

Event Horizon



Volume 20, Number 4
February 2013

From The Editor

With so many excellent astrophotographers in our club, is it any wonder that our calendar sold out so quickly?

In addition to the annual calendar, we also need photos to feature in this newsletter, at meetings and during public events. I strongly encourage any of our astrophotographers out there (new or experienced) to send in photos. Include information on when and where the image was taken along with a description of the exposure and equipment used.

There is a good chance that we may have at least one, and perhaps two, bright comets in the sky this year on which to practice our imaging. So dust off your camera and get out there!

Clear skies!
Ann Tekatch
Editor@amateurastronomy.org



Chair's Report by Jim Wamsley

2013 is here, and I could not be more excited about the H.A.A. and its 20th anniversary year. We started the year off right with a huge crowd of 108 people at our January meeting. Our speaker, Dr. Laura Parker, was extremely interesting and informative.

I also had the pleasure to announce the club's plans to have a 20th Anniversary Banquet at Hamilton's Canadian Warplane Heritage Museum. I was informed after, that in my excitement I forgot to announce the date we are to hold this event. (My bad) I am happy now to tell you the date will be Nov.2, 2013. We will have full access to the museum from 5:00 pm. till 1:00 am. I'm sure we will have a great time.

On the subject of speakers, we have a line-up of some terrific people coming to see us. February is Dr. Christine Wilson from McMaster, speaking about Galaxy Collisions and the Origin of Stars. March we have Kerry-Ann Lecky Hepburn. For those of you who don't know Kerry, she is a long time club member, and one of the country's best astrophotographers. I have just gotten word that Dr.

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Chair's Report (continued)

Doug Welch of McMaster University will be coming to speak to us on Light Echoes from Luminous Transients for our April meeting. I am working on getting talks more suited to our less advanced members for May and June.

On that note, we have had our first Astronomy 101 class Jan. 19th. There were 13 members there to take part. John Gauvreau did the introductory talk, in which the group discussed the subjects about which they most wanted to learn, and then set the schedule for when we will meet in the future. We covered some of the basics of telescope optics and how they work, as well as the types of scope mounts typically in use today. In our future classes, we will cover things like what you can expect to see in the eyepiece, how to navigate the night sky by using star charts, planispheres, and star-hopping, as well as other fundamental topics. I think everyone enjoyed the class, and I hope they were able to take home some useful information.

The astrophotography group had its second meeting Jan 26th. For those of you not familiar with this group, it takes a very informal approach. We just get together and talk over some of our problems and successes in astrophotography, sharing information on the things that work, and those that don't. Some of us bring new equipment we have purchased for show and tell. There is a wide range of experience, from the raw novice to intermediate, all the way to extremely advanced astrophotographers all sharing, and having a great time.



*Jim speaking to the Astro 101 Group
Photo courtesy of Jim Wamsley*

I know the weather of late has been less than cooperative. Even on the nights that we have clear skies, the temperatures have been less than comfortable "Brrrrr !!!" We just have to put up with this for a little while longer and we will be in the more moderate temperatures of spring, and prime observing weather. The club has a long list of public observing nights planned to start on Astronomy Day April 20th, but I'm sure we will have some intrepid folk setting up their scopes at McQueston Park for an impromptu sidewalk astronomy session long before that. Be sure to check your e-mail often for updates on this and for nights out to Binbrook Conservation Area, as the weather improves.

As you can see, the HAA has something for everyone, and I hope you will join in the activities the club has to offer. Borrow a scope from the club, if you don't have one, and get out under a dark sky this year. I hope to see you there, and share a view with you.

Masthead Photo: Everett Cairns took this image of the Moon near Jupiter on Monday, January 21/13. He writes: "The exposure was 1/100, ISO 100 at direct focus of Orion 110mm f7 apochromat at 10:27 pm. Camera-Nikon D800, focused as best I could with "live view" on the camera." The original image was oriented vertically, but has been rotated 90 degrees clockwise to fit our newsletter's masthead. (Sorry, Everett!)



Treasurer's Report by Steve Germann

	(Unaudited)
Starting balance:	\$6554.80
Revenue:	\$510.50
Expenses:	\$103.84
Ending Balance	\$6961.46

Thanks to a kind and sharp-eyed reader who pointed out an arithmetic error in last month's report. This month's opening balance correctly reads \$6554.80

Revenue consisted of Calendar sales \$250; Memberships \$200, and 50/50 \$60.50.

Expenses consisted of \$100 for club computer repairs, and \$3.84 for shipping 2 calendars by mail, and \$200 advance payment for the club's James Winger Memorial Prize for the Bay Area Science and Engineering Fair.

Calendar sales have almost concluded. The club looks on track to make more than \$1200 from calendars this year. Special thanks to all who gave calendars as gifts, and all who crafted the calendar or contributed photos.



The Sky This Month: February by John Gauvreau

The Sky This Month February 2013

February 2 - Moon 3° from Saturn (midnight)
February 3 - Last Quarter Moon
February 9 - New Moon (2:20am Feb 10)
February 16 - Mercury at greatest elongation (low in west at dusk)
February 17 - First Quarter Moon
February 18 - Moon beside Jupiter
February 25 - Full Moon
February 28 - Gibbous Moon $\frac{1}{2}^\circ$ from Spica

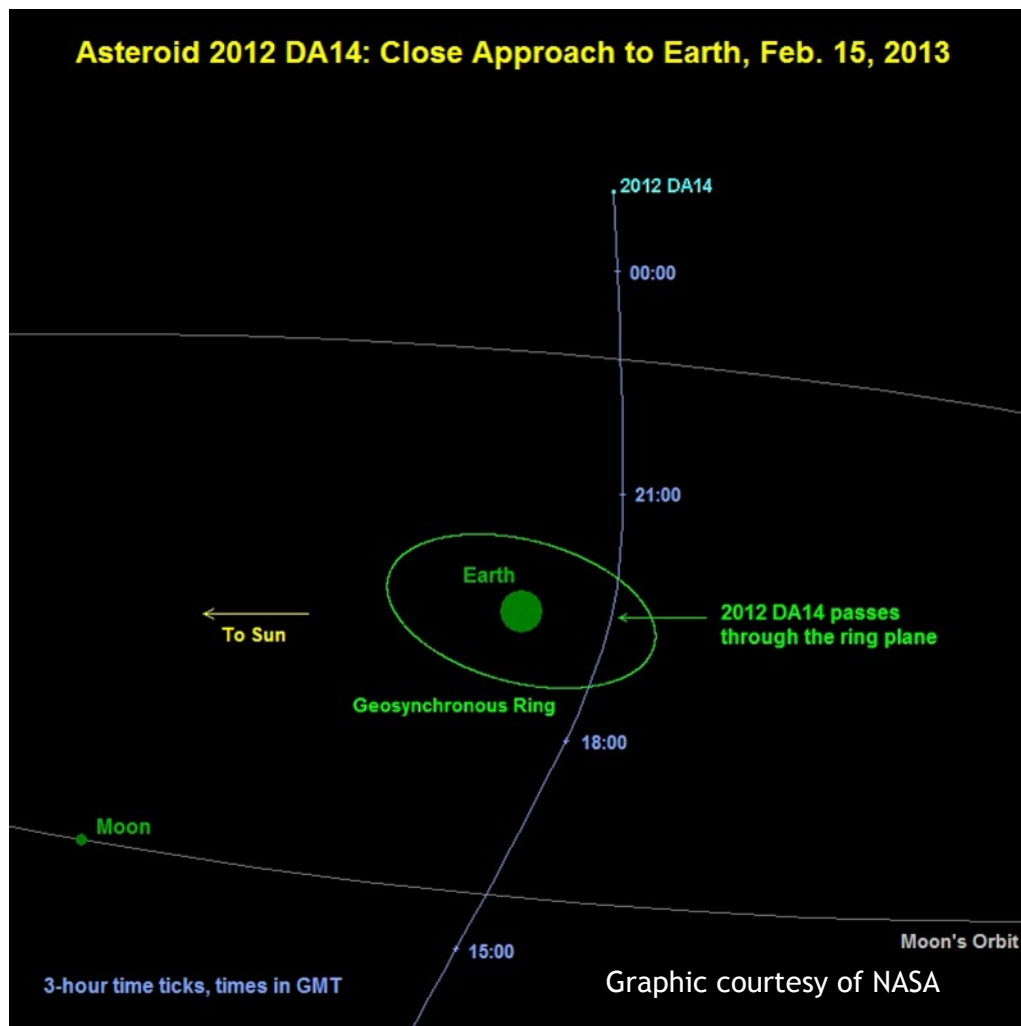
Under the Sky

The month of February is bookended by a pair of lovely naked-eye events that see the moon pass by a planet and a bright star. On February 2nd the moon passes only 3 degrees from Saturn. Rising about 8pm, the pair is well up in the south by midnight. This lovely sight is best with the unaided eye or binoculars, but telescope observers will find a close look at Saturn irresistible. We still have Jupiter gracing our evening sky, and after a time spent with this gas giant we can finally have a look at the other great giant of the solar system, Saturn, at a reasonable hour of the night.

(Continued on [page 4](#))

The Sky This Month (continued)

This month sees an asteroid pass as close to the Earth as any in decades. On February 15th asteroid 2012 DA14 will pass only 27,500 km above the Earth's surface. This is much closer than the geosynchronous satellites that your satellite TV or GPS works from (so if your TV signal goes out that night, your satellite just might have been knocked out by a passing asteroid!). There is no chance of a collision with Earth, which is good. At 45 meters across, the asteroid is about the same size as the one that blasted out Meteor Crater in Arizona. There is also little chance of observing this asteroid. At closest approach, it will be 7th magnitude and moving about 1 degree per minute.



Aside from Jupiter and Saturn, there is another opportunity for some planetary observing this month. February is your best chance in 2013 to see Mercury. Visible in the western evening sky all month, on the 8th it is less than $\frac{1}{2}$ degree from Mars, and then on the 11th the moon passes 5 degrees from the innermost planet. You can use the slim crescent moon to help you find Mercury. Finally, it is at greatest eastern elongation on February 16th. Because it is very low in the west, you will need a good view of the horizon, but this is your best chance all year to spot Mercury, so don't miss out!

(Continued on [page 5](#))

The Sky This Month (continued)

The moon passes just 5 degrees from Mercury on Feb. 11, 2013
Screenshot from Stellarium



Perhaps the most spectacular sight of the month falls on its final day, and closes our bookends. On the night of February 28th and into the morning hours of March 1st, the moon will sit less than $\frac{1}{2}$ degree from the bright star Spica. Rising about 10pm, the pair is at their closest about three hours later, at 1am. Again, this is a lovely naked eye sight and spectacular in binoculars, but will also fit into a wide field telescopic view, so set up your scope and see the month off with a rare view of the moon and Spica together.

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

For Sale

Astrophotography Bundle for Sale



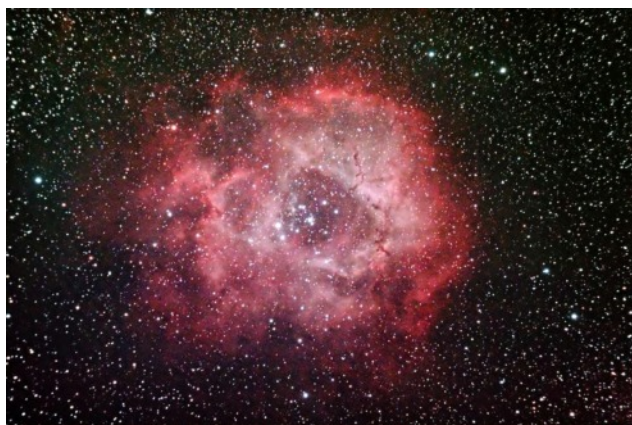
Includes the following items:

- Canon 40D body with the cables, software, manuals, battery and charger
- Sigma 17-70mm f2.8-4.5 macro + UV filter.
- Astronomik CLS clip filter (really helps to enhance Ha nebulae in dark or light polluted skies)
- AC adapter kit (needed in the field when taking long exposures)
- 1 extra camera battery
- 258mb + 1 GB CF memory cards

\$850 for the complete package (in original boxes)

I am selling this because I recently made the move to a full frame camera. All items are in very good to excellent condition. This package is great for those interested in daytime and astrophotography. The 40D's live view focusing and camera control through the laptop has been indispensable for astro work. This camera and lens combo has helped me receive many daytime photography awards and one NASA APOD. Examples of some photos can be seen below. To see more images visit www.weatherandsky.com

Contact Kerry-Ann at kerry@weatherandsky.com. Available for pickup in Grimsby.



Thank You to Our Monthly Food Donors!



28 Athens Street,
Hamilton, ON L9C 3K9
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Fax: 905-574-1688
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February 17, 2013

Hamilton Amateur Astronomers
PO Box 65578
Dundas ON
L9H 6Y6

Dear Friends,

Thank you for your donation of food to the Neighbour to Neighbour Centre. It is a very generous contribution and will go a long way in helping so many people who use our Centre's multitude of services.

Your support is also recognition of the necessity for the programs and services offered by our Centre. The men, women and children who seek out our help are a determined bunch. Self-sufficiency and a future full of as many opportunities as they can create are their goals.

These goals are achieved by seeking help from our Resource Counsellors who parlay vital community information to clients about ways to tackle financial, legal and housing problems and even how to grow their own food in one of our Community Gardens. They may also join the Sole Parents Program to become more confident parents and enroll their children in our one-on-one tutoring program.

With your help, Neighbour to Neighbour is meeting the needs of disadvantaged people and through focused programs, helping them flourish in the future. Thank you so very much.

Yours truly,

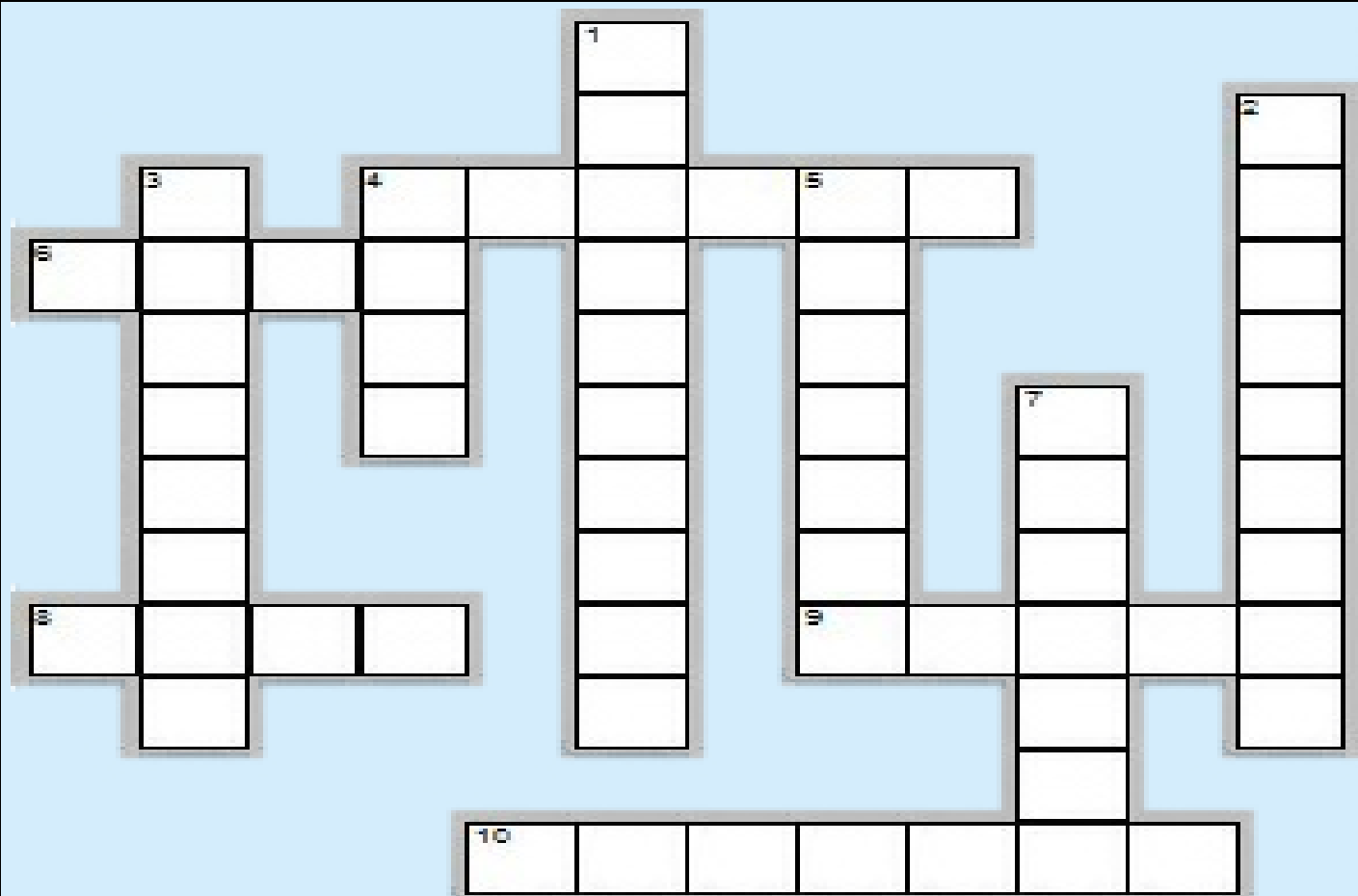
NEIGHBOUR TO NEIGHBOUR CENTRE (HAMILTON)

Denise Arkell,
Executive Director

Help is Just a Neighbour Away



Astronomy Crossword by Mario Carr



Across

4. On Feb. 3 the last quarter moon is just below this planet in the dawn sky
6. On Feb. 11 this object is above Mercury in the evening sky
8. On Feb. 8 Mercury and this planet are extremely close low in the evening sky at dusk
9. On Feb. 28 the moon is close to this star rising just before midnight
10. On Feb. 16 this planet is at its greatest angle away from the Sun.

Down

1. On Feb. 19 Saturn begins this type of motion
2. On Feb. 18 the moon and Jupiter are close to this star
3. On Feb. 27 this type of light can be seen for the next two weeks in the western evening sky.
4. On Feb. 25 the full moon is called this type of moon
5. On Feb. 24 the moon is below this star in the evening sky
7. On Feb 17 the first quarter moon is close to this planet in the evening sky

Answers on page 13
No peeking!



January Meeting Summary by Bob Christmas

The first HAA meeting of 2013 and of the new Maya long-count got under way with HAA chair Jim Wamsley welcoming the huge audience of 108 attendees and making a few announcements and comments.

Our main speaker of the evening was Dr. Laura Parker of McMaster University's Department of Physics and Astronomy, who gave her talk on galaxy collisions and galaxy evolution.

Dr. Parker talked about how galaxy collisions and mergers of galaxies have played a huge role in the evolution of the universe since near its beginning, and how galaxy clusters get formed over time. She emphasized that large galaxies, including our own Milky Way Galaxy, have come to be by absorbing smaller galaxies, and that our galaxy is still in the process of absorbing small nearby galaxies, such as the Sagittarius Dwarf.

She also touched on how big a role "dark matter" plays in galaxy mergers and collisions.

During her talk, Laura showed us several spectacular images of the Hubble Ultra-Deep Field, interacting galaxies such as Centaurus "A" and "The Antennae" (NGC 4038/4039), as well as a computer animation of the upcoming collision and merging of our galaxy and the Andromeda Galaxy that will occur in a few billion years.

Laura's fascinating talk elicited lots of questions from our huge audience, including from yours truly. We look forward to Dr. Parker doing another great talk at a future HAA meeting. Thanks very much, Laura!

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

Justin O'Donnell then took the floor to talk about the Mars 1 Program, an ambitious, privately funded venture that would eventually send humans to Mars and even start a new colony on the Red Planet.

Finally, the HAA's observing director John Gauvreau talked about The Sky This Month. John's first visual was of a very bad astronomy-themed commercial. I won't name the non-astronomy product name, but I can tell you that it showed a father and his son in a field, looking up in the sky through their Newtonian reflecting telescope. It looked ordinary enough. But to an experienced astronomer, it took just a few seconds to realize their scope was pointed not up, but down! Moreover, the scene was brightly lit by a portable stadium light, which would have badly hindered their viewing ability anyway, if they had their scope pointing skywards!

John went on to show the night sky as it was up that evening, using the Stellarium planetarium program. All of the winter constellations, including Orion, Taurus, Gemini, Canis Major and Canis Minor, are in perfect prime-time view. Included are such deep-sky objects such as the Pleiades, the Hyades and the Orion Nebula. Also prominent in the month of January this year has been the planet Jupiter.

After the meeting, about 20 of us reconvened at Crabby Joe's in West Hamilton for food, drinks, and further conversation and camaraderie.



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.

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Astrophotography Group Meeting Report by Ann Tekatch

Our astrophotography group met in the basement common room of the Centurion Apartment Building in Dundas on Saturday, January 26th. I brought three tripods to illustrate their advantages and disadvantages for astrophotography. I also described the new iOptron Skytracker and explained how it could be mounted on an ordinary photo tripod for taking tracked, widefield astrophotos.

Jim Wamsley passed around his new standalone Skywatcher guider and we all had a chance to see how it was connected to his new short-focus achromatic refractor and mounted on his 8" Schmidt Cassegrain telescope.

Kerry demonstrated the new Canon 6D full frame DSLR. A very exciting feature of this newly released camera is its wifi connectivity with Android or Apple smart phones. Kerry was able to remotely operate the camera from her smart phone. No more cables!

Judging by all the new equipment and the many newcomers who attended this session, next year's HAA Celestial Events calendar should feature some remarkable photos!

Our next meeting should be in March sometime. Watch your newsletter for details.



HAA Astrophoto Group - photo by Jim Wamsley



What Constitutes A Good Astronomy Club? by Mike Jefferson

Astronomy societies, clubs or organizations can last a long time and achieve much, last a short time and accomplish a great deal, or last a short time with very little being done. All of us would like to opt for the first possibility and we would like a lot accomplished over that long time-frame. How to do this is the subject of this essay. As we enter the initial months of 2013, this author and member of the HAA feels that we need to look at this organization's accomplishments, evolution, successes, failures and goals.

Astronomy clubs, whether affiliates of a larger parent organization or those which are fully independent, need to look at the rate at which they accumulate membership and keep the membership they already have, at the same time. Any organization whose membership is generally increasing over a long period is probably going to be around for many years. Conversely, any organization which is declining over the same time frame is obviously headed toward its long term conclusion. Clubs which make membership feel included and make it feel important to the survival of the club tend to be much longer term ones. New membership is the lifeblood of any volunteer organization and needs to be nurtured to the fullest. New members are the vitality and the future of any organization. New membership not only runs the club *in the future*, it contributes ideas and volunteer work *for the present*.

General membership must always be given the opportunity to make suggestions and even implement new ideas; and Council should always be open and receptive to such. Council is, after all, only general membership which has volunteered to help run the club in some capacity. It is **not** a 'ruler' and it is not 'forever'. Any councillor willing to 'step down' at any point in his/her term is likely to be an excellent councillor - being there to serve only.

The "Hamilton Amateur Astronomers" (HAA) - even the name is not boastful - will have been here for 20 years this November, 2013, with a very stable and continuous membership. Thanks to the efforts of Matthew Mannering (Membership Councillor), membership lists are kept and monitored so that HAA always knows how many people it has and can take steps to improve its membership relations should our roster suddenly begin to decline. The 20th anniversary will be celebrated, just like the

15th and 10th before it for the benefit of membership relations and sense of belonging. All of our councillors bear some responsibility for this excellent, continuous performance.

HAA has managed to keep its same meeting place over the course of two decades. Our relationship with the Hamilton Spectator has been almost impeccable over that time period. Our membership, too, has increased over that period and we are now the largest independent astronomy club in Canada. One or two other organizations are larger, but they are members of a parent organization and are in very large population centres. HAA Council welcomes membership suggestions, presentations and participation and opens all council meetings to general membership for interest or input. HAA responds to inquiries from potential members. Recently, it acquired a new member in the 'form' of a professional physicist because it enthusiastically responded to his email. Councillors are even willing to 'step aside' for any general membership willing to 'step up' - ask your Recorder - the job is **perpetually open for takeover**, subject to HAA membership ratification! In fact, there are no appointments or selections for Council - elections or acclamations being the only routes there.

Membership fees can spell the difference between long and short term existence. Most of the general membership has other interests beyond astronomy. This usually means that it has to divide its resources among a number of clubs. To ask it to spend the lion's share of membership fees on one organization is unrealistic. Keep fees as low as possible. HAA has always been known for its low membership fees. Even family rates are a 'steal' for all of the benefits they entail. Higher fees are 'Titles' in name only, for those who wish to contribute more. And yet HAA manages to thrive by spending and controlling its monies wisely. The treasury is very well-managed and there is no need for this club to run into the 'red' now or at any time in the future. For this, we can thank the efforts of our treasurer, Steve Germann, whose job it is to monitor the state of our treasury and our spending and to plan for the next year.

Publicity or 'profile' is vital for any club's survival. Announcements in all of the media, public service communication, the internet and public presentations keep the club in the eye of the general population. Some of this *(Continued on [page 12](#))*

What Constitutes A Good Astronomy Club?(continued)

population may have only a passing interest in things astronomical. However, it passes such information along to others who may be very interested in getting involved with an astronomy club. For all of their efforts in this area, we are very grateful to Don Pullen (Webmaster) and Mario Carr (HAA Publicity).

Tradition - can be a great thing. It can also be stifling. Any society needs to maintain a healthy balance between too much and too little tradition. While people are interested in hearing of the greatness of past membership, they get very weary of having the accomplishments of people, they never knew, dragged out in front of them at every general meeting, every discussion group and every sub-group gathering. Evolution has to balance the past. The club has to move into the future not only to keep pace with changing times but maintain the interest of the next generation of membership.

Diversity is another characteristic of a healthy club. Astronomy is not just looking through telescopes. Some members have little interest in using telescopes, preferring instead to spend their time reading about astronomy, grinding optics, writing about astronomical history or discussing cosmological theories with other membership. For a club to survive, these 'side roads' must always be catered to as much as possible. Our thanks should go Everett Cairns, HAA Chair Jim Wamsley, Ann Tekatch (Editor) and Mario Carr (Publicity).

What would any club be without its newsletter - its communication with membership? For this we can thank our editor, Ann Tekatch, whose tireless work with this publication makes it anticipated at the start of every month by all HAA membership! It is a first class newsletter - not full of someone else's pictures, borrowed articles, 'NASA publicity' or other fillers that step in to replace the lack of membership contribution. Ann keeps it current, interesting and strong!

Continuity in what we do is vital. It becomes very necessary to keep membership and the public aware of what is transpiring in the night sky from month to month. For this we are indebted to Observing 'Director' John Gauvreau, who makes these presentations come alive with wit, examples, models, stories, jokes and narrative.

None of the above is intended to avoid mentioning other council membership. Your entire council, councillors-at-large and even general membership, both past and present, have been and are, actively engaged in making this astronomy club as educational, entertaining and participatory for the whole membership and public as is possible at all times.

What are our goals? To continue with all of the above will be our mandate. To continue developing and producing the annual calendar will be necessary because it is educational, financially rewarding and it is publicity. To promote the enjoyment of astronomy, allied studies and to foster an interest in scientific pursuits through the encouragement of membership projects and rewarding the student accomplishments in the annual Bay Area Science and Engineering Fair projects will also be ongoing.

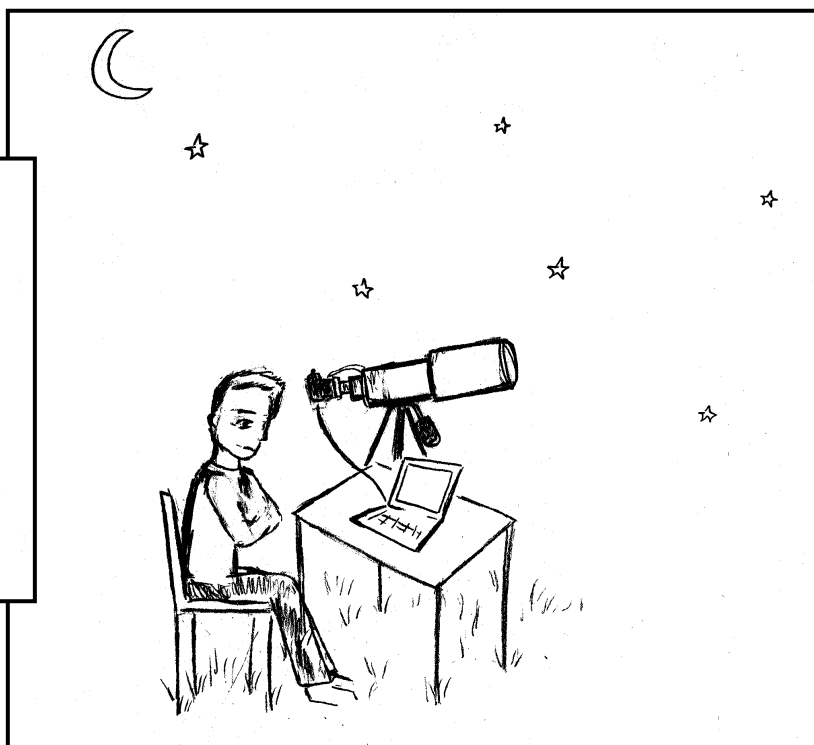
Has HAA failed at anything? There may be some very minor issues, as with any club, over the decades. However, these were not problems that were not quickly overcome or solved, usually to everyone's satisfaction.

The issue of manners and decorum has a place here as well. Kudos go to member Kevin Salwach for organizing and setting up an observing night on the evening of January 01/2013. During the course of sending out announcement emails about the event, problems occurred with the dissemination of the gate lock combination. It finally got straightened out, but Kevin was so apologetic about the mix-up - the kind of person who makes a model HAA member!

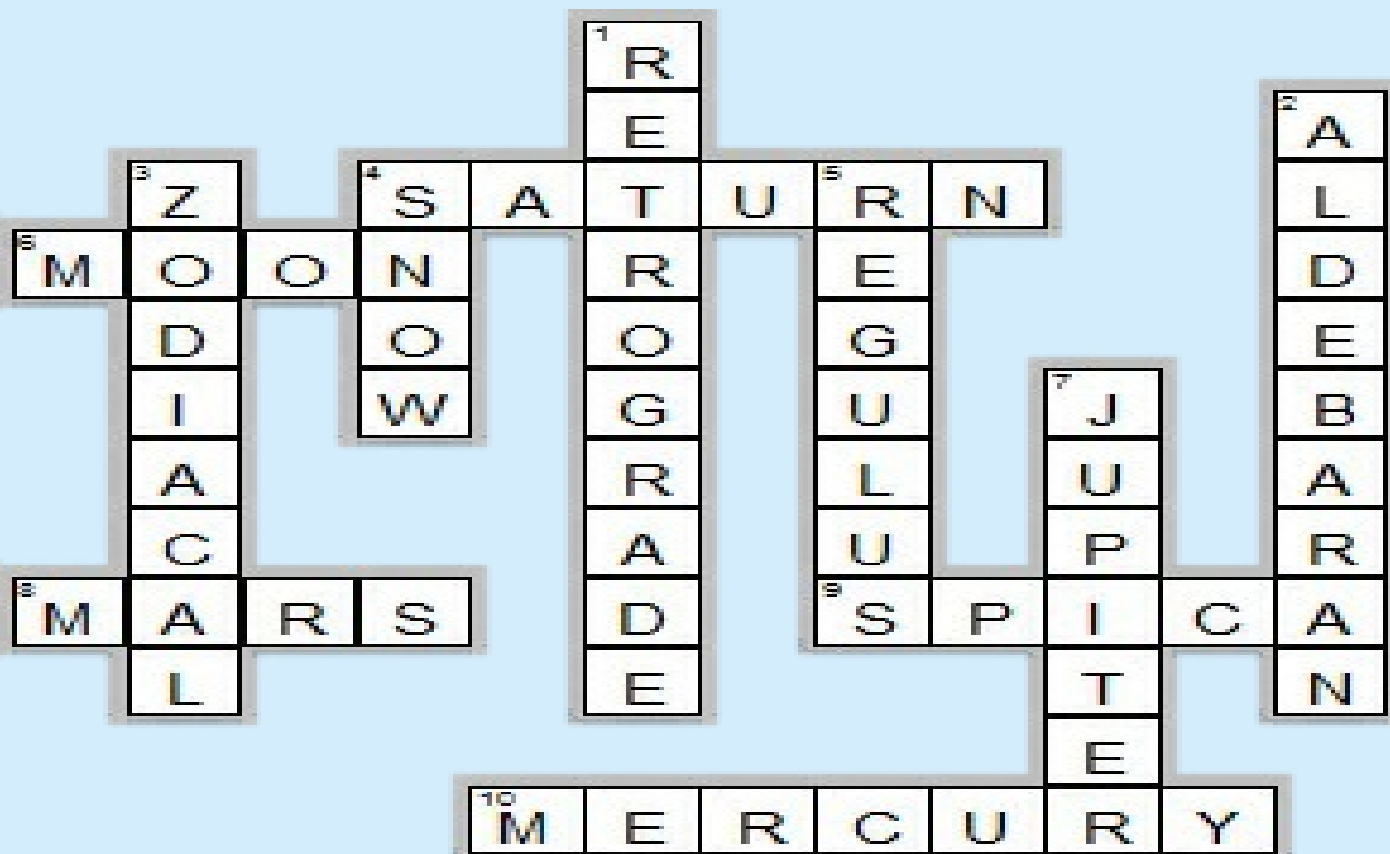
Finally, does this make us a model for astronomy organizations? I suppose that would depend on the 'eye of the beholder'. Nevertheless, although we are not perfect, by any stretch, it is the author's contention that this club is as close to the ideal as is ever going to be had!



Evolution of the Astronomer



Answers to Astronomy Crossword on Page 8



UPCOMING EVENTS

February 8, 2013 - 7:30 pm General Meeting at the Hamilton Spectator Auditorium. Guest speaker will be Dr. Christine Wilson of McMaster University.

February 26, 2013 - 7:30 pm Cosmology Discussion Group meets in the basement common room of the Centurion Apartments building in Dundas, Ontario. Contact Jim Wamsley for details: chair@amateurastronomy.org

March 8, 2013 - 7:30 pm General Meeting at the Hamilton Spectator Auditorium. Kerry-Ann Lecky Hepburn will be our guest speaker.

2012-2013 Council

Chair	Jim Wamsley
Second Chair	Joe McArdle
Treasurer	Steve Germann
Membership Director	Matthew Mannering
Observing Director	John Gauvreau
Event Horizon Editor	Ann Tekatch
Recorder	Mike Jefferson
Secretary	Bob Christmas
Public Education	Mario Carr
Councillors at Large	Brenda Frederick Harvey Garden Keith Mann David Tym Leslie Webb

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

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Come observing with the HAA and see what a great location this is for stargazing, a family day or an outdoor function.

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