Orbit

The official publication of the Hamilton Centre of the Royal Astronomical Society of Canada

Volume 40, Issue 9

September, 2008

Issue Number 9, September, 2008

Roger Hill, Editor

For me, it's been a very eventful summer. After a few years of contracting my services to various companies in southern Ontario, I started a full time position about 5 minutes from home. Some travel is involved, but to exotic places like Acton, Georgetown and even Burlington! After years of taking the GO train, I must admit it's a delight to work locally again. Astronomically, it was a good summer, too. For the first time, I attended the Manitoulin Island Star Party, about which I'll write more later. I also purchased a Canon XSi camera, and I'll write a bit more about that device, too. There was also the GA.

In the Centre, others were busy, too. Steve Barnes and Les Nagy must have been among the busiest. Les always has a lot to do showing almost a thousand kids the night sky at the Tim Hortons Childrens Camp in St. George. Steve has to be the most travelled. He was in the high Arctic observing the August 1st Solar Eclipse, went to Starfest, the Saskatchewan Summer Star Party, and the GA. He also had enough spare time to spend with Les and I at the Observatory, collimating the 16" Trillium scope, polar aligning it (using drift alignment), and setting up a T-Point model. We also played with my new Canon XSi, putting it through it's astronomical paces.

In July, a rare clear Thursday night saw a large turnout at the Observatory for a Tech Night. The parking lot was full of cars, and some people parked on the road. The night was pleasant, the sky was dark, scopes were played with, fussed over, modified, discussed, and used! Personally, some hightlights for me were the views through Eric Goldings refractor. There's some good glass in that tube! For truly breathtaking views, though, you just have to look through Berts nebula filter on the 16". I can't remember ever seeing finer views of M17, M27 and M57. Bert is a wonderful person, who takes great delight in all things astronomical, but he was like a kid at Christmas with his new filter. It worked so well, I'm thinking of getting one!

I'd be remiss if I didn't mention the GA. It had been 24 years since the last time the Hamilton Centre had hosted or co-hosted an RASC General Assembly, and this time we got a chance to put our name on one in partnership with Mississauga and Toronto. In past years, we'd have partnered with Niagara Falls, but with more active members coming from Halton rather than Hamilton, we've had more visitors and members from Mississauga than Grimsby. If you missed Hamilton Day at the GA, you missed some terrific talks. My favourite was by Phil Plait...Mr.. Bad Astronomy himself, talking out *Seven Ways a Black Hole Can Kill You*. Incredibly informative, very entertaining, it would have been a great final talk, but instead kicked off a great day. The other talk I enjoyed tremendously was by followed very closely by a wonderful talk on the recovery of the Tagish Lake meteorite by Phil McCausland. I'd love to see Phil at a Hamilton Centre meeting...his talk was too short, due to time constraints. Oh, and mention should be made of the great job John Williamson did of hosting the paper sessions.

The Banquet was tremendous. I must admit I was a tad worried when I heard that it would be at the Mongolian Grill. Frankly, I'd never really considered the food that the Mongol hordes ate as that swept across Asia and into Europe to be the height of culinary excellence, but I loved the meal I had. It could have also been the company, the beer, or the acute embarrassment of seeing that someone else had found a copy of the Burlington Gazette, circa 1972 promoting the Hamilton Centre Starlab. Apart from that, there were some great pictures of times past and of friends now departed. The Banquet itself was sponsored by EfstonScience (one of my favourite places in Toronto), and the talk by Devon Hamilton from the Ontario Science Centre about their Facing Mars exhibit was informative, particularly so as we'd had a chance to go through it just hours before.

It's been quite a few years since I've attended a GA. I did some work at the Hamilton one in 1971 and I've still got a mug from the one in 1984. I also travelled to the Ottawa one in 1973. I went with Ken Chilton. I think my liver is still recovering from that weekend. Next years will be held in conjunction with the Saskatchewan Summer Star Party (the SSSP), and promises to be something very special.

Elsewhere in this issue, you'll find an all-too brief note by Steve Barnes about this years SSSP, along with some pictures of it from Steve and from Alan Dyer (who took our cover picture); an article by one of the masters of inexpensive telescope modifications Glenn Kukkola, who talks about his 12" Meade, the usual humour stuff, more fill from me, lots of pictures to fill way too much white space and a nomination form for this years Board of Directors. Your Centre needs you. I'm going to sign it. You should, too.

Humour:

People actually said this! From, or reported to, Wally Anglesea <wanglese#NoSpam.spammersbigpondareparasites.net.au>

"If it's so dangerous to look at the eclipse, then why are they having one at all?" (caller to a radio program prior to the 2002 eclipse, Ceduna, Australia).

"Is it safe to play golf during the eclipse, I mean, won't I lose my balls?" Asked of an astronomer at Bombala, for the eclipse in 1976

"How do you manage to take pictures of the sun during the day? Isn't it too bright?"

"If there are no aliens, why can't NASA show us pictures of them not being?" (apocryphal, but I've been told this and asked similar questions so many times I can believe it)

"It's obvious the Earth is flat, otherwise the people on the bottom would fall off into space" Said to an astronomer in 2001 in the UK. This was NOT said as a joke....

"Isn't it too dangerous to have 2 comets in the sky at the same time?"

At a planetarium where I've worked there was this question from a caller - a teacher apparently: "Me and my class cannot make it to the solar eclipse on wednesday...can you reschedule it?"

At the planetarium where I work, I've had a couple of people angrily complain about NASA scheduling eclipses and comets at inconvenient times. When I pointed out that they had nothing to do with that, I was told "what do you think the space program is for?" They didn't get it when I suggested that their complaints might get a better hearing at a local church. (everybody else did)

Another time, I was showing the crescent Venus through my long (obvious where its pointed) refractor. The comment; "I thought you could see craters on the moon". I directed his attention towards the real gibbous Moon high in the sky behind us, only to be told, "you have to have a telescope to see the Moon!" He then turned back to the scope and told his child to "look at the Moon in here, but its not very good".

I used to take constellation pictures by mounting my Vitessa L camera on my EQ scope and using the slow-motion controls to follow the stars. Someone asked me if I used a flash for the star photos.

Not so much astronomical as gravitational, but this may qualify.A friend said to me, while shrouded in mist at the top of a small mountain, 'it's hard to know which way is up when it's like this'.I said 'as long as your feet are standing on something...'He said 'why? Is that up?'

My favorite question came from a neighbor during a partial eclipse (probably the one on July 11, 1991--visible from Albuquerque where I lived at the time), who asked if it was harmful to be out while the eclipse was going on. He'd heard that it was dangerous to look at an eclipse. We were looking at images of the eclipse on the ground, as formed by the many pinholes of light filtering through tree leaves. I assured him that when you don't look at the sun directly, there's no problem.

Many years ago during one of our public nights at our observatory, a couple of ladies cornered one of my friends and were pestering him on the subject of UFO's and the like. It was late September, and getting pretty chilly out, so I walked out of the building to get a jacket.

As I passed my friend and his "questioners" one of them asked him "Do you think we'll know where the aliens are from?" Quickly, without breaking stride, I said "they come from the planet Ullu in the Skyron Galaxy" and went to my car, where I put a dark jacket on over my light shirt.

Those ladies looked for me for the rest of the evening, thinking I knew all about the aliens. But since it was dark, they never found me.:)

From a 1980 Shreveport (Louisiana) Times newspaper Letter To The Editor:

"Why do we have Daylight Savings Time? That extra hour of daylight is killing my grass..."

Yup, a common idea, I'm afraid. I overheard a women on the street explaining to her companion that the reason the snow starts melting so quickly in the springtime is the extra hour of sunlight after DST starts.

Our 2008 General Assembly—John Williamson

I had never been to a General Assembly before. But last year, the Hamilton Centre was presented with an offer it could not refuse. Our previous President, Les Nagy, had been in contact with National about the possibility of the Hamilton Centre hosting a GA. We had co-hosted it twice in the past; first in 1971 and then again in 1984. For both occasions, we teamed up with the Niagara Centre. Now it was 2007, and we were being asked by the Toronto and Mississauga Centres to co-host the 2008 General Assembly with them. After Roger Hill and I attended an introductory meeting, last year's board voted overwhelmingly to endorse the idea. The work began.

An awful lot goes into the planning of a General Assembly. So much so that I don't think we could have done it by ourselves. Not at least with the cumulative experience our members had at the time with organizing such an event. Fortunately, the leaders of the Toronto and Mississauga Centres, Denis Grey and Randy Attwood knew exactly what to do. They both had a lot of experience. Throughout the next year I learned a lot about General Assemblies both inside and out.

As the opening day for the GA grew closer (it was held this past Canada Day weekend at York University for those who did not attend), the number of trips I had to make into Toronto grew exponentially. But all the last minute arrangements were made, and everything was set to go.

The official first day of the GA was on Saturday. There were some events on Friday, but they were mainly centred on the National Council Meeting held that day. Saturday was Mississauga Day, and as such, it was hosted by Randy Attwood. It was an enjoyable day with Paper Sessions that ended it the afternoon. Following that was a hockey game; East vs. West (or as close as could be arranged). Those who participated were not as bad as the Leafs, and I certainly know they tried a lot harder. It was a game that was as enjoyable to watch as I'm sure it was to play. The evening was topped off with a BBQ, a National Members Night with the presentation of the Chant Medal, and tours of the Observatory at York.

Sunday was the real highlight of the General Assembly - Hamilton Day. Despite my best efforts as host, the day went perfectly. The first paper presented in the morning was *Black Holes: Seven ways they can kill you*, by Dr. Phil Plait. Phil is an absolutely excellent speaker. The day could not have started any better. The paper sessions finished at lunch, and in the afternoon everyone journeyed by bus to the Ontario Science Centre to tour the *Facing Mars* exhibit. After that, the buses were boarded again to make the short trip up the street to the Mongolian Grill Restaurant. It was back in 1908 when the Astronomical Society of Hamilton became the third centre to join the Royal Astronomical Society of Canada. To commemorate the occasion, a banquet was held at the Mongolian Grill. About 160 people were in attendance with extra Hamilton Centre members driving in for the dinner. No one was disappointed; the food was fantastic.

Monday was the last official day of the GA - Toronto Day. This day featured the RASC Annual Meeting in the morning, followed by a number of keynote speakers in the afternoon. Terence Dickinson was recognized for his 50 years of RASC membership, next year's International Year of Astronomy was introduced, and the Helen Sawyer Hogg Lecture was given. The Hogg Lecture is a public lecture co-sponsored by CASCA and the RASC. Being a public lecture, it is completely open to anyone who wants to attend; no General Assembly registration is required. Phil Plait was the speaker this year, giving his second talk at the GA. This time it was on his trademark topic *Bad Astronomy*. The day, and the GA, was wrapped up in the evening with the formal Closing Banquet.

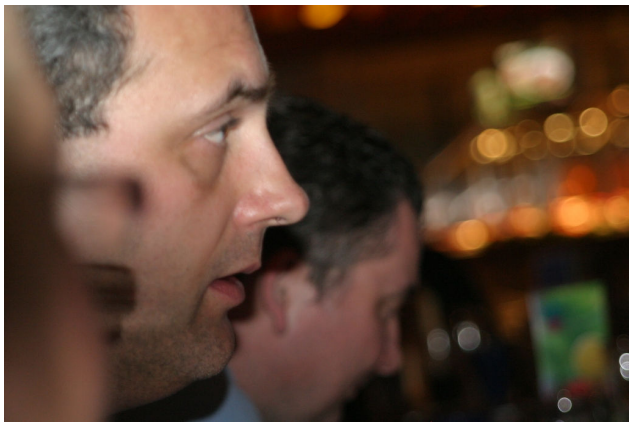
I want to thank everyone from our centre who helped out this year at the GA, and those who simply just attended. It was great to see everyone out supporting our centre. As this was my first General Assembly, I didn't know what to expect, but I really enjoyed it. Would I ever attend another General Assembly? Absolutely!

Editors Addendum
Frankly, I don't know how John managed this. With the smallest Board in memory, a young child at home, studies at University, and he managed to do the vast amount of work needed for the GA. It was an astonishing performance, and I think the Centre has been extremely fortunate that John was on the Board this year.


Herschel 400
Observing
Guide


Shield yourself!


BERT



How to improve on a good Thing - Glenn Kukkola

I had to get my hands on a 12 inch Meade Lightbridge truss Dobsonian. By this mean that I wanted to expand my arsenal of scopes so that I had the maximum size scope I was willing to transport, with the minimum of hassle. I could sing of the praises of the small grab and go APO refractor for those quick looks that satisfy your craving for celestial sights, when the sky conditions are iffy or unreliable. I could elaborate on the finer points of observing with a moderate size reflector or large achromat equatorially mounted, for those clear nights affording high power and detail on planets. But I will spare you. I speak of the wonder of 12 inches of aperture for stunning deep space views of globulars, nebula, and galaxies, with ample capability to provide eye-popping detail of the moon and planets, with a reasonably wide field eyepiece.

Yes the Meade Lightbridge is a marvellous piece of engineering, even out of the box. It can be broken down in to small enough chunks that make it easy to transport from den to small sub-compact car, with little worries that any part will have trouble fitting in the trunk or back seat. Once back out of the car and at the site, it is a quick 5 minute set up, including collimating, especially if you have experience collimating a scope. So what's not to like about that?

Well here are a few things that you may want to improve on the out of the box model. The first thing one will notice is that on site collimation is a trial with the provided, Allen key screws on the secondary, and small thumb screws and slot screws for the secondary. It also will not hold collimation when the screws are unlocked for the primary because the springs are too light, and so the mirrors own weight keeps shifting the mirror as you try to turn the collimation screws. The solution for both the troublesome screws and the weak springs is a overhaul with "Bob's Knobs" secondary & primary knobs, and new primary mirror springs also from Bob's Knobs. I was fortunate enough to get this scope with the knobs already, but it shouldn't cost you more than $80-90 to get these items.

Another thing one finds is that the light shroud which also must be purchased after market sags into the optical path of the primary mirror. The solution would be to make the scope 'fatter' so the shroud has a more snug fit. How do you make a truss scope fatter? Well, you could make the truss bars fatter, and thereby making the scope assembly fatter. One easy trick is to buy the appropriate diameter pipe insulation that will wrap around the aluminium truss bar. With each truss bar clad in insulation the over all diameter of the scope is sufficient to eliminate most of the sag of the light shroud for the cost of $9.

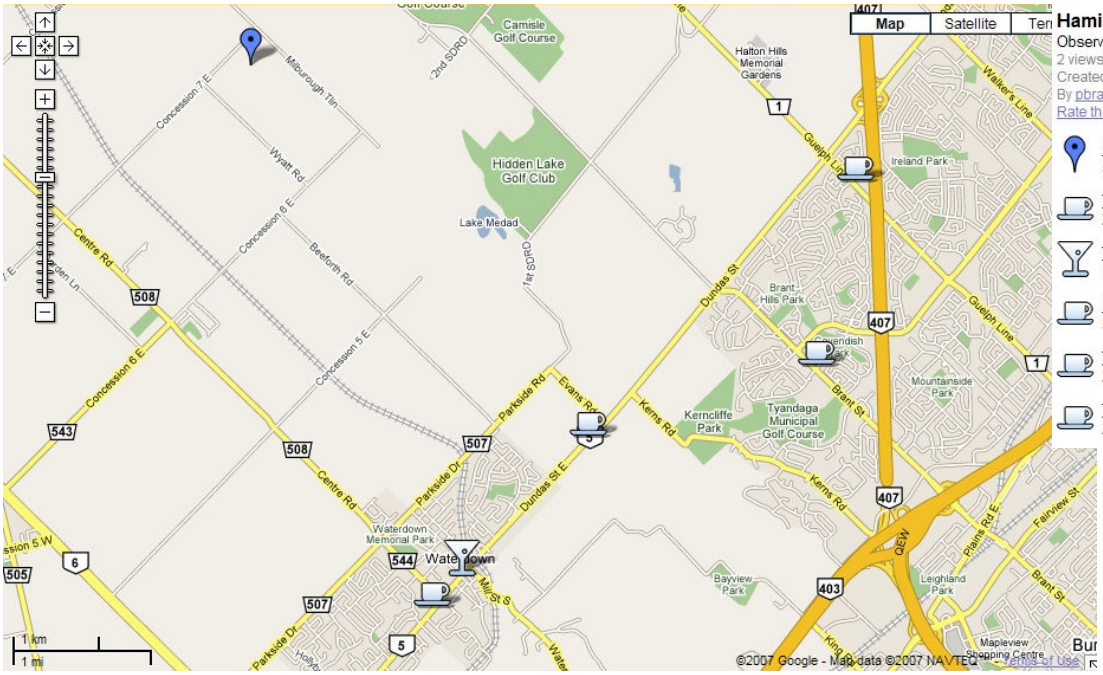
With the shroud snugly on and a 2 inch 35mm eyepiece in the focuser one discovers a new problem. The Meade engineers made the cell holder very light, and so the bottom end of the scope is not heavy enough to compensate for the weight of the shroud and any wide field eye-piece you may want to use. At angles less than 45 degrees the open end of the scope will fall frustratingly to the ground, even with the plastic friction clip they provided on the one alt bearing.

How to improve on a good Thing (Cont'd)

This is fairly lame and poor solution. If you crank the clip tight enough to keep the scope from tipping down, you mar the alt bearing and you lose the smoothness of motion. I have seen other solutions to this problem like adding huge links of chain to the bottom of the scope, sliding counter weights or pricey screw on weights that are machined. You can already guess that I am not about to pay huge bucks for some weights or make a heavy component even heavier by mechanically fixing a counterweight system to it. The idea is spot on. Add weight to the back of the scope when you need it. What I decided to do was get some magnetic strips, the same material used for fridge magnets, cut them to an appropriate length, and adhere to them sticky back Velcro (hooked surface), and place the strips onto the top of the bottom end of the scope. I had some ankle weights with the Velcro on it that would cling to the Velcro on the scope magnetic strips. I removed some of the weight because I didn't need that much weight and placed it on the scope.

And there you go: instant weight that won't slide off until you don't need it above 45 degrees. It also holds to scope enough to stay on, but can easily be slid up and down the scope. When I don't need it I just take it off.

And the cost? I found in my wife's craft box the magnetic strips that came from a craft store so that cost me $0. Also in her craft box was the black sticky back Velcro strips so that cost $0. I already had the ankle weight from a previous endeavour where I was balancing the heavy end of a 6 inch Synta refractor. This solution was replaced by a heavier focuser from Williams optics, and a lighter custom dew shield which I made. The cost of the ankle weight? $0. The total cost? $0. The cost of having an easily transportable 12 inch truss dob that moves freely and effortlessly even close to the horizon? Priceless.



Website: http://www.hamiltonrasc.ca/

Observatory Phone: (905) 689-0266

E-Mails:

General Inquiries:	hamiltonrasc@hamiltonrasc.ca
President:	president@hamiltonrasc.ca
Secretary:	secretary@hamiltonrasc.ca
Treasurer:	treasurer@hamiltonrasc.ca
Orbit Editor:	orbit@hamiltonrasc.ca
Web master:	webmaster@hamiltonrasc.ca

Location: 576 Concession 7 East, Flamborough ON

Mailing Address:
Hamilton Centre, RASC
Box 1223 Waterdown, Ontario
L0R 2H0

M27, taken through the Centres 16” Ritchey-Chretien. This is from a stack of 16 2 minute exposures. Deep Sky Stacker was used, and some processing in Photoshop. This was the first astrophoto taken with my Canon 450D/XSi.

The images were unguided. Each raw frame looked like this:

NOMINATION FORM for the Board of Directors - October, 2008.

I, _____ , being a member in good standing of the Royal Astronomical Society of Canada 1968, Hamilton Centre, do hereby nominate _____ for election at the Annual Meeting.

_____ _____
Signature of nominator Date - YYYY/MM/DD

I, _____, being a member in good standing of the Royal Astronomical Society of Canada 1968, Hamilton Centre and being at least 18 years of age, do hereby accept my nomination to the Board of Directors of the Royal Astronomical Society of Canada 1968, Hamilton Centre.

_____ _____
Signature of nominee Date - YYYY/MM/DD

NOMINATION FORM for National Council Representative - October, 2008.

I, _____, being a member in good standing of the Royal Astronomical Society of Canada, and of the Hamilton Centre, and being at least 21 years of age, do hereby accept my nomination for National Council Representative for the Royal Astronomical Society of Canada 1968, Hamilton Centre. (Two year term)

_____ _____
Signature of nominee Date - YYYY/MM/DD

Bylaw Number One of The Royal Astronomical Society of Canada 1968, Hamilton Centre (September 13, 2005)

5.04 NOMINATIONS
Any member of the Centre may make nominations to the Board. Such nominations shall be submitted by the member to the Secretary of the Centre in writing at least ten (10) days before the annual meeting, and shall contain the name of the nominator and the written consent to the nomination by the nominee.

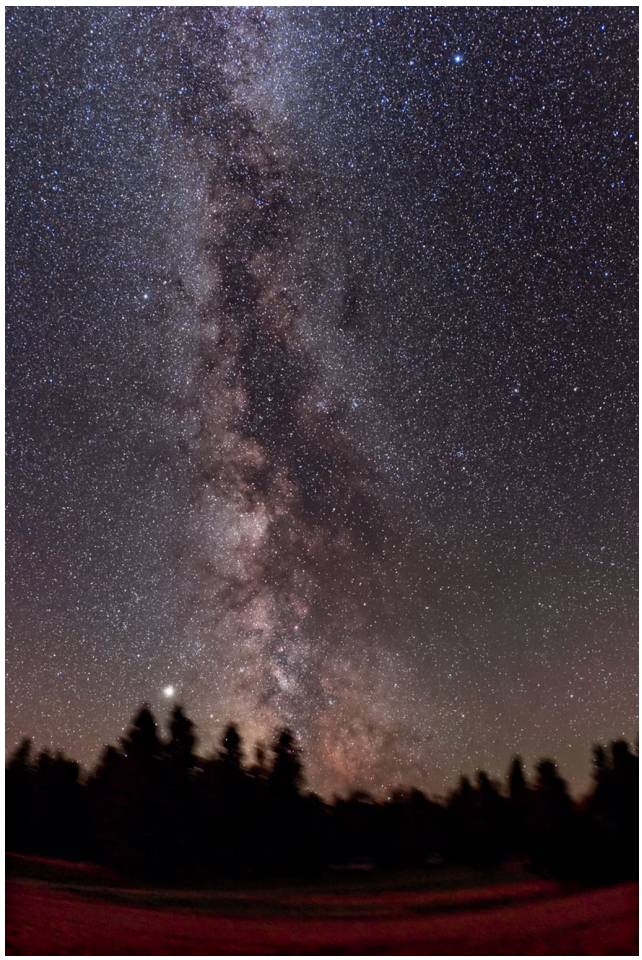
Bylaw Number One of The Royal Astronomical Society of Canada (February 2006)

4.07 CENTRE COUNCILS AND OFFICERS
(2) Every member of the Centre Council shall be elected by the members of the Centre, for such term and in accordance with such procedure as is established by the Centre by-laws, at the Centre's annual meeting or at such other meeting as is duly called for that purpose.

4.08 NATIONAL COUNCIL REPRESENTATIVES
(2) Subject to Article 4.08(4), the National Council Representatives of a Centre shall be elected by the members of the Centre in accordance with the procedure established in Article 4.07(2) for the election of Centre Council members.
(4) If for any reason a National Council Representative of a Centre is unable to attend a meeting of the National Council, then the Council of the Centre may appoint another member of the Centre as an alternate for that National Council Representative. The alternate will be entitled to exercise all the rights of the National Council Representative for whom he or she is the alternate only upon presentation to the National Council of proof in writing from the President or Secretary of the Centre as to the due appointment of the alternate.

SASKATCHEWAN SUMMER STAR PARTY - Steve Barnes

This August I was lucky enough to be in Southern Alberta and had a couple of free days at the end of my trip. I decided to check out the SSSP as I had heard that the skies there were very good. The SSSP is located in the Cypress Hills Interprovincial Park in the south west corner of Saskatchewan. Cypress Hills IP is the highest point east of the Rockies at over 4,000 feet altitude. With no large nearby towns the skies are incredibly dark. What an amazing place for a star party. SSSP had a record turnout this year (316) and they expect even more next year as they will host the RASC General Assembly at the same time. The GA events will take place in the Cypress Hills Resort Hotel (where I stayed) and where the SSSP hosts its talks as well. If you get a chance to go I highly recommend it. Check out http://homepage.usask.ca/~ges125/rasc/starparty.html
Maybe I'll see you there next year.



Top left and right, by Alan Dyer, used with permission.
All sky photo on left provided by Steve Barnes

Manitoulin Island Star Party—2008 by Roger Hill

My love of Manitoulin Island is well known. What might be less well known is that the Island has had several star parties over the years. Originally, there was the Great Manitou Star Party, but after 6 years, it split into two, resulting in the Manitoulin Island Star Party and the Great Manitou event. This continued for two years, when the Great Manitou event stopped. The remaining August event, the Manitoulin Island Star Party continues on, and is held at Gordons Park.

I had been to this campground last year with my son, and found that the skies were just about as dark as they boasted...mag 7.2 was the limiting magnitude, and no light domes. Having been spoiled by trips to Arizona, Texas and Chile in the last 18 months, I was not going to settle for anything less than BLACK skies. Add in the fact that my son loves going to the Island, and it was a no-brainer.

We had planned to catch the 8pm ferry from Tobermory, arriving on the Island shortly before 10pm, but work commitments for my job meant that we were not able to leave Milton until just after 4pm on the Wednesday afternoon. So, we drove around arriving in Sudbury shortly after 8pm. There was some panic on the way up as I realized that I had not packed the sleeping bags. A call to my wife on the cell phone had her looking for Canadian Tire locations in Sudbury, and sending directions to me via text messaging. Gotta love Technology! A quick stop at CanTire, and we were on our way again, fortified by a cup of Timmies finest. We crossed over the swing bridge at Little Current before 10pm, and drove down to Gordons Park. We got checked in (they knew we were coming). There were only two other groups there, a father and son from Ohio in the cabin, and a man and his girlfriend. Neither of them minded if we turned on a few lights as we set up our tents, and before midnight, I started setting up my 12" SCT.

We could see lightning flashing towards the south, and surmised that perhaps Starfest was underneath the storms. Either way, there was enough activity to stop me from taking pictures. Just as well...I was pretty tired from working, driving, and setting up. The skies, however, indicated that under ideal conditions, the reports of how good they can be were not greatly exaggerated.

Thursday saw Jonathan and I touring the Island. We went to Mindemoya for breakfast, bought some groceries and other supplies, and drove around a bit. When we got back to the camp, I put my guide scope on my telescope, got it all properly balanced again, and when nightfall came, refined my polar alignment while waiting for the moon to set. Shortly after it did, clouds stared rolling in and out, sufficiently so that taking pictures was out of the question. Around about 3am, I packed it in.

Friday night saw the start of the star party proper, being kicked off with a wine and cheese party while gathered around a camp fire (a kilometre or more from the dark sky reserve). There were about 40 people there. The numbers were down due to a number of regulars attending Starfest.

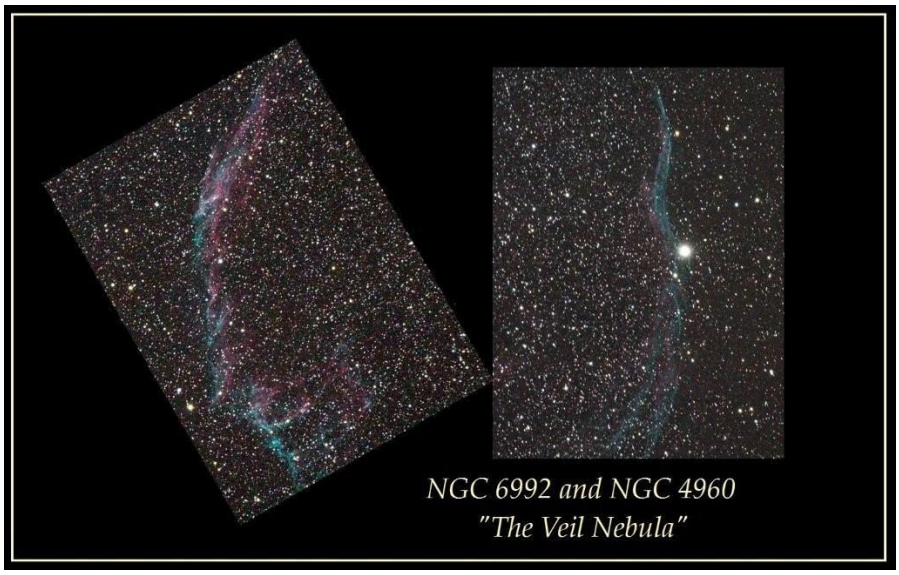
I got set up for the night. Two computers were fired up, cameras were connected, and when darkness fell, I showed people some of the showpiece objects, like M13, M17, M11, M57, and my son showed Jupiter off using my 90mm ETX, which was his to use for the star party. Around 1am, the Moon finally set, and I started a sequence of 6 minute exposures of the North American nebula, using my XSi, and a 135mm Hanimex lens at f/4. I was using the auto dark frame subtraction on the camera, so each exposure took 12 minutes to do. Since it was going to take about two hours to finish, I went wandering off to look through other peoples scopes and chat. It didn't take long before I realized that clouds were rolling in again. I managed to get one good frame of my sequence. About 2:30, the telescope was covered for the night, and everything stowed away.

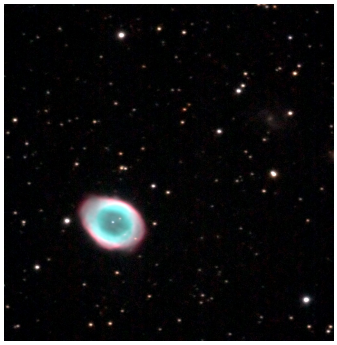
Good thing too, because at 5am, it started raining. Hard. For over an hour. Around 9am, I woke up, made coffee, and looked under the BBQ cover I use for my scope, and everything was nice and dry. Not so with my son, though. His 10 year old pup tent had seriously leaked during the night and needed replacing. We aired out his sleeping bag, and drove for 90 minutes to get to Espanola on the mainland, near the northern end of Hwy 6. Surprise...the only tents they have were large family tents, but at least they were on sale. So, $100 lighter, we ate in Espanola, and drove back. It was a lovely day, and we took our time, getting lost once, taking some pictures of the incredible scenery, and making it back to the campground for 5pm. The clouds in the west were looking very ominous as we took down his old tent, and started putting up the new one, trying to figure out how it went up. After about 15 minutes, it started to rain. After about 5 minutes, the rain started coming down really hard, and we were drenched. With his tent partly up, we ran for cover in the van and waited for this storm to pass. An hour later, and we're still waiting. At 7pm, in the pouring rain, we had a pot luck turkey supper (the turkey provided by Gordons Park...good, too!) underneath a cover that they have and tried to listen to the keynote speaker over the incessant pounding of the rain. At 9pm, there was a brief lull in the downpour and we decided it was time to pack up. Shortly after getting the telescopes packed up, the rain redoubled it's efforts, pouring down with a vengeance. By 10:30, we had the van all packed up, with everything soaking wet, and went looking for a motel room to spend the night. There was not a single unoccupied one on the Island, so we headed back to Espanola, checking in to a warm, dry room with two queen size beds. In the morning, the rain was still coming down, and after breakfast, we drove home. After all our escapades, I managed to get just one astrophoto.

Will I go back? Absolutely! Gordons Park is a nice place, if a touch on the pricey side for what you get, but there's no arguing that their skies are as dark as they claim.

Perhaps you'll join me next year.

Summer pictures





Top Row - Steve Barnes, from Starfest:NGC7000, M45 and M31
2nd Row - Roger Hill, from Manitoulin Island: NGC7000
3rd Row - Gary Colwell, from Split Rock Observatory: M17, and Veil Montage
4th Row - Roger Hill and Les Nagy, Hamilton Centre 16" RC: M57 and M51. Roger Hill — Rainbow at Gordons Park