Orbit
celebrating 100 years
The official publication of the Hamilton Centre of the Royal Astronomical Society of Canada
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Photo of Moonrise by Bob Botts

Reflections and Looking Ahead

by: Ken Lemke

It hardly seems that just over a year ago I took up the hobby of amateur astronomy and, on reflection, it has been a great year, filled with many firsts.

Over that time I've seen the Milky Way, countless meteors, observed many of the major stars, 58 (and counting) of the Messier Objects, a partial solar eclipse, and numerous features on the moon.

I've watched in fascination as the four major moons of Jupiter danced from side to side around Jupiter on a nightly basis.

In early September, a number of members of the Hamilton Centre went up to Haliburton for some dark sky observing. On the Saturday night, we watched a spectacular display of Aurora Borealis, which lasted on and off for about 4 hours. At times the Aurora stretched in every direction for as far as the eye could see. Even, those who have been observing for 20 plus years

*See **Reflections** on page 4.*

Editorial

by: Scott Barrie

This will be my last issue of Orbit, for this go-around at least and, typically, it's a little bit late. Producing a monthly newsletter for a vibrant organization like the Hamilton Centre is both fun and rewarding, but it's also time consuming and these days time seems to be getting harder and harder to find. Consequently, it's time to hand the reins over to someone else.

At the last general meeting Glenn Kukkola made some much-appreciated comments about my tenure as editor and I want to thank Glenn for those kind words. But I also want to point out that the editor is more of an organizer than a creator and simply works with the material provided by contributors. And members of the Hamilton Centre are fortunate to have a good number of people who have been generous to enough share their knowledge and enthusiasm by writing articles or creating images.

So, let me thank, in alphabetical order, those people who have made my life easier over the last two years. If I've missed anyone, please accept my apologies.

- Raymond Badgerow
- Steve Barnes
- Bob Botts
- Roland Christen
- Tina Coppolino
- Gerry Cyr
- Klaas Dekens
- Scott Donaldson
- John Grimmett
- Colin Haig
- Roger Hill
- Mike Jefferson
- Mark Kaye
- Nick D. Kim
- Ken Lemke
- Grant Maguire
- Dr. D.B. Marsh
- Bruce McCurdy
- Wiley Miller
- Harry Pulley
- Ev Rilett
- Robert Sears
- Barb Schultz
- M.J. Spicer
- Ann Tekatch
- Alan Whitman

A Special thanks also to NASA, the folks at Starry Night, and the anonymous individual who drew the little telescope guy 60-odd years ago.

Thanks for reading.

SB

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The Demise of Lumicon

by M. Spicer

Experienced observers know that quality counts. Wander around an observing site and look at the equipment in use: you will see names like Tele Vue, Astro-Physics and Takahashi. Accessory names such as Lumicon, Panoptic and Brandon all reek of high quality.

For over 30 years, Lumicon was a manufacturer and vendor of high-quality astronomical accessories. Lumicon Easy Guiders were commonly used for astrophotography, and everyone knew and loved the outstanding quality of Lumicon filters ("special discount pricing if you buy two or more!").

There is a full page Lumicon ad in November's Sky & Telescope at page 95, touting its products, but if you call the toll-free number or go to the Lumicon web page at www.Lumicon.com all you get is a terse message announcing the little company's demise.

Lumicon is no more.

MS

From the Eyepiece

by: Mark Kaye

September is the month that I miss The Observatory the most. The weather is usually beautiful, but all the noise and bustle of summer has left the Lake, leaving me alone with the peace and quiet. Instead, I now have two girls (three if you count the Doc) to get out the door in the early morning and observing time is placed at a premium.

I did take off for the Observatory for one weekend, but the weather that plagued me all spring and into early summer has returned and I suffered clouds nearly the whole time. It was clear when I arrived and I did manage to view comet Hoenig briefly before the haze rolled in ending the night. I did enjoy this comet over the summer, despite it not really getting very bright. It is nice to have a comet to go to each night to check its progress as it moves across the sky.

Thanks to a message in RASCALS, the RASC internet list service, I did spend an evening trying to catch the ISS fly in front of the just past full Moon. While I did not spy the ISS, I was amazed by the steady passage of migrating birds. I did not have any idea that so many birds flew by a particular spot in the sky on any given September night. Some of the birds could clearly be defined and others could not. I guess that means that the defined ones were quite distant and thus in fairly much the same focus as the Moon, while the blurrier ones must have been much closer. Given the number that flew past that half degree wide spot of sky, the numbers flying by the whole sky must be pretty astounding!

October always means elections in the Hamilton Centre. I hope that some of you will consider joining the board this year. At the October general meeting, only ten of the possible twelve positions were filled. That means that it is not too late to join the board. Please consider coming out to a board meeting and seeing what goes on.

After attending a meeting, you can make a better judgement on whether you could contribute to the club by being on the board. Having new people on the board makes the job of those that have been working on the board easier and we're less likely to have sitting members burn out and leave. Unless people do these jobs, the club cannot function. It is all very well to ask that the site be kept clean and that "Orbit" be delivered but, unless people step up to volunteer to help run the club, these jobs will not get done.

Let us hope that we have lots of clear sky this fall and winter to make up for the dreary skies that we have suffered through for a large part of the past year. Get out and look up!

Clear skies!

MK

Observer Alert: Saturn White Spot!

by: M. Spicer

The Association of Lunar and Planetary Observers (ALPO) has put out the following Alert on its web page for Saturn observers [**http://www.lpl.arizona.edu/~rhill/alpo/satstuff/recobs.html**]:

"Observers are urged to pay close attention to Saturn in the coming weeks. Ed Grafton of Houston, TX, using an ST5 CCD, 14-inch f/11 Celestron SCT, Barlow Projection @ f/27 (approximately .21 arc seconds per pixel) has imaged a white spot at high latitude on Saturn on 2002 September 29 11:28UT (CMI 374 degrees, CMII 289 degrees, CMIII 94 degrees). The spot is very near the CM at the time of the images."

Tiny images on the ALPO site show a small white spot in the dark polar cap.

Please don't forget that contributions are sought to the 2002 Saturn Study, an observing project of the Hamilton Centre. Observers who are taking part in the 2002 Saturn Study may want to keep a lookout for this white spot, and include it in their observing reports. An explanation of the Project and Report forms are available on the Hamilton Centre web site:

http://homepages.interscape.net/homeroom/rascsite/index.htm

Just click on "Download Orbit",

*See **Saturn** on page 5.*

***Reflections** cont'd.*

remarked about the display. One of the best!!

The list goes on and on, and the great thing is that while I feel like I've crammed a lifetime of experiences into this past year, I've only scratched the surface of the cosmic delights above. Every night is a new discovery for me.

The side benefits of observing have been 1) the peace and tranquility of just being outside under the sky; time and life's problems just seem to melt away, 2) I've met a great group of people with a diversity of interests who are willing to help and share their knowledge.

During the course of the year, in order to track down some of the more elusive objects, the use of star charts and star hopping had to be developed. Further, to avoid frustration, I had to understand the limitations of my equipment and/or the limits of what could be seen given the sky conditions.

To say that I have been "bitten" by the astronomy bug would be an understatement. Hardly a night goes by that, if I'm not out observing, my nose is in a book reading or pouring over a star chart, devising a plan of attack on an object.

The Future:

My battle plan for the next year is to continue working on the Messier list and track down more of the open clusters which I enjoy so much. Additionally, I want to expand the list of double stars seen and most recently I started observing variable stars. Observing double stars and variables is aimed at developing an ability to better estimate star magnitudes and distances, and thus make my observing notes a little more meaningful. This also appeals to the "scientific side" of my nature.

More contributions for Orbit are planned, as well. As a Novice, Grade 2 (I've been promoted), I have an understanding and appreciation of the frustrations and problems encountered by beginners and it has been suggested that I write about how I've addressed them. Hopefully, this will be helpful to others who are new to the hobby and, for the experienced observers, provide a trip down memory lane.

Some of the potential topics are: star-hopping, observing

Aurora photo by Bob Botts

doubles, equipment, observing resources, learning the sky, session planning and variable stars.

If you have some suggestions for other topics that could be addressed in future articles, please let me know at: 905-634-5168 (daytime phone), 905-639-5127 (nighttime phone), 905-634-5699 (fax) or at cfs@world-chat.com (E-mail).

While I still have much to learn and may not be able to address a topic directly, I'll undertake to get assistance from one of the experienced observers in our Centre, and get the answer.

This undertaking should be a lot of fun and help us all enhance our observing skills together, with the end result being that we'll all get maximum enjoyment out of our time under the starry skies.

Cheers.

KL

***Saturn** cont'd.*

download the acrobat format March 2002 issue of Orbit (this takes 90 seconds at 56kbps), and print page 9 of that issue.

Observe often in the coming months – Saturn rises long before the sun and is well placed for eary morning observers! Please send your observing reports to me at: Spicer & Associates, 25 Redbury Street, Unit 20, Hamilton, Ontario L8W 1P7 or fax them to me at (905) 388-0602, and thanks for participating.

MS

Your Burnham's Handbook

by: Ev Rilett

I would like to introduce you to the Burnham's Celestial Handbook. It is the quintessential 3 volume set full of an incredible wealth of information on every constellation, their stars, deep sky objects and the lore and history behind the figures. While this information is astounding in itself, I would like to take the opportunity to introduce you to another unique feature of this book. Its poetry. Writers such as Tennyson, Homer and Pliny are included. If you've never looked though these books, you are missing a great deal.

The first passage I'm offering is my favourite, Burnham's words from his introduction in Volume I.

"Considered as a collector of rare and precious things, the amateur astronomer has a great advantage over amateurs in all other fields, who must usually content themselves with second and third-rate specimens. for example, only a few of the world's mineralogists could hope to own such a specimen as the Hope diamond, and I have yet to meet the amateur fossil collector who displays a complete tyrannosaurus skeleton in his cabinet. In contrast, the amateur astronomer has access at all times to the original objects of his study; the masterworks of the heavens belong to him as much as to the great observatories of the world. And there is no privilege like that of being allowed to stand in the presence of the original."

ER

Photo by Bob Botts

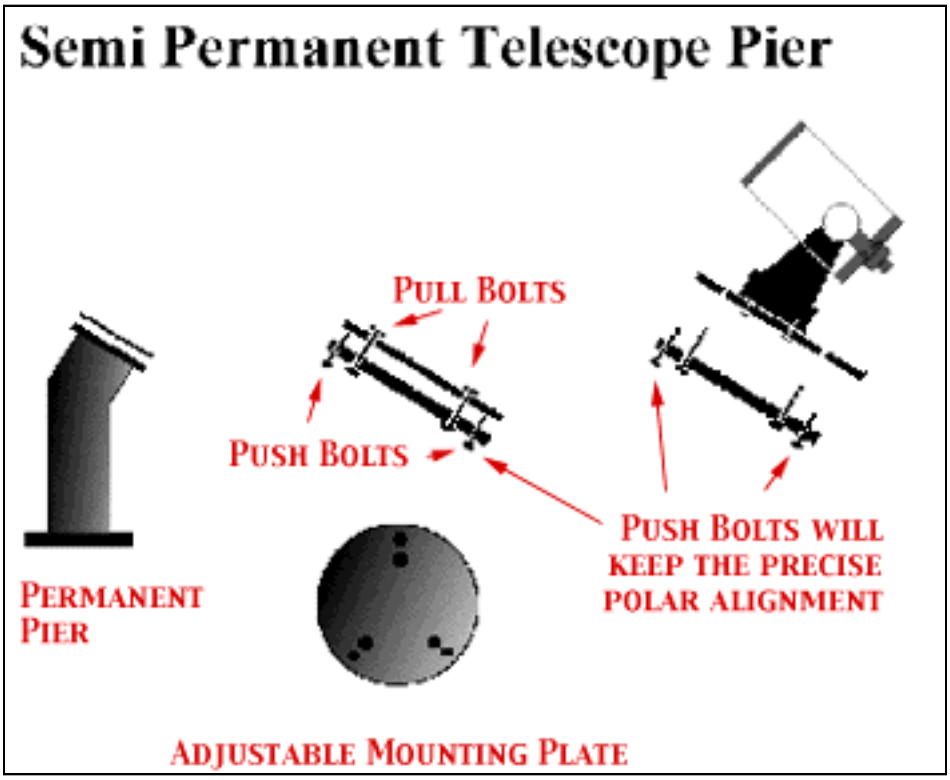
Report of the Pier Committee

by M. Spicer, Committee Chair

At the September Board meeting, I was selected to Chair the Pier Committee. I offer this report and ask that any members interested in having or using a pier, please contact me at (905) 388-0602.

The Powis Observatory site was leased in the early 1970's from what was then the Township (now part of the City of Hamilton). Every few years members of the Hamilton Centre expressed an interest in setting up permanent observing piers. In fact, the Centre installed a small number of wooden posts to be used as piers. The Celestron 8" SCT telescope in the Chilton building has been mounted on one for many years.

Observing piers, usually concrete and steel, would be permanent fixtures on site much like the pier that supports the 5" refractor under the dome of the Marsh building. The equatorial head or fork mount of your telescope can be bolted quickly to the top of the pier for observing or imaging. The advantage of a pier is threefold: (1) extremely rigid, almost vibrationless support; (2) permanent alignment on the North Celestial Pole; (3) no need for a tripod. If you have ever tried taking long-exposure photographs or CCD images through your telescope, you will recognize the advantages of having a pier mount. A concrete pier was installed rather impermanently by a member and housed in a small dome some 25 meters southwest of the Chilton Building a few years ago. Unused and decrepit, it was demolished this summer and the remains of the Carr dome, piled in a heap at the site, were a fire hazard until removed by a 12-member work party this month.



The Hamilton Centre board received a submission for permanent pier installation in late spring. Interest in piers was expressed by half a dozen members and the Board struck a committee to look into putting in a number of permanent piers. The installation cost would be financed mainly by the members interested in using them. The committee held a number of meetings during the summer, deciding that half a dozen prefabricated metal piers could be bolted to a concrete foundation as in the attached diagram provided by committee member Bob Botts.

The Board expressed interest in providing the piers with both electric outlets and a conduit for cables to permit remote telescope control, ie: being able to image at the telescope while sitting at your computer inside the Marsh building. If you have observed at the Powis site from November to April you will appreciate the advantage of imaging from inside the building.

Preliminary estimates of construction costs for pier foundation(s) will be solicited from electrical contractors once the committee has determined how many members wish to have a pier. Installation of the concrete foundation with underground electrical and control conduits is the first step, estimated at $1,750 (under $300 each). Members

would arrange to have suitable metal piers fabricated at their own expense (estimated at under $100 each). Installation by a registered electrical contractor would ensure City of Hamilton approval of the construction.

The Committee believes installation of observing piers at the Powis Observatory will cut down on set-up time and facilitate more frequent use of the site for visual observing and for imaging. I look forward to hearing from interested members. Members interested in having a pier at the site are asked to review the attached draft Agreement with the Centre and advise me of their interest as soon as possible.

MJ

Meade and Celestron – Head-to-Head Clash!

by: M. Spicer

Competition has been very, very good to amateur astronomers of late. Meade Instruments, the largest manufacturer of sizeable telescopes in the world, has been in competition for decades with Celestron, famous for its Schmidt-Cassegrain telescopes. Both California-based companies produce quality observing instruments, sharing the market for compound telescopes with many smaller manufacturers.

Meade's market share has steadily increased over the years through the usual four-fold American marketing strategy: (1) competitive pricing; (2) continual improvement to the product; (3) attempts to buy out the competition; (4) litigation against the competition.

Photo of the Horsehead Nebula by Steve Barnes

Meade had been selling its LX-200 telescopes (8", 10" and 12" models) with "go-to" technology for a decade with little technical improvement, when Celestron in 2000 launched its Nexstar series of "go-to" self-levelling, GPS based SCT telescopes (8" and 11") with f-2 Fastar imaging capability at very competitive prices, Meade sales suffered.

Meade attempted to buy Celestron outright to end the competition. The US government blocked Meade's attempted take-over. Intense lobbying by astronomers rightly claimed that Meade would have a virtual monopoly on the SCT market. That strategy thwarted, Meade launched a number of lawsuits against Celestron claiming infringement of its patented "go-to" technology. Meade sought a Court Order freezing Celestron sales of the very successful Nexstar telescope line. Celestron has won all the initial legal wrangling in the litigation.

Meade countered the Celestron Nexstar GPS in 2001 with release of its LX-200 GPS series with a built-in electronic focusing system and mirror-lock for CCD imaging. To sweeten the new line, Meade included a bonus offer - a set of seven series 4000 eyepieces at no additional charge.

Celestron responded in 2002 with a US$500 rebate to purchasers of the Nexstar 8" GPS. Meade almost immediately cut the price of its 8" LX-200 by US$500. Just weeks ago Meade renewed the eyepiece offer at a nominal US$99 cost to purchasers of selected (ie: more expensive) Meade telescopes. Telescopes are drop-shipped from Meade's factory and the purchaser is required to send Meade a lot of paperwork after the telescope is received, to get the eyepiece bonus.

Unfortunately, Meade made little provision for actually supplying telescopes and eyepiece

*See **Meade** on page 8.*

Coming Events:

November 7, 2002 - General Meeting at 8:00pm at the Steam Museum. Program TBA.

November 14, 2002 - Board Meeting at 8:00 at the observatory. Come on out and shape the future of the centre.

December 5, 2002 - General Meeting at 8:00pm at the Steam Museum. Program TBA.

December 12, 2002 - Board Meeting at 8:00 at the observatory. Come on out and shape the future of the centre.

January 9, 2003 - General Meeting at 8:00pm at the Steam Museum. Program TBA.

January 16, 2003 - Board Meeting at 8:00 at the observatory. Come on out and shape the future of the centre.

Directions to Observatory:

From Hamilton or Guelph:

- Hwy 6 N of Hamilton,
- Take Concession 7 East eastbound, cross Centre Rd.
- Continue on 7E, past the rail tracks, proceed to near the end.
- Our gate is on the south side on the last lot (south west).

From Mississauga or Milton:

- Britannia Road past Hwy 25, Guelph Line, Cedar Springs to end
- South 1 block on Milborough Town Line to Concession 7 East.
- Right on 7th Concession, then first driveway on left.
- Our gate is on the south side on the last lot (south west)

From Burlington or Oakville:

- Dundas Street (HWY #5) to Cedar Springs Road
- Cedar Springs Road to Britannia Road
- Left (west on Britannia road to Milborough Town Line
- South 1 block on Milborough Town Line to Concession 7 East.
- Right on 7th Concession, then first driveway on left.
- Our gate is on the south side on the last lot (south west)

Hamilton Centre Observatory
43° 23, 26" N 79° 55, 22" W **Telephone 905-689-0266**

Club web site - http://www.rasc.ca/hamilton/

***Meade** cont'd.*

cases, so if you order there may be a "back order" wait of several months.

In contrast, Celestron now has its own US$99 offer of an aluminum case filled with eyepieces, Barlow lens and a set of filters to the purchasers of any Celestron telescope. The case of eyepieces is available at the time of purchase from your retailer with no additional paperwork required.

In the end, one of these companies will undoubtedly succumb to the competition. My money's on Meade winning out, with its huge market share and financial resources. But Celestron is manned by real innovators and has sharp legal counsel. Earlier this year Celestron was put under the gun when its parent corporation, Tasco, went into corporate receivership. Tasco's CEO was arrested for diverting hundreds of millions of dollars from the company. Celestron's officers gained financial backing and in a brilliant legal move, purchased the assets of the company and its factory. Don't count Celestron out just yet.

Both Meade and Celestron make good products. Most consumer comments to this writer laud Celestron's excellent customer service while deriding Meade's post-purchase indifference of its customers. By all means take advantage of the bonus offers of both companies. The buyers' market can't last long.

In the warmroom

Agreement between the Royal Astronomical Society of Canada, Hamilton Centre ("the Centre")

- and -

_____,
a member in good standing of the Centre

Whereas the Centre wishes to foster astronomical endeavours and members in good standing of the Centre have expressed an interest in the installation of telescope piers at the Leslie Powis Observatory,

Now therefore this agreement witnesses as follows:

The above named member has paid to the Centre the sum of one hundred dollars ($100.00) in exchange for the right to install a pier he or she will supply, on a concrete foundation ("the foundation") to be installed by the Centre, and to enjoy the right of use of the installation for a period of two years from the date of installation.

The Centre shall promptly take steps to construct the foundation for the member, and the Centre shall be responsible for maintenance and upkeep of the foundation. The named member shall be responsible for the upkeep of his own pier and the Centre assumes no liability for damages to the pier or caused by use of the pier.

The concrete foundation shall be in a form approved by the Centre in conformity with statutory building requirements. The member is responsible for installation of his or her pier, which also shall be of design and material approved by the Centre.

Two years from the date of installation of the member's pier, the member shall remove his pier from the observatory grounds, save that the Centre and the member may enter into a further agreement for use of the installation after expiration of the two year period, on such terms as the Centre and the member may agree.

This agreement is conditional upon the Centre securing approval of the required authorities for the construction of the foundation, which approval the Centre shall promptly move to secure. In the event that approval is denied the Centre shall return the member's payment forthwith.

Signed, sealed and delivered
At the City of Hamilton
In the Province of Ontario
this _____ day of_____, 2002.

_____
member

_____
I have authority to bind the Centre