

From The President

Les Nagy, President

The beginning of summer is here and so is my most active time in astronomy. I must admit that I am not a good Canadian because I sincerely dislike winter and snow as much as a person can. Being outside at night with a even a hazy sky and a warm breeze is much preferable to me to shivering with cold toes and fingers while trying not to fog up the optics with my breath. I hope to see more people out at the observatory.

This brings me to the topic of the observatory and the new telescope and its home. I have promised twice now at general meetings to start CCD training within a week, but circumstances have seemed to conspire against these promises. Weather has not been very cooperative till lately, and now we have a problem with our dome. It is starting to fail and we need to

replace it NOW. A design for the new roof, a roll off roof, is in the works and we hope to have it installed by the end of June. The Hamilton Centre will need your support as a member to help get this done. Please contact me anytime by phone or email to offer your help or donations.

president(at)hamiltonrasc(dot)ca

905-388-1011

Astronomy Day

This report is a little late, ok very late. April 16th was Astronomy Day and a few members set up a display at Limeridge Mall in Hamilton to try and catch the eye of the shoppers. It was amusing to watch some of the people rush by us in a hurry and avoiding eye contact. Perhaps they thought we were trying to sell something like vacuum cleaners or encyclopedia subscriptions. Despite the wary, there were many visitors to our display of all ages and gender. Somewhere around 200 people in total. We handed out pamphlets and held a draw for a free year subscription. Many thanks to the contributors to our display and those who helped it work:

Victor Grimble, Colin Haig, Ken Lemke, Sky News, Sky and Telescope, Kalmbach Publishing (Astronomy Magazine) & Limeridge Mall

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FROM THE EDITOR

With summer approaching I'll move us a little ahead. Watch for the beautiful nemesis Scorpio and the mighty archer Sagittarius.

SCORPIUS

The scorpion in the southern summer sky was a menacing figure in the tales of many cultures, particularly those of ancient Greece. According to some accounts, this monster was the slayer of Orion, who now keeps the greatest possible distance between himself and the poisonous beast.

In the Greek story of Phaethon, the rash youth who tried to drive the Sun-chariot across the sky, it is sometimes said the Scorpius frightened the horses of the Sun, and Phaethon was not able to calm them. North Africa was turned into a desert when the wildly racing Sun-chariot came to close, while northern Europe froze. Zeus saw that the whole world was in danger and struck Phaethon dead with a thunderbolt - a weapon which never failed.

George F. Kunz, in *The Curious Lore of Precious Stones* states that the figure of Scorpius was one of the most popular subjects for ancient and medieval amulets: "in the case of the bezoar stone, a generally recognized antidote for all sorts of poisons, it was held that the scorpion's bite could be most effectively healed by a bezoar upon which the creature's figure had been cut during the time then the constellation Scorpio was in the ascendancy". The bezoar stone is not a recognized mineral or gem but a type of hard concretion occasionally found in the digestive organs of certain animals, particularly the wild goat of Persia!

Scorpius, in the Middle Ages, became something of a symbol of unyielding fortitude, from the legend that the creature, if

surrounded by enemies, would sting itself to death rather than submit to capture. Lord Byron refers to this tradition when he writes, "The mind that broods o'er guilty woes, Is like the Scorpion girt by fire...."

SAGITTARIUS

Chiron, the centaur, is usually thought to be represented in the sky by either Sagittarius or Centaurus whom Asclepius received his medicinal training from. He was a great healer and had many pupils who became heroes. Other than that there is not much lore surrounding this mythical centaur.

However, Sagittarius is the brightest part of the Milky Way seen by northern observers. In the mythology of many ancient cultures the Milky Way is a heavenly River, a cosmic bridge linking Heaven and Earth. In these concepts we find a deep though obvious symbolism involving the metaphor of life itself as a journey or voyage, and Man as both the traveller and the bridge between the worlds. Rivers, roads, and bridges, are all symbols of the journey of life, and the endless journey that the Universe itself appears to be making, toward an unknown destination. Ovid introduces the Milky Way as the Road of the Gods: "There is a way on high, conspicuous in the clear heavens, called the Milky Way, brilliant with its own brightness. By it the gods go to the dwelling of the great Thunderer and his royal abode. Right and left of it the halls of the illustrious gods are thronged through open doors; the humbler deities dwell further away, but here the famous and mighty inhabitants of heaven have their homes...This is the region which I might make bold to call the Palatine of the Great Sky."

"They toiled and built a thousand years
In love's all powerful might;
And so the Milky Way was made -
A starry bridge of light..."

Web Cameras, Continued

Mark Kaye

As promised, it is time for a report on the web cams after putting them to use. The trouble with a new toy is that it seems to breed clouds. Three new toys and you are in real trouble. I finally got a chance to use the web cams on the night sky and it was a very long night. At the end, I learned a lot, but I did not get any good results. It appears that the Philips Toucam is the best camera for low light situations. The Creative Ultra NX does work well as a web cam and that is what I am now using them for. But they do not work as well as the Toucam under really dark conditions. I did not have the Logitech 4000 with me, so it remains untested with the telescope. I started out with the Moon and then switched to Jupiter. I was able to get an image right away, but focus turned out to be a real problem. I tried and tried, including using the Hartmann mask with some bright stars, but I never got an image that I was happy with. No matter what I did, the images were very soft. Finally it dawned on me that these cameras are very sensitive to infrared light and that our apochromatic refractor really only focuses well in the visible part of the spectrum. It is my guess that infrared and ultra-violet light are being detected by the camera and making the

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SCHEDULE OF EVENTS

Hamilton Steam Museum
hosts our General Meeting on
the 1st Thursday of each
month

JUNE

02 – General Meeting – Paul
Mortfield; Topic: CCD
IMAGING FROM YOUR
URBAN BACKYARD

9 – Board Meeting @
Observatory

17 – Sidewalk Astronomy @
Spencer Smith Park in
Burlington @ 9.00 pm

JULY

16 – Summer Bar-B-Q – bring
your own chairs and drinks.

**HAVE A SAFE & HAPPY
SUMMER HOLIDAY**

Sidewalk Astronomy

Spencer Smith Park
In Burlington
@ 9.00 pm

Friday May 20
Friday June 17
Friday July 15
Friday August 12
Friday Sept 9
Friday Oct 7

Always a good time had by all.
Members and guests alike.
Many people pass through and
are able to share an
experience for the first time.
Bring a scope if you have one
or just bring yourself.
Everyone can help. Hope to
see you there.

THE HAMILTON CENTRE OBSERVATORY:

From Highway 6 North of Hamilton.

Take Concession 7 East eastbound, cross Centre Road.
Continue on 7E, keep going past railroad tracks, to near end.
Observatory driveway is on the right just before the stop sign.

From Mississauga or Milton.

Britannia Road past Highway 25, Guelph Line, Cedar Springs Road to End. South 1
Block on Milborough Townline to Concession 7 East.
Our gate is on the south side of the last lot (south west).
The observatory phone number is (905) 689-0266.

LOANER EQUIPMENT

Thinking of buying your first telescope but wondering what kind to get? Try a beginner's night at the Observatory or ask Mike Spicer about his "loaner" 5" telescope which is easy to set up and very easy to use. Mike is offering newer members of the club one of these scopes to try out for a month or so. Mike also has an electronic eyepiece for video astronomy. Contact him at Mike Spicer – 905-388-0602 [DeBeneEsse2001\(at\)AOL\(dot\)com](mailto:DeBeneEsse2001(at)AOL(dot)com)

PUBLIC EDUCATION

Public Education is very important at the Observatory. Among other events, our Centre is involved with Girl Guides, Scouts, and other groups interested in a guided tour of the night sky. We generally give a brief discussion, a slide show or other visuals, and then a tour outside with two or three different scopes. This gives the guests a chance to decide for themselves which type of telescope they like best.

It is wonderful to see the look on a child's face the first time they look through a telescope. Also, if you know of a group that may be interested in an evening under the stars call for a booking.

Call a board member to find out more. Your help is always welcome.

LIST SERVERS

There are two list servers available for members to receive and contribute with informative conversation. Our local centre list. Get in touch with Mark Kaye (see Board of Directors List) and he will sign you up.

There is also the national list. Members must go the national web page to sign up for. <http://www.rasc.ca/computer/rasclist.htm>

MONTHLY SWAP MEET

Feel free to bring in any astronomical items you no longer need in your collection. It might be just what someone else is looking for. A table will be set up each month for items to be swapped that evening. So, clear out that closet space and make room for some new, slightly used astro ware.

A NEW LOOK FOR OUR WEB SITE – ANY IDEAS. A NEW FRESH LOOK IS IN THE AIR AND OUR WEBMASTER, SCOTT BARRIE IS LOOKING FOR IDEAS. THIS SITE IS FOR EVERYONE. LET'S MAKE IT SOMETHING SPECIAL. Contact Scott at [scottbarrie\(at\)homerom\(dot\)ca](mailto:scottbarrie(at)homerom(dot)ca) or call him at (905) 693-1469.

[The Building of a lifelong Dream...Split-Rock Observatory](#)

By Gary Colwell

Ever since I can remember I loved looking up at the stars, either out in a field somewhere or just through my bedroom window. I remember the first time I went to the David Dunlop Observatory (back when Richmond Hill was just that...a hill.) I often dreamed of one day owning my own telescope and perhaps, even my own personal observatory. Well here we are almost 40 years later, and that dream has finally come true.

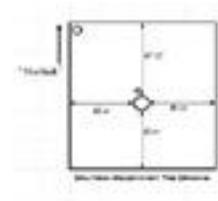
Last year I purchased some land in the Frontenac Highlands about an hour north of Belleville ON. The skies are soooo incredibly dark up there, and I had 3.5 acres on a private lake to work with, and the nearest town is 30 kms away with a bustling population of about 200. I also had an area that affords me a 360 degree clear view with only a few large trees to contend with. So...the plan was on! It is no small decision to build ones own personal observatory, I think the hardest part was deciding just what kind... a dome, a roll off roof, a combination of the two, but I always thought to myself that it was a bit of a waste to have a nice building, but to use it you had to remove the roof, and couldn't take refuge on a cold winters night, even for a few brief moments just to warm up. So I thought to myself, why not build an observatory that (a.) was fully functional and reasonably "cheap" to build ...that would make Glenn Kukkola happy...(b) could house a 10" telescope and work station, a sleeping bunk...that would make me happy... and (c) could be used as a warm room on those cold nights...as well as a refuge from the summer onslaught of bugs and flying critters....So I thought, why not build an observatory where the WHOLE building rolls off?...the only problem was....HOW???? I went on the internet for ideas, but much to my dismay, I could find nothing, the closest thing I saw was a building where "half" of the building rolled off, but it still left you prone to the elements. So being the dreamer I always have been, I put my mind to work and started thinking....and came up with all sorts of ideas....but would have cost a small fortune. As luck would have it I went

[YOUR BOARD OF DIRECTORS](#)

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Observatory – 905 689 0266

to Home Depot one afternoon to look for something totally unrelated and found the answer to my dilemma...a Royal Plastics Garden Shed!..and here is the story in pictures and through brief description.

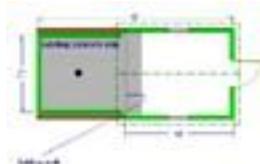
The first thing was to select a suitable location and size to build the "pad". I decided on an 8'x10' x 6" thick concrete pad, that was anchored to the "Canadian Shield" with tie rods. I also decided to put in a 7" dia. stovepipe "pier" that was also anchored and "isolated" into the bedrock with threaded rod and filled with concrete.



I then put in 2" PVC tubing to run the electrical connections to the telescope under the pad so as not to create a tripping hazard and also allow me to remotely control the telescope from inside the comfort of a closed/heated/bug free environment. It took 52 wheelbarrel loads of hand mixed concrete to complete the pad!..would have been easier with a cement mixer, but then..where would the challenge have been?

Next was to design a building....here are a few drawing of some early ideas....great on paper, but very involved and expensive to build....and HEAVY!
A lot of work and materials, and ultimately too heavy to be able to "push" off the telescope by a single person.
I didn't want to get into having to move it with motors or winches....that's when I saw the 8'x8' shed that Royal Plastics manufactures...and here was the final plan...

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The first thing was to design and build the rolling platform. I decided to use pressure treated lumber and 3" ball bearing casters to provide movement for the base. There were 3 casters on each side where the platform met the "track" and a caster on each side of the opening where the platform rolled past the pier. The platform rolled effortlessly and very smoothly. The "track" was made from 2"x10"x 16' P.T lumber and was attached to a 4"x 4"x16' "runner plate" and tapcon screwed into the concrete. Next...assemble the shed on top!



Once the Shed was assembled...the critical question...would it roll easily....and to my complete satisfaction...it rolled smoothly and with little effort!!!! The next thing was to put in the "finer details"...First...a cover to cover the opening that fit around the pier...that was fairly easy, then a window in the side to look through..(totally non functional other than to be able to look out and see the sky while I was huddled up all warm inside!..) I also put in a solar panel to charge the batteries and an inline charge controller to ensure that no damage to the system occurred, along with 6 cigarette lighter adapters and a 115 volt converter.



I also put in a folding computer desk to allow me to close the door on one side and be able to go in an out without moving the desk...Under the desk is the access panel to retrieve the underground connections that power the scope. They can be easily removed to allow the building to move freely without the hassle of running long lengths of cord.



And here are some pics of the finished product!



There you have it....in a nutshell...my dream realized. I hope that everyone will one day come up with me to my new observatory and enjoy the heavens in a dark sky and bug free environment!...Clear Skies.

Web Cams Continued...cont'd

image hard to focus. Later chatting with Paul Mortfield, an expert in digital imaging, I was reassured of this being a probable cause. So now I have to go out and find a filter to correct this and try again.

So the saga continues. The most difficult part is finding the clear skies. I only had one night the last time I was here at The Observatory and I spent the whole night trying to get an image without success. Fortunately, I also spent some time just observing, so the night was not a complete loss. I need to regroup, get the right parts and try again. I am also working on an all sky camera using a web cam. I have the camera, a clear dome and a 2.5mm lens. Now I just have to figure out Linux so that I can use the meteor detecting software, so stay tuned! Web cam results will be posted on www3.sympatico.ca/mark.kaye/webcam.htm There are two web cams running there now and a third will hopefully be added in the near future.

Clear skies!



[RASC Annual Banquet](#)

"Wow, what a great evening with friends. The annual banquet had everything you need for a great time and the restaurant was very nice. First everyone wandered around and chatted during cocktail hour, then a very nice dinner

started. The choices on the menu were extremely tasty by all accounts. During desert and coffee our speaker, John Nemy, gave an excellent picture show accompanied by music and narration. This year's banquet had everyone walking away with a door prize and the Hamilton Centre gained a little from a silent auction. All items for the auction and the door prizes were donated by:

Ken Lemke, Colin Haig, Victor Grimble, Sky Optics, John Nemy, Grant Maguire, Meade

With this banquet being such a great success, I am looking forward to next year and maybe even a bigger one!"



Observing Opportunities

Ken Lemke

As we start June, Venus will be in the sky (look in the West North West during evening twilight) and is almost fully illuminated. I encourage you to observe Venus periodically and observe how it changes phases. By the end on June, you should observe a gibbous phase. Venus will be with us for some time - by the end of August, it's appearance will be similar to a first quarter moon.

During the latter part of June, again during evening twilight look for some close groupings of Saturn, Venus and Mercury in the West North West. Saturn and Venus will be closest to each other on June 25 while Venus and Mercury will be closest to each other on the 26th and 27th. In fact, Venus and Mercury will be so close, you may need binoculars to see that there are two planets.

Jupiter continues to be well placed in the evening skies to observe the constantly changing position of it's four major moons. On June 2-3, there will be a nice double shadow transit, and sharp eyed observers will be able to pick Io itself as it transits the disk. On the evening of June 25th - 26th, Io and it's shadow will transit the disk while Europa and Gannymede will slip behind the disk - always an interesting event to watch, as is the reappearance of the moons. Consult the June/05 issue of Sky and Telescope (page 60) for event times.

Now that the better weather is upon us, I trust you will have the opportunity to get away during the summer and enjoy truly dark skies. If you don't have room to pack a small telescope, don't forget your binoculars and a sky chart, you won't be sorry. For example from my dark sky location, the globular cluster M4 in Scorpius is an easy binocular object, while I can barely see it with my telescope in the city. It is a real treat to see the heavens in their full glory, without the glare of city lights.

Regardless of your observing location, here are some of my favorites at this time of year:

- * Globular Cluster M 13 in Hercules. A stunning sight from dark skies.
- * Globular Cluster M 92 in Hercules. A nice globular that is often overlooked.
- * The various double stars in the Constellation Lyra - Epsilon Lyrae (famous double-double), Zeta Lyrae, and Delta Lyrae.
- * In the little constellation of Corvus - the lovely double Delta Corvi.
- * The double star Alpha Herculis which exhibits a nice colour contrast.
- * Later in the Summer when the Milky Way is overhead, I just get lost in the constellation Cygnus.

In closing, don't forget to include the Moon in your observing schedule. No matter how often you observe the Moon, you'll usually see something new.

Enjoy the Night Sky

**Hamilton Centre, Royal Astronomical Society of Canada - Board Meeting
Thursday, April 14th, 2005 at the L. V. Powis Observatory, Flamborough, Ontario.**

Board Members present:

Les Nagy President
Roger Hill Recorder
Ev Rilett Orbit Editor
Ken Lemke Observing Director
Victor Grimble Secretary
Colin Haig Vice President

Board Members Absent (with apologies):

Gary Colwell Maintenance Director
Patricia Marsh Public Education
John Williamson Treasurer
Mark Kaye Curator

Steve Barnes Telescope Scheduler (Interim)

Guests: Darryl Maude, Neil Cambell and Ed Lewis

The meeting was called to order at 8:07 pm.

Motion 2005-04-14-A: That the minutes of the February 16th Board meeting be accepted with the following amendment: In Motion 2005-02-16, "Viktor" should be "Victor" Moved by Roger Hill and seconded by Ken Lemke. The motion carried.

Motion 2005-04-14-B: That the minutes of the March 16th Board meeting be accepted as submitted. Moved by Colin Haig and seconded by Ken Lemke. The motion carried.

Directors Reports:

Recorder: Roger Hill had nothing to report.

Treasurer: John Williamson submitted a report. Motion 2005-04-14-C: That Patrick Gibbens and William Young be accepted as ordinary members of the Hamilton Centre. Moved by Ken Lemke and seconded by Ev Rilett. The motion carried.

John reported that he is working on the GST Rebate. Motion 2005-04-14-D: That the remaining Trillium funds in the US dollar account be moved to Canadian funds before the end of April. Moved by Ken Lemke and seconded by Victor Grimble. The motion carried

Curator: Mark Kaye was absent this month

Publicity: Patricia Marsh was absent this month.

Observing Director: Ken Lemke reported the latest workshop had been a success. He noted in particular that one woman had come from Mississauga after reading about the event on our web site. The April workshop will be on "Collimating your Newtonian" and "How to Convert your Dob". The Month of May will feature a workshop run by Mark Kaye on "Building your own Dew Heater".

The next 'scope training session will be held on Tuesday, April 19th.

Ken suggested that a "Quarterback" is needed for Public Nights at the Observatory, and he would like to see more observing done on weekday evenings.

Secretary: Victor Grimble stated that there had been several phone enquiries. Neil Campbell (an attending guest) and Mark Croker were contacted. Regarding the report to the Trillium foundation, Victor reported that it had been delivered on time as per the amended deadline. There had been a request by an ordinary member to receive a copy of the report, but until such a time as the Trillium Foundation has approved the submitted report, it must still be regarded as a "work in progress". Distributing possibly incomplete copies of the report was deemed to be a bad idea by consensus of the Board members, and the request for a copy was denied.

Vice President: Colin Haig reported that the Bylaw committee had not met due to scheduling problems. A new date needs to be set. He also wants input from Board and membership around elections and positions.

Orbit Editor: Ev Rilett had receipts for the Treasurer, and wanted re-imburement. She thanked all the contributors for the last Orbit, noting the contributions of both Paul Tarvydas and Carl Roussell. She will put the dates for Sidewalk Astronomy events in the next few issues.

Telescope Scheduling: Steve Barnes was absent this month.

President: Les Nagy reported that: 1) He had contacted the Trillium Foundation to ensure that the report was in their hands. 2) He was waiting to hear back from the person at the City of Hamilton who had responsibility for the trees.

Old Business: Motion 2005-04-14-E: That Gary Colwell's resignation from the Board be accepted, with regrets. Moved by Ken Lemke and seconded by Victor Grimble. The motion carried. The Board wished it to be known that the contributions made by Gary are much appreciated.

Banquet: The demise of JetsGo airlines has increased the cost of airplane travel for Mr. John Nemy, the speaker. Motion 2005-04-14-F: That the price of tickets for the banquet not be increased, remaining at \$47.50 each. Moved by Ken Lemke and seconded by Victor Grimble. The motion carried. Ken will get a notice out to the Centre's email list and the National RASC email list.

Dome replacement: No cost for materials has been done yet. Kevin's design has still to be seen.

Mall Display: Les reported that Limeridge Mall has all the pertinent contracts, insurance certificates and other forms.

2005 General Assembly: Mark Kaye had reportedly expressed an interest in attending the 2005 GA. Les offered to talk to Mark.

New Business: Fund raising: A bucket has been created for use at Sidewalk Astronomy events.

Work Party: The work party will take place on the weekend of Saturday, April 30th and Sunday, May 1st. The parking lot needs re-grading and drainage installed. Rob Bodnar knows what needs doing, and Les offered to contact him. The gate needs fixing, too.

Next Board meeting: May 12th, 2005, at the Leslie V. Powis Observatory.

Motion 2005-04-14-G: That the meeting be adjourned. Moved by Colin Haig and seconded by Ev Rilett. The motion carried.

Respectfully submitted by Roger Hill, Recorder.