

# Event Horizon



Volume 20, Number 7  
May 2013

## From The Editor

Now that the weather has stabilized somewhat, observing season is upon us! I encourage you to join your fellow club members at the scheduled public events as well as at club observing nights. No telescope is necessary, but if you have one, be sure to bring it along and share a view. Don't be shy. We were all newbies at one time!

The warmer weather also means we're getting closer to the dates for star parties. I will have a listing of the local ones in next month's newsletter.

Clear skies!

Ann Tekatch  
Editor@amateurastronomy.org



## Chair's Report by Jim Wamsley

It's been another busy month for the H.A.A. April 10<sup>th</sup> John Gauvreau spoke to the Astronomy 101 #2 class, about the things they can hope to see in the night sky, and how they will appear in the eyepiece. I think everyone there quite enjoyed the class, and took home a new understanding of astronomy as a hobby. This class will meet again May 1<sup>st</sup>, for the last classroom session, with Mathew Mannering and Lesley Webb, on resources, and finding your way around the sky. Shortly after that class, we will have both groups get together for a night out observing at Binbrook.

The April general meeting was very well attended. Doug Welch, our main speaker, was very informative, giving us an insight on his work on light echoes of supernovae. Kevin Salwach entertained the crowd with his "This Date in Astro History". Well done Kevin. John Gauvreau's "The Sky this month", as always, (*Continued on [page 2](#)*)

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## Chair's Report (continued)

gave us all the information we need, to plan our observing nights for the upcoming month, as well as showing us the great photos taken by our club members in the past month.

Over the past month or so, John G. and I have been doing research on line, and have made a couple of road trips to Kitchener and K.W Telescopes, in order to get a video camera for the club to use at our public observing nights. This camera, in use with the 8" S.C.T. telescope, donated to the club by Dave Gaylor, will allow people confined to wheel chairs, and the small kids that always have a hard time looking through the eyepiece. We ordered a camera and monitor, and got delivery of it in time for Astronomy Day. I was able to get this up and running for the evening session, with a lot of help from many members. The cam gave a very pleasing view of the moon. I'm sure, with some work on my part, figuring out the controls, it will be a great addition to our public outreach program.

On the subject of public outreach April 20<sup>th</sup> was International Astronomy Day, and was the first H.A.A. public observing event for the 2013 season. Traditionally we have afternoon observing and an evening session for Astronomy Day. This year, four hearty members showed up, to show the public views of the sun through a collection of especially equipped telescopes. Unfortunately the weather did not co-operate. It was very cold, windy, and the cloud cover only broke on a rare occasion, to tease us with an occasional short view of the sun. Undaunted, we set up a display of meteorites, in the hopes that some adventurous members of the public would stop by, but alas we only had three people come by, even with the help of the 94.7 country radio community cruiser making announcements. The evening event was quite another story. By the time I arrived at Bay Front Park, at 7:15, the sky had cleared, and there were already several club members starting to get their scopes setup for the night. I did not get a count of the number of members, or public that showed up over the course of the night, but I would guess at least 25 to 30 members, and 60 to 70 or more public turned out. I was busy the entire night with people viewing the Moon, Jupiter, and Saturn through the Gaylor scope and the camera monitor setup. The view of the Moon was spectacular, and got many Oohs, and Aahs. I am looking forward to perfecting the use of this setup. The odd time I had a chance to look around at the other members, they too were busy answering questions, and helping folks look through their scopes. In the end, Astronomy Day was a tremendous success, and a big thank you is due to all that helped out.

May looks to be just as busy as April was. Our friends at the Binbrook Conservation Area are putting on a Fishing Derby Sunday May 5<sup>th</sup>, and some of the attendees will be camping overnight Saturday night. We have been asked to set up our scopes, and share views with these folks. It will be a dark night, two days past last quarter, so please come and help out it should be fun.

May 10<sup>th</sup> will be the general meeting with Phil Mozel, speaking on the stars of 1812. Phil, is a science educator for the Ontario Science Center, and a very engaging speaker, so be sure to attend.

May 18<sup>th</sup>, we will be at the Grimsby Welcome Center for our second official public night. This venue is always a very busy one, with travelers coming and going all night. We probably get more exposure here, than at any other place we go. Please join us and share in the fun.

Let's hope the weather co-operates with us, and I'll see you out there.

**Masthead Photo:** Don Pullen took this image at Bayfront Park on Saturday, April 20 during our evening Astronomy Day public event. By using a long exposure, he was able to capture a bright image during darkening skies at twilight. The extended exposure also meant that motion blurring occurred.

## Hamilton Amateur Astronomers

### 20<sup>th</sup> Anniversary Banquet

At

Canadian Warplane Heritage Museum  
Hamilton International Airport  
9280 Airport Rd., Mount Hope, ON

Celebrate our 20<sup>th</sup> anniversary in style!

Enjoy a tour of the museum, listen to an engaging speaker and dine under the wings of vintage aircraft. Tickets will be available at our general meetings or you can contact Ann Tekatch (editor@amateurastronomy.org), Brenda Frederick (moonspinner@sympatico.ca), or Steve Germann (treasurer@amateurastronomy.org) .

Saturday, November 2, 2013

Doors open at 5:00 pm

Cocktails at 6:00 pm

Buffet Dinner at 7:00 pm

Cash Bar

HAA Members & Guests

\$45.00 per person



### The Sky This Month: April by John Gauvreau

#### The Sky This Month May 2013

- May 2 - Last Quarter Moon
- May 4 - Eta Aquarid Meteor Shower
- May 9 - New Moon
- May 12 - Crescent Moon only 3 degrees from Jupiter
- May 17 - First Quarter Moon
- May 22 - Moon right next to Spica
- May 23 - Moon rises 4 degrees from Saturn
- May 24 - Full Moon
- May 26 - Triple conjunction! Jupiter, Venus and Mercury only 2 degrees apart
- May 27 - Mercury only 2 degrees from Jupiter
- May 28 - Venus 1 degree from Jupiter

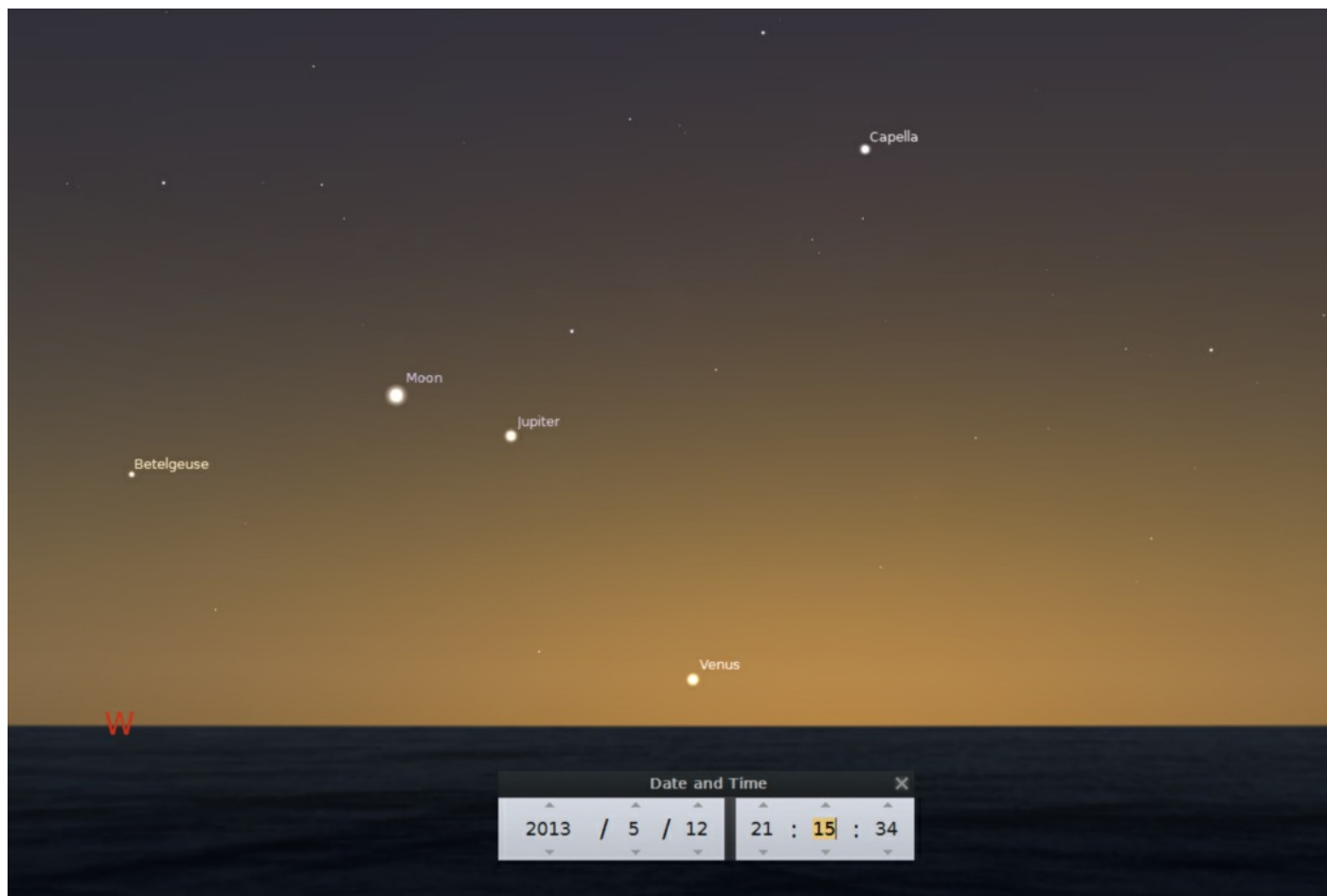
I, for one, couldn't be happier to have warmer temperatures and a fresh smell in the air. Of course, I have already noticed the nights getting shorter, but that is the price we pay, and for many, the preference of a quality observing experience trumps the quantity of dark hours over the cold winter.

We start the month with the **Eta Aquarid Meteor Shower**, and it is one of the best of the year. Not in the same category as the Perseids or the Geminids, but at 40 - 50 meteors per hour, it's pretty close and the warm temperatures make a night out under the sky appealing. These dust (Continued on [page 4](#))

## The Sky This Month (continued)

particles originated with Comet Halley, so if you missed your chance to see the famous comet in 1986 and don't want to wait until 2061, you can cheat by seeing some Eta Aquarid meteors. Remember, no telescope needed, just sit back and watch the sky for shooting stars, but the best rewards go to those willing to stay up late, and the shower peaks in the early morning hours of the 5<sup>th</sup>.

The Moon is new on the 9<sup>th</sup>, so by the 10<sup>th</sup> it is a very, very slim crescent. Nevertheless, if you are up for the challenge, you can try to spot it next to Venus, very low in the west at dusk. You will need a low horizon and will have to spot the pair in the still day lit sky. The next night the moon will be above Venus but below Jupiter, and the night after that it will be paired with Jupiter, the last of their monthly meetings for this apparition. As the month continues, Jupiter sinks lower and Venus rises higher, until finally the two meet at the end of the month. Over the few days from May 26<sup>th</sup> to the 28<sup>th</sup>, **Venus**,



**Jupiter and Mercury** dance around each other, forming a challenging but worthwhile sight. Again, very low to the horizon, but if you can catch this triple conjunction it will be well worth your effort. Use binoculars to help locate them and then enjoy the view as all three planets will fit in the field of binoculars or a wide field telescope.

Here's the rundown of how they line up each night:

May 23 - Mercury (magnitude -1) two degrees from Venus (magnitude -4)

May 24 - All three planets now within 5 degrees of each other

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



## The Sky This Month (continued)

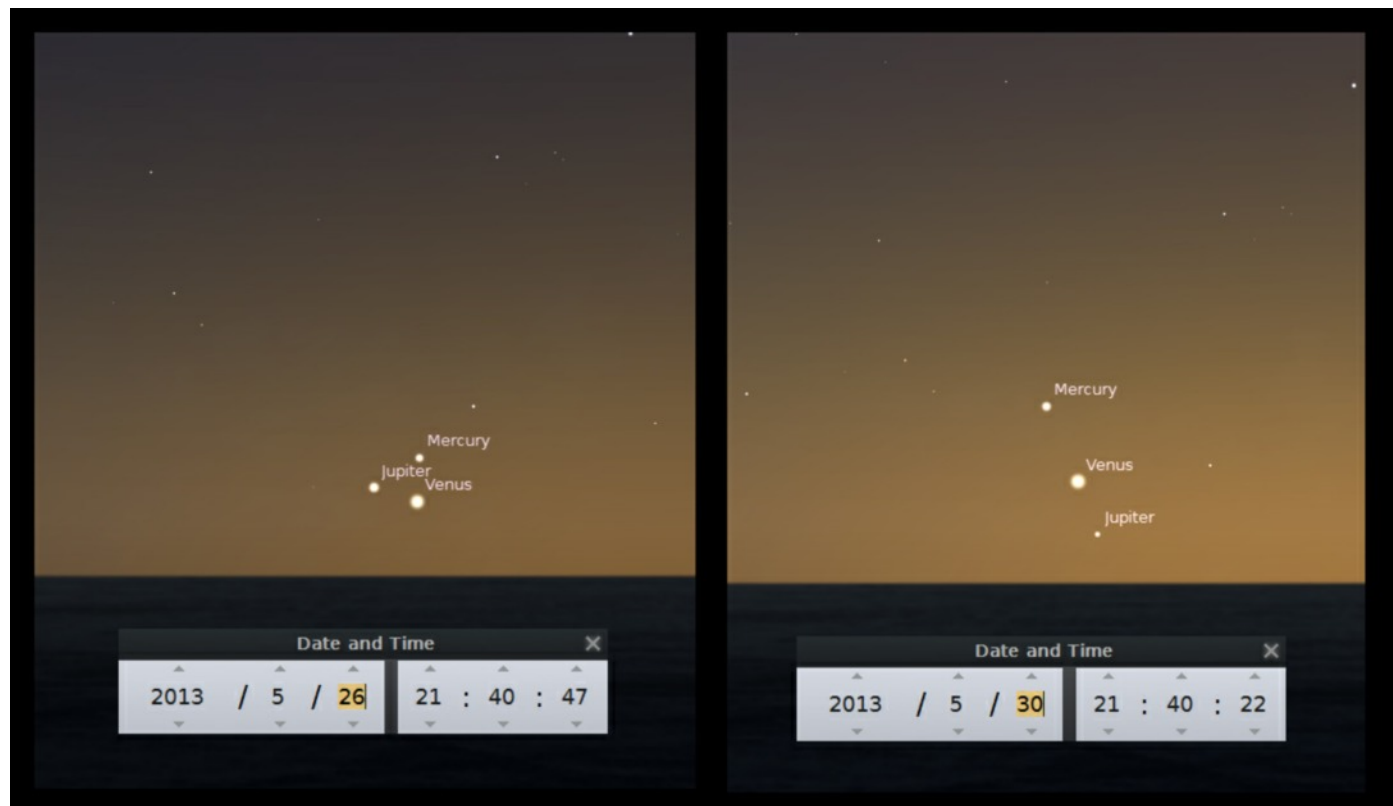
May 25 - Three planets now within 3 degrees, with Jupiter (magnitude -2) to the upper left, Mercury to the right and Venus below.

May 26 - Still three degrees, Mercury is now higher

May 27 - Venus and Jupiter side by side with Mercury above

May 28 - Venus now one degree to the upper right of Jupiter

May 29 - Spreading apart but still within 5 degrees, the three are now in a row, with Mercury on top, Venus in the middle and Jupiter below.



And with that we bid farewell to Jupiter for another season. He has been a constant companion, high in our sky since last fall, but now sets into the west. As we noted, Venus is now rising higher in the west and will only improve over the coming months. Of course, we pointed out last month that **Saturn** is also arriving on the scene and is a worthy successor to Jupiter. Now rising in the east before sunset, it is visible all evening, climbing higher and higher as the night goes on. By the end of the month, Saturn and Spica form a lovely pair high in the south by 10pm. Saturn never will get very high in the sky this year, the way that Jupiter sat overhead this past winter, so don't delay and start enjoying Saturn right away. Many argue that it is the single most beautiful sight in the night sky, so even when low down it is worth the time to observe.

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



## Observing the International Space Station by Joe McArdle

Catching sight of the space station is fairly easy, all you need is a watch. N.A.S.A. makes orbital information of the ISS available on their website

<http://spaceflight1.nasa.gov/realdata/sightings/> or at <http://www.heavens-above.com>

I have put together a chart for the month of May showing all visible passes by the station for the Hamilton/Binbrook area. Please note that this information is subject to adjustments as the station makes altitude changes in their orbit from time to time.

Date	Brightness	Start			Highest point			End			Pass type	Time of Day
	[Mag]	Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.		
<a href="#">17-May</a>	-0.9	4:48:01	10°	S	4:50:07	16°	SE	4:52:13	10°	E	Visible	Morning
<a href="#">19-May</a>	-2.3	4:42:41	15°	SSW	4:45:01	38°	SE	4:48:07	10°	ENE	Visible	Morning
<a href="#">20-May</a>	-1.6	3:53:50	20°	SSE	3:54:23	21°	SE	3:56:59	10°	E	Visible	Morning
<a href="#">21-May</a>	-0.5	3:04:54	11°	ESE	3:04:54	11°	ESE	3:05:09	10°	ESE	Visible	Morning
<a href="#">21-May</a>	-3.3	4:37:38	19°	WSW	4:39:54	88°	NNW	4:43:13	10°	ENE	Visible	Morning
<a href="#">22-May</a>	-3	3:48:36	46°	S	3:49:05	52°	SE	3:52:19	10°	ENE	Visible	Morning
<a href="#">23-May</a>	-1.4	2:59:28	22°	E	2:59:28	22°	E	3:01:12	10°	ENE	Visible	Morning
<a href="#">23-May</a>	-2.4	4:32:12	14°	W	4:34:46	42°	NNW	4:37:57	10°	NE	Visible	Morning
<a href="#">24-May</a>	-3.1	3:42:59	46°	W	3:43:46	67°	NNW	3:47:04	10°	NE	Visible	Morning
<a href="#">25-May</a>	-2.4	2:53:41	44°	ENE	2:53:41	44°	ENE	2:56:05	10°	ENE	Visible	Morning
<a href="#">25-May</a>	-1.4	4:26:46	10°	WNW	4:29:37	26°	NNW	4:32:28	10°	NE	Visible	Morning
<a href="#">26-May</a>	-0.6	2:04:18	15°	ENE	2:04:18	15°	ENE	2:04:57	10°	ENE	Visible	Morning
<a href="#">26-May</a>	-1.9	3:37:00	23°	WNW	3:38:26	35°	NNW	3:41:31	10°	NE	Visible	Morning
<a href="#">27-May</a>	-2.5	2:47:32	50°	N	2:47:32	50°	N	2:50:32	10°	NE	Visible	Morning
<a href="#">27-May</a>	-0.9	4:21:50	10°	WNW	4:24:23	20°	N	4:26:56	10°	NE	Visible	Morning
<a href="#">28-May</a>	-1.2	1:57:59	24°	NE	1:57:59	24°	NE	1:59:28	10°	ENE	Visible	Morning
<a href="#">28-May</a>	-1.1	3:30:41	12°	WNW	3:33:04	23°	NNW	3:35:48	10°	NE	Visible	Morning
<a href="#">28-May</a>	-0.6	5:07:55	10°	NW	5:10:25	19°	N	5:12:55	10°	NE	Visible	Morning
<a href="#">29-May</a>	-1.6	2:41:02	27°	NW	2:41:45	30°	NNW	2:44:43	10°	NE	Visible	Morning
<a href="#">29-May</a>	-0.6	4:16:36	10°	NW	4:19:02	19°	N	4:21:27	10°	NE	Visible	Morning
<a href="#">30-May</a>	-1.6	1:51:16	34°	NNE	1:51:16	34°	NNE	1:53:36	10°	NE	Visible	Morning
<a href="#">30-May</a>	-0.6	3:25:07	10°	NW	3:27:36	19°	N	3:30:04	10°	NE	Visible	Morning
<a href="#">30-May</a>	-0.8	5:02:10	10°	NW	5:04:56	24°	NNE	5:07:42	10°	ENE	Visible	Morning
<a href="#">31-May</a>	-0.9	1:01:22	19°	NE	1:01:22	19°	NE	1:02:26	10°	NE	Visible	Morning
<a href="#">31-May</a>	-0.8	2:34:02	13°	WNW	2:36:08	22°	NNW	2:38:47	10°	NE	Visible	Morning
<a href="#">31-May</a>	-0.6	4:10:56	10°	NW	4:13:30	20°	N	4:16:04	10°	ENE	Visible	Morning

## Comet PanSTARRS Meets the Andromeda Galaxy by Everett Cairns



*This spectacular image was taken by HAA member, Everett Cairns, on Monday, April 1<sup>st</sup>. If you were at our April general meeting, you were treated to the full resolution image on screen. - Editor*

*Everett describes taking this image: "Tied the 300mm f2.8 and D800 to the tube of that old Japanese refractor that I bought from the club, and took it up to the cottage. The attached photo is one of about a half dozen hand guided 30 second ISO 1600 photos, some of which can be stacked. I used a delayed shutter release to give me time to centre a guide star on the cross hair. About 4 minutes at ISO 200 would have been nice, but then I would have to leave the cross hair and close the shutter manually. "*

*I'm sure you'll agree that this image is well worth the effort that Everett put into it!!- Editor*





## Solar Halo Image by John Gauvreau



Solar halos, like this one photographed on Friday April 26th, are formed by sunlight passing through ice crystals suspended high in the atmosphere. Since the ice crystals are 6-sided, just like snowflakes, the sunlight reflects off the inner surfaces and bounces out at a very specific angle, creating a ring of light 22 degrees from the sun. Even though the temperatures are warming, and spring and fall are the best times of the year to see these interesting atmospheric phenomena, these halos can be seen at any time of year. Even on a hot summer day, the air is quite cold at the 5-8 kilometer height of the ice crystals.

Photographing solar halos can be tricky, since you have to point your camera right at the sun. Some people like to block the sun with a telephone pole or other distant object, and that's a great idea. I took a light meter reading off the sky beside the sun and then shifted the camera to put the sun in the middle and fired away. This exposure was 1/8000 of a second at f/8 and ISO 200. Keep an eye out for these beautiful light shows, but remember to always protect yourself and never look at the sun directly.





## April General Meeting Summary by Keith Mann

Perhaps the best measure of the success of the Hamilton Amateur Astronomers is that it is can almost be taken for granted that a monthly meeting of the club will be well-attended, with a healthy dose of newcomers. Certainly that was the case once again at the April meeting. And, as chair **Jim Wamsley** told us during his opening remarks, the club's special-interest groups are enjoying comparable popularity. The "Astronomy 101" class - or rather classes, as the program was in such demand as to require two - are progressing well, and will soon merge into a single group and head out to do some observing. Our astrophotography group remains very active, and our loaner 'scope program continues to see most of the equipment in continuous use.

Jim also told us of two upcoming events. Astronomy Day, April 20<sup>th</sup>, will see the club at Hamilton's Bayfront Park throughout the day and evening. In September, the club will celebrates its 20<sup>th</sup> anniversary with a gala banquet at the Canadian Warplane Heritage Museum. Attendees will enjoy dinner, have the run of the fantastic museum, with many vintage aircraft and exhibits, and can look forward to a special guest speaker. Tickets are \$45 per person and can be purchased from **Ann Tekatch** and **Brenda Frederick**.

Our guest speaker for the evening was **Dr. Doug Welch**, Professor of Astronomy and Physics at

McMaster University and a founding member and first chair of the HAA. Doug's presentation was entitled "Light Echoes from Luminous Transients - An Exploration of Asymmetries and Time Evolution" and described the research of Doug and his talented team. Their careful analysis of the light from supernovae, reflected off of interstellar dust clouds, has provided new insights into the nature of supernova explosions. It has also revealed a fascinating way of "seeing back in time", as the indirect path the reflected light takes to Earth means that it arrives later - sometimes hundreds of years later - than the directly-transmitted light.

**Kevin Salwach's** "This Day in Astronomy" marked the anniversary of the 1633 trial of Galileo, accused of heresy for his theory of heliocentricity. Other events included the 1817 death of Charles Messier, who lent his name to a catalog of over a hundred objects that are not comets and hence are unworthy of observation. Twentieth-century events of note included the first manned spaceflight (by Yuri Gagarin in 1961) and, twenty years later, the first launch of the space shuttle.

Among those lucky enough to attend this latter event was our own observing director, **John Gauvreau**. John gave us a summary of upcoming observing highlights in "The Sky This Month", bringing to a close another evening of great speakers and news of great events to come.



## Treasurer's Report by Steve Germann

(Unaudited)

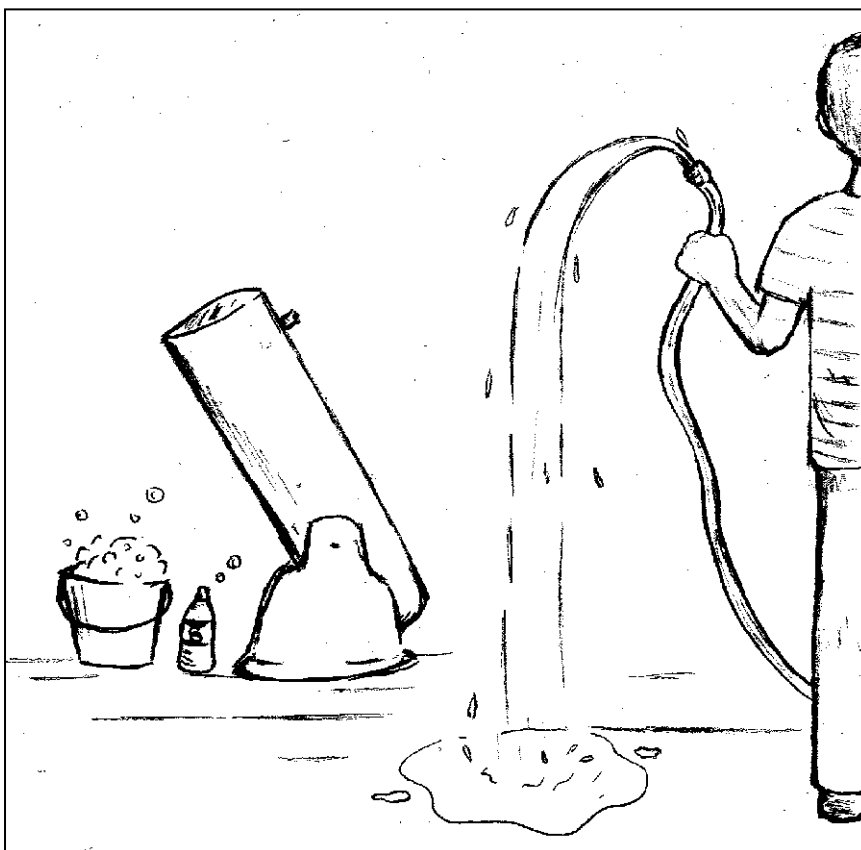
Opening Balance	\$7619.37
Revenue	\$ 354
Expenses	\$ 793.57
Closing Balance	\$7179.80

Revenue included \$54 for the 50/50 at the meeting, sale of one banquet ticket for \$45 and memberships totalling \$255.

Expenses included \$22.69 for speaker expense, \$126.80 for a monitor to use with the new electronic eyepiece, and \$644.08 for a Mallincam Jr electronic eyepiece.



## Spring Cleaning



### **The Scope Store at Camtech**

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**[www.camtechphoto.com](http://www.camtechphoto.com)**

## UPCOMING EVENTS

**May 10, 2013** - 7:30 pm General Meeting at the Hamilton Spectator Auditorium. Phil Mozel of the Ontario Science Centre will present The Stars of 1812.

**May 18, 2013** - 8:00 pm Public Stargazing Event at the Grimsby Welcome Centre

**June 14, 2013** - 7:30 pm General Meeting at the Hamilton Spectator Auditorium. Dr. Christine Wilson of McMaster University's Physics & Astronomy Department will be our guest speaker. Kevin Salwach and John Gauvreau will update us on This Day in Astronomy History and the Sky This Month.

### 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

#### Binbrook Conservation Area

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

Please consider purchasing a season's pass for \$79 to help support the park.

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

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