focal length of your scope in mm divided by the maximum magnification for that scope. 300x is a typical maximum magnification for an unguided scope.
Example: EFL=1500mm/300x=5mm. So anything less than 5mm is a waste of your hard-earned cash. If you invoke my minus 20% option, then 300x -20%=240x. Now the maximum magnification EFL=1500mm/240x=6.25mm. Either a 6 or 7mm eyepiece would be fine in this case.

My twelve-inch Dobsonian has a focal length of 1500mm and I use a 6mm eyepiece for maximum magnification. This equates to 20.8x per inch of mirror, which is nowhere near the 50 to 60x per inch quoted by some sales clerks.

(Continued on page 8)

High Magnification Eyepieces (continued)

One extremely clear night I did take my telescope up to 480x magnification (40x per inch). The view of the moon was spectacular! The opportunity to do this might happen once or twice a year.

Most of the time I use a 13mm eyepiece. To see why, I'll go through the calculation.

First calculate the magnification for the 13mm eyepiece.
Magnification=1500mm/13mm=113x
Now we can calculate the magnification per inch of mirror.
Magnification per inch of mirror=113x/12"=9.4x

As you can see, the 9.4x value falls in the range of 9 to 15x per inch I mentioned earlier as the best fit for most viewing situations.

Remember, club members are willing to help you with questions like this. A club night under the stars is a great time to experiment with the help of other members. Clear skies!

October Meeting Summary by Keith Mann

Annual general meetings are not the sort of thing that generally draws large crowds and newcomers, but that didn't stop the Hamilton Amateur Astronomers from filling the Hamilton Spectator auditorium with enthusiastic members and guests on October 12. Take it as a sign of the continued popularity of our hobby, the success of our club, and the efforts of people like Publicity Director **Mario Carr** that half of those present to mark the end of our membership year and the election of our new council were newcomers.

Hosting his final meeting as Chair, **Bob Christmas** led off by promising the crowd that Observing Director **John Gauvreau** had a fantastic presentation ready to go as soon as the formal business was concluded. Bob talked briefly about the upcoming telescope clinic (watch for it in early December) and then thanked the outgoing council whose hard work served to "put the club on the map."

Secretary **Jim Wamsley** invited members to see him to reserve a loaner 'scope (which would be available after the well-used instruments received a little maintenance). He also announced the formation of a new Astro-Imaging Group that all members are welcome to join.

Treasurer **Steve Germann** delivered his annual report. The club's bank account continues to be healthy, buoyed by dues from a large membership and excellent sales of our calendar. This income was enough to allow us to print and distribute brochures, as well as covering our usual expenses.

The final piece of business, the election of a new council, was quickly and ably conducted by Second Chair and Webmaster, **Don Pullen**. The slate of candidates as proposed by council was acclaimed.

After an intermission and the door prize and 50/50 draws, the patient crowd was treated to John's "Tour of the Universe" presentation just as Bob had promised. It's a credit to John's skill as a presenter and his evident passion for our hobby that even veteran astronomers sat enthralled as John narrated through a series of beautiful images, from the Sun and inner planets of the Solar System to the very farthest reaches of the visible universe. The loud applause at the close of the meeting was a fitting end to a great membership year, and an auspicious beginning to the next.

Lennox & Addington Dark Sky Site Report

by Eric Shepherd

I recently sent a report on the L&A County Dark Sky Viewing Site mentioned in Sky News to Terence Dickinson. An edited version has been published in the current issue of Sky News. The problem is that certain information concerning an imperfection with the site as well as detail on how dark it actually is was completely left out. I just don't think it is fair for anyone planning to make the trip to this site in the future to not have full disclosure due to the travel distance involved.

If I may, here is my unedited report: I feel like the part in bold is important information for any would be traveller

Hi Terence,

Just thought I would send you a summary and first impressions of my recent visit to the L&A County Dark Sky Viewing Site.

With the aid of the weather network's forecast for Tamworth (about 10km from the observing site) and the Clear Sky Chart for the L&A county dark sky site I decided to take a chance book a motel and make the drive from Hamilton with the intention of enjoying 2 nights of observing at the L&A County Dark Sky Viewing Site.

I was not disappointed. This is a wonderful location with an unobstructed 360 degree view of anything above and some below about 10 degrees and higher. As an example I was able to view M7 before it set and it was only bout 7 degrees above the horizon.

Expecting, but not necessarily wanting to be on my own for the night, I was pleasantly surprised when a father and son from Stoney Creek pulled in and set up about an hour later. They were also here the night before and were busily setting up for an AP session on their final night.

On my second night a threesome from about 50km north of here pulled in with nothing more than lawn chairs and a set of what looked like 25mm binocs. They just totally enjoyed the naked eye view and although I had observing plans for the night I really had just as much pleasure letting them view through my scope and showing them how find certain objects on their own. The view of M31,M32 and M110 in the 2 degree FOV of my 10 inch dob resulted in some 'WOWS". One lady in particular was overjoyed at being able to now find, on her own, the double cluster, M31 and M33 in her 25mm binocs. In the mean time another couple from Belleville showed up with their Nexstar 6. They were in goto heaven. This was beginning to turn in to a small star party. A great time under a very dark sky was enjoyed by all.

On the first night my Sky Quality Meter (SQM) topped out at 21.33. The second night the SQM hit 21.45. I would say that the transparency on even the second night was about average and on a night of excellent transparency the sky would be even darker. Having very little experience at dark sky sites I was amazed that these SQM readings held up even well away from the Zenith. The only exception was a small barely perceptible light dome in the SE from Kingston.

Unfortunately nothing is perfect and although I considered it a minor inconvenience, the site is close enough to the road for car headlights to interfere with dark adaptation if one is not careful. There is about a 5-10 second warning between the time you first hear a vehicle and the headlights become visible. I just got used to closing my eyes or turning my head at the right time. There was not a lot of traffic and it really slowed down after 11pm. I have a feeling that during the summer when it doesn't really get dark until 11 or 11:30 this will be almost a non-issue.

The observing platform has room for maybe 7-10 telescope setups depending on the size and quantity of equipment. There is an equal amount of fairly flat ground surrounding the observing platform, which is just as useful for setting up.

I highly recommend this observing site to anyone who wants to escape the light pollution of their current locations and observe under the sky as it was meant to be. It's a 3 HR drive for me but I plan on making that drive on a regular basis in the future.

Cheers,

Eric Shepherd

(Continued on page 10)

Lennox & Addington Dark Sky Site Report (continued)

In the photo at left, the guardrail for the highway can be seen in the gap between the rocks (arrow). This view faces east.

Below Right: facing north from the parking area.

Below Left: The view to the southwest.

All photos courtesy of the author.

From the Editor:
My interest in this new observing site was piqued when I first read about it in a recent issue of SkyNews Magazine. I asked Eric Shepherd for more information and he provided the following additional details:

The site's parking area on the south side can easily handle 10 cars.
Concerning headlights: Lights from oncoming traffic are blocked from one side by a rock formation and the other side by trees-vegetation. It is a relatively small window through which the headlights could be seen. You basically hear a vehicle about 5-10 seconds before the lights become visible and then they are only visible for about 5 seconds. The highway is not heavily travelled and traffic is reduced to almost nothing after 11pm. Not really a problem for visual but may be a problem for astrophotographers. I am not sure of the ramifications for astrophotography as there have already been several great photos from others who have used the site.

(Continued on page 11)

Lennox & Addington Dark Sky Site Report (continued)

There are 2 or 3 motels that are all about 35km from the site. I stayed at the Napanee Inn ($59) which has Denny's and Tim Horton's restaurants close by and open 24hrs. The room was clean and functional for my needs, which were few. (fridge & microwave are included)

There are no washroom facilities at the dark sky site.

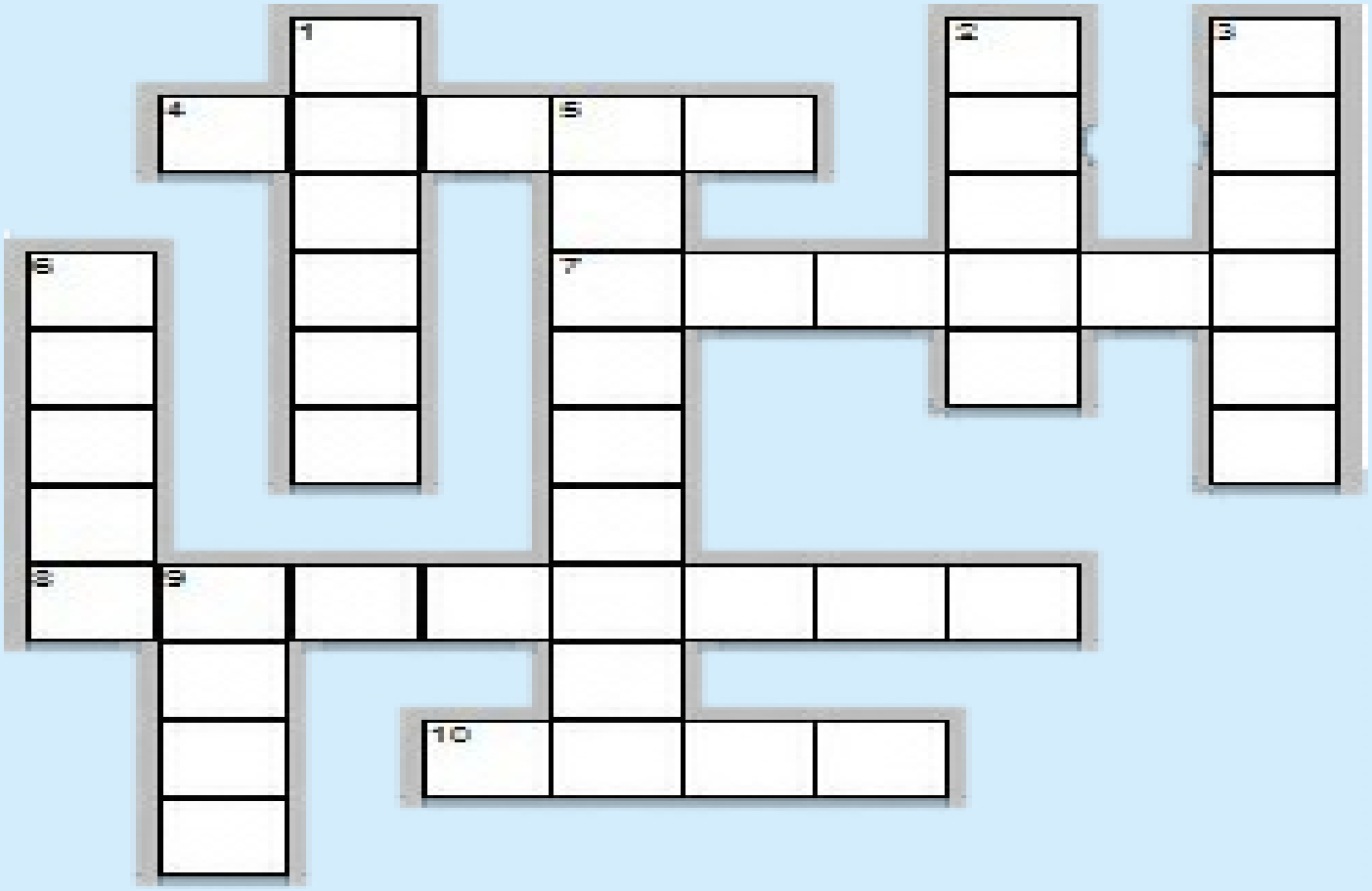
Here are links to more information:

http://www.lennox-addington.on.ca/must-see/dark-sky-viewing-area.html

http://skynews.ca/

Google Map to L & A Dark Sky Site

Astronomy Crossword by Mario Carr



Across

4. On Nov. 9, 1934 this astronomer was born?
7. On Nov. 12 the waning crescent moon is below this planet low in the dawn sky?
8. On Nov. 28 the full moon is this for all 2012 full moons?
10. On Nov. 15 the crescent moon is close to this planet in the evening sky?

Down

1. On Nov. 8, 1656 this comet hunter was born?
2. Nov. 26-27 Saturn and this planet will be extremely close in the dawn sky.
3. On Nov. 17 this meteor shower peaks?
5. On Nov. 13 a total eclipse of the sun can be seen from this country?
6. Nov. 20-25, this dwarf planet is below M35.
9. On Nov. 11 this object is below Venus in the Dawn sky?

Answers on page 17
No peeking!

2011-2012 Financial Statements by Steve Germann

We began the year at $5,975.90 in the bank. We now have $6,649.07 in the bank, so things are ticking upwards.

In this year, your club leadership made several strategic purchases which will strengthen us during the coming years:

- We designed new brochures, which have potential to reach out to new members.
- We purchased planispheres to distribute during our outreach programs.
- We purchased and outfitted a laptop computer to ensure that our presenters will have a machine compatible with the projection system at our meetings.
- We have of course paid in advance for our rent for the coming year until June, and will be soon renewing our club's liability insurance which enables us to have these meetings, public nights, outreach and sidewalk astronomy.
- We purchased hazard vests which can be worn at our public outreach events, providing an added degree of safety to our members.

In the year just concluded, our astronomical calendar raised $915 for the club. Many thanks to those who contributed photos, and time and effort to the crafting of this calendar. We should display it proudly for the rest of 2012, and then put up the 2013 HAA calendar.

Selling of HAA branded merchandise such as hats and jackets raised $124.24.

We began the year with $1462 in prepaid memberships, and collected $1385 more memberships during the year. I think that's a record for club memberships and I thank all the members who donated at the higher levels such as royal and patron.
At this point, we have sold $1435 worth of prepaid memberships for the coming year.

The club has ended the year $673.07 up from last year.

Our budget covered our major expenses, such as rental of the room and insurance, and estimates for our minor expenditures. The budget is a working document, which guides us as to future events, but it's not set in stone. Your council was able to make several strategic changes during the year, outlined above, which have strengthened and improved it.

We budgeted for a possible large expenditure last year, which for various reasons has not been spent, and is not for sure going to be spent. By this I mean, a Kiosk at the Binbrook Conservation Area, which could call the attention of the public to the wonders of the night sky, when they visit in the daytime. The nature of the project has changed over time and at this point it's been shelved.

We did not budget for any capital purchases, but in fact we spent $1153.83 on equipment. We did not budget for any sales of assets, but in fact we raised $1008.41 by selling some items donated to the club, to members who could use them.

Our 50/50 draw raised as much money as we spent on office supplies (PO box rental, membership cards and receipt books, etc) and speakers meals, transportation, and honorariums.

Your donations for memberships covered the cost of renting the space for our meetings and insuring the club.

All in all we should thank the club's leadership for exceptionally frugal and effective management of the club's resources.

It's important to note, that I am the club treasurer, and I keep track of the club’s finances, but the club executive as a whole, and you members, effectively control what happens to the money.

I am looking forward to serving another year on the club executive and working with them to steer the club in its many activities.

(Continued on page 14)

HAA 2012 Balance Sheet

Assets

	31-Oct 2012	31-Oct 2011
Bank	$6,649.07	$5,975.90
Cash	$0.00	$0.00
Inventory	$0.00	$0.00
Prepaid PO Box Rental	$158.20	$152.55
Prepaid Mailing Expense	$0.00	$0.00
Prepaid Liability Insurance	$0.00	$0.00
Prepaid Hall Rental	$941.66	$941.66
Accounts Receivable	$0.00	$0.00
Total Current Assets	$7,748.93	$7,070.11
Depreciated Fixed Assets (opening)		
Laptop	$1,041.06	
Vests	$112.77	
Projector	$836.00	$1,045.00
Telescopes	$1,203.00	$903.00
Total	$3,192.83	$1,948.00
Less current Depreciation	$493.18	$209.00
Equipment	$2,699.65	$1,739.00
Total Fixed Assets	$2,699.65	$1,739.00
Total Assets	$10,448.58	$8,809.11
Liabilities		
Deferred Membership Revenue	$1,435.00	$1,442.00
Accounts Payable	$0.00	$0.00
Total Liabilities	$1,435.00	$1,442.00
Equity		
Opening Balance	$7,367.10	$4,645.00
Value of Equipment Donations	$300.00	n/a
Prepayments start of year minus	$1,094.21	n/a
Prepayments	$1,099.86	n/a
Retained Earnings	n/a	$1,311.00
Current Year Surplus	$1,340.82	$1,411.10
Closing Balance	$9,013.57	$7,367.10
Total Liabilities and Equity	$10,448.57	$8,809.10

(Continued on page 15)

HAA 2012 Income Statement

	31-Oct 2012	31-Oct 2011
Income		
Memberships	$2,827.00	$2,070.00
HAA Calendars	$2,610.00	$2,305.00
RASC Handbooks	$0.00	$0.00
Clothing Sales	$795.00	$0.00
50/50	$508.00	$542.50
Coffee Fund	$0.00	$0.00
Advertising Revenue	$0.00	$0.00
Cash Donations	$90.60	$780.00
Messier Marathon	$0.00	$140.00
Miscellaneous	$0.00	$0.00
Prepaid Postage	$0.00	$0.00
Sale of Assets	$1,008.41	$0.00
Total	$7,839.01	$5,837.50
Expenses		
Insurance	$739.80	$705.24
EH Newsletter	$0.00	$0.00
Brochures and Handouts	$911.46	$59.10
HAA Calendars	$1,695.00	$1,695.01
RASC Handbooks	$0.00	$0.00
Clothing Sales	$670.76	$0.00
Donation Expense	$346.10	$346.97
Depreciation Expense	$493.18	$209.00
PO Box Rental	$158.20	$152.55
Speakers Allowance	$184.66	$20.00
Office Supplies	$59.03	$45.04
Postage	$0.00	$16.98
Bank Charges	$0.00	$5.00
IYA Events	$0.00	$0.00
Kids Outreach Kit	$0.00	$0.00
Hall Rental	$1,130.00	$1,130.00
Miscellaneous	$110.00	$41.51
Total	$6,498.19	$4,426.40
Surplus/Deficit	$1,340.82	$1,411.10
Advanced Revenue		
Membership Payments	$1,435.00	$1,442.00

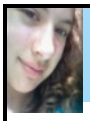
(Continued on page 16)

HAA 2012 Income Statement (continued)

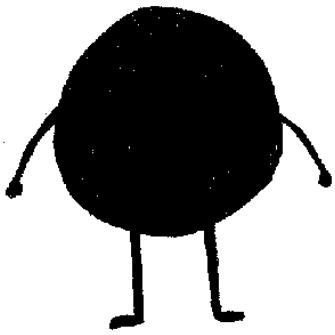
	31-Oct 2012	31-Oct 2011
Prepayments		
Prepaid Hall Rental	$941.66	$941.66
PO Box Rental	$158.20	$152.55
Capital Purchases		
Safety Vests	$112.77	
Computer	$1,041.06	
Telescopes	$903.00	

HAA 2012 Revenue

	31-Oct 2012	31-Oct 2011
Membership	$2,827.00	$2,710.00
Calendars	$915.00	$609.99
Cash Donations	$90.60	$180.00
50/50 Draw	$508.00	$542.50
Planetarium Trip	-$110.00	$39.00
Donations in Kind	$300.00	
Total Revenue	$4,230.60	$4,081.49
Depreciation Table		
Opening Balance	$1,739.00	$1,045.00
Depreciation Full Year	$347.80	$209.00
Additions	$1,453.83	$903.00
Sales	$0.00	$0.00
Net	$1,453.83	$903.00
Depreciation Part Year	$145.38	$0.00
Total Depreciation	$493.18	$209.00
Closing Balance	$2,699.65	$1,739.00



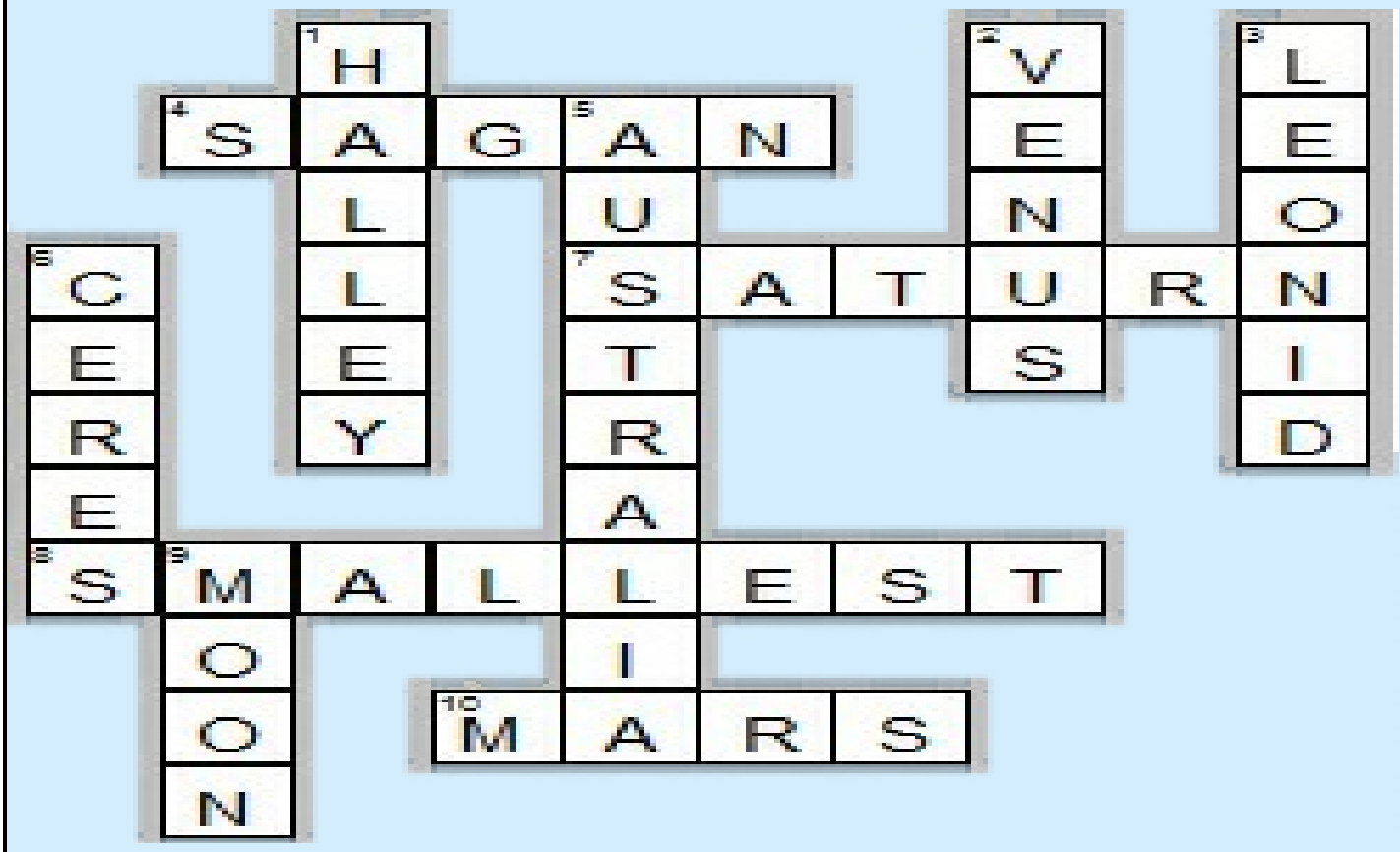
Cartoon Corner by Alexandra Tekatch



What do a vampire and a black hole have in common?

They both suck.

Answers to Astronomy Crossword on Page 12



UPCOMING EVENTS

November 9, 2012 - 7:30 pm **General Meeting** at the Hamilton Spectator Auditorium. Our speaker will be Don Pullen whose topic is entitled Radio Astronomy.
November 23, 2012 - 7:30 pm **Telescope Clinic** at the Hamilton Spectator Auditorium.
December 1, 2012 - 7:30 pm **Cosmology Discussion Group** meets in the basement rec room of 75 Main St., Dundas, ON. Contact Jim Wamsley for details (chair@amateurastronomy.org).

2012-2013 Council

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Second Chair	Joe McArdle
Treasurer	Steve Germann
Membership Director	Matthew Mannering
Observing Director	John Gauvreau
Event Horizon Editor	Ann Tekatch
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Recorder	Mike Jefferson
Secretary	Bob Christmas
Public Education	Mario Carr
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Please consider purchasing a season's pass for $79 to help support the park.
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