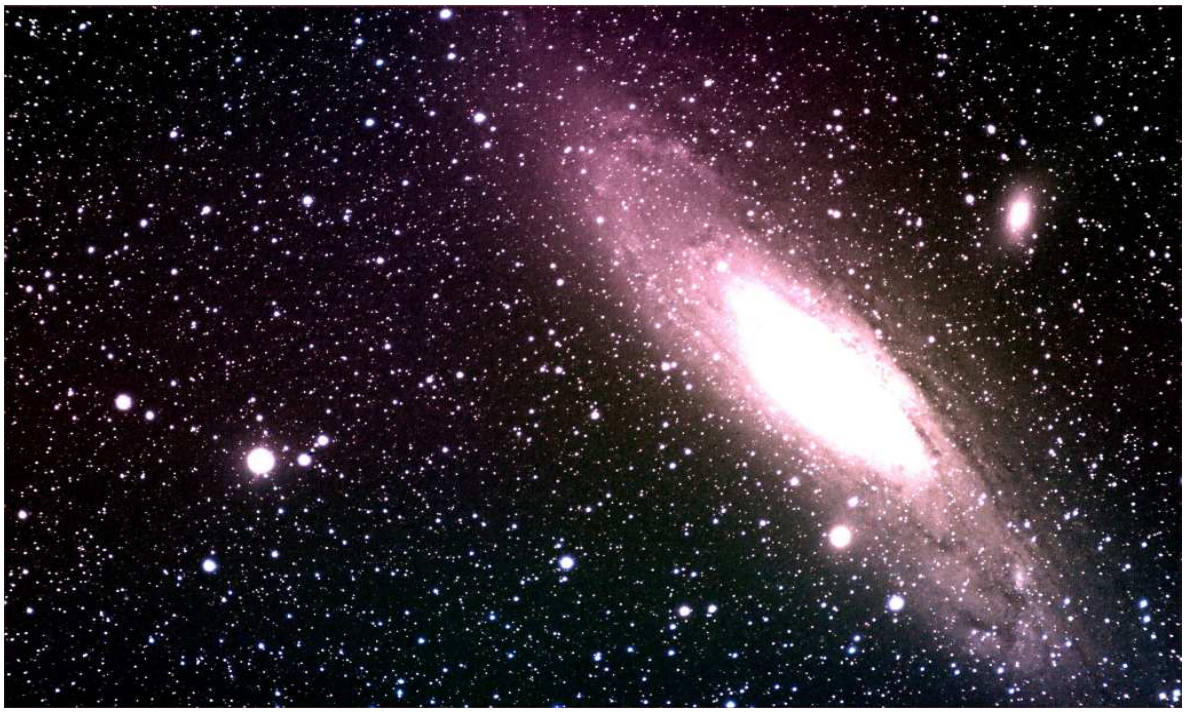

Orbit

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

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Welcome to Orbit, 2007.

It's now been 40 years since the Hamilton Centre started producing Orbit. It was the brainchild of Ken Chilton, and the Hamilton Centre was one of the first RASC Centres to publish a monthly newsletter. From time to time, Orbit has fallen on hard times, but it always seemed to bounce back, whether it be with a new editor, or a change in direction of the Centre (which frequently meant a change of editor!).

Well, now it's my turn. I've threatened to do this before. In 1995 I stood at the front of the room at McMaster and said that since it seemed to be easier to find a president than an Editor, that I'd step down. One fellow in the audience put his hand up and asked if the Editor was a Board position. The answer was No, not really. The Editor is frequently a member of the Board, but it's not a requirement. Colin Haig put his hand down and said "Okay, you've got yourself an editor" (or words to that effect).

In the years since 1971, when I first joined the Centre, I've contributed. Whether it be From the Keyboard of the President, or as an author, I've tried to produce an article every now and then. In the past few years, though, I've let that lapse, and frankly, I've missed writing for these pages.

But no more...now I've got to come up with a few pages every month!

I've also tried to innovate, too. In 1976 , while working as a Co-op student at the Hamilton Centre for Inland Waters, I wrote a word processing program for an HP desktop computer. I typed in the article, stored it on a data cartridge, and edited it for spelling and punctuation before printing it. By altering the amount of space between each letter, I produced an article that was left and right justified...in other words, each line was the same length. The Gestetner stencils that were used at the time to print off Orbit were a major pain...particularly so because spelling errors were difficult to erase. If I remember correctly, Peter Ashenhurst was the editor at the time, and he LOVED the fact that someone else was going to do the typing for this article on the Sun. Anyway, the force the printer used was not enough to cut the stencil, so I had it hammer out each letter several times. It took many minutes to 'print' each page, but it worked. Electric Pencil, the first word processor available for home computers, was available at about the same time for a number of machines, but it was certainly the first time computers had been used to compose an article for Orbit.

In the early 1990's, The Hamilton Centre website was hosted from my basement. Charles Baetsen was the editor at the time, and he also produced the Centres first website. This was hosted on a spare computer at his work, but that couldn't last. So, since I had a dedicated connection to the nascent World Wide Web, the entire thing was moved to my server (A 486 clone with 16 megs of RAM—at $50 a megabyte—and 160megabytes of hard drive space).

So, now I get to bore you each month with tales from meetings, happening around the Centre, rumours, scuttlebutt, and anything else I can find to publish.

Oh, and I need articles. Lots and lots of articles. Unlike editors of the past, who accepted hand written articles and then typed them labouriously onto the aforementioned stencils, I'll only accept articles already in electronic format.

Let the good times roll!

Roger Hill

The August Lunar Eclipse...Bring on February!

Comet Holmes.

Like nothing you've ever seen before!

Hamilton RASCals have been stunned and amazed by the weirdest comet to appear in the sky in a very long time. And it's one of the brightest, too — it's a naked eye comet that brightened by a factor of a million in just a couple of days.

On October 24th, periodic Comet Holmes (17P) brightened dramatically — by nearly a million times — virtually overnight. For no apparent reason, the comet erupted from a very dim magnitude 17 to about magnitude 2½. Within a day its starlike nucleus had expanded into a perfectly round, bright little disk visible in binoculars and telescopes. It looked like no comet ever seen.

Its startling outburst, however, has a precedent. The comet was also in a major eruption 115 years ago, in November 1892, when English amateur Edwin Holmes was the first to spot it. It reached 4th or 5th magnitude, faded in the following weeks, and then underwent a *second* eruption 2½ months after the first.

According to Sky and Telescope, The comet is likely to stay visible to the naked eye for at least a couple more weeks, before moonlight returns. The yellow color is dust reflecting sunlight, as confirmed by spectra. Dust is what keeps a comet bright — as opposed to gas (comet gas is green and blue), which blows away more quickly in the solar wind. For updated information, see the Sky and Telescope web site at
http://www.skyandtelescope.com/observing/home/10862521.html

or visit SkyNews at http://skynews.ca/pages/comet17pholmes.html

Here is a picture posted on the London RASC list of the comet. Ths is very close to the view through the Centres 16" OGS Ritchey-Chretien.

For more pictures, see the back page.

Send me your pictures, and I'll publish the best ones in next months Orbit!

Software of the Month

Which doesn't mean it's good, just noteworthy.

This month, a quick look at PHD Guiding.

Now THIS is software. It does exactly what it is designed to do with a minimum of fuss. There is no huge learning curve; no extraneous features; it runs on Windows XP and Vista (it's also been known to run on Windows 9x) as well as OS X, and you can't argue with the price—It's FREE!

If you have a computerized GOTO mount and any one of several cameras (Meade DSI and webcams included, among others), you can autoguide.

Prior to using PHD (which stands for Press Here Dummy), most autoguiding programs or systems had you go through some major hoops before they'd work. I played around with GuideDog before stumbling on PHD, but once I tried it, I was sold.

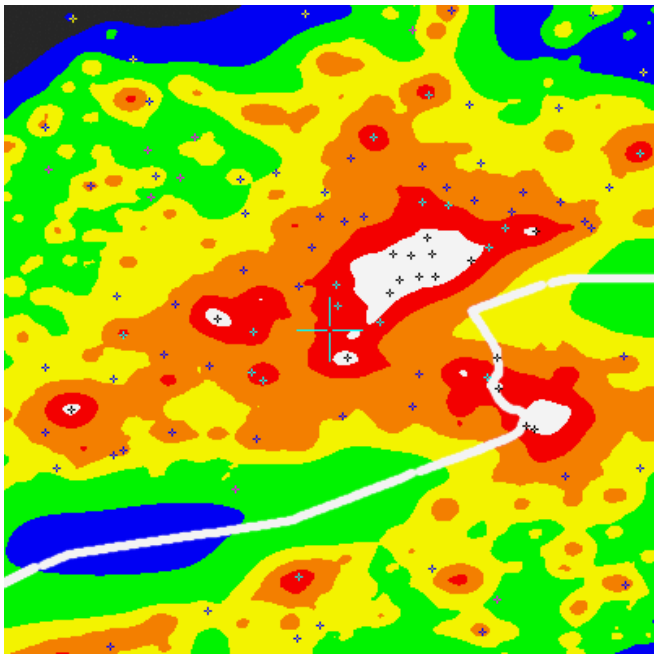
PHD Guiding is designed to be "Push Here Dummy" simple, yet provide powerful, intelligent auto-guiding of your telescope for both PCs and Macs. Connect your mount, your camera, select a star, and start guiding. That's it!

I've always had a tough time figuring out which way North is on a computer monitor, whether East is left or right, and trying to get my entire setup calibrated was a major pain, if I was just going out to the backyard for a couple of hours. *PHD Guiding goes through a calibration routine when it starts guiding, so you don't have to worry about the orientation of the camera, the focal length of the guide scope, or the number of pixels in the giider. The* automatic calibration routine takes care of this for you.

I use the software on a Pentium III 750 MHz with 28 megs of RAM running Windows XP Pro. The guide camera is a Meade DSI and I've used both my 12" SCT and my 80mm F/6 refractor (mounted on the SCT) as the guide scope.

At a dark sky site in September, I spent 15 minutes polar aligning and then used PHD to give me 10 minute exposures through the 80mm.

Highly recommended. It's available at http://www.stark-labs.com/phdguiding.html



Interested in getting more involved with Light Pollution Abatement?

Club 54, a nightclub in Burlington, have a couple of searchlights on all night Friday, Saturday and Sunday.

They have been seen from Milton.

Wondering what to do? How about forming a LPA Committee. Don't wait for the Board—they're up to their eyeballs keeping the Centre going.

Join the Centres email list, and talk about it. Send an email to Mark Kaye at mark(dot)kay(at)sympatico(dot)ca and opt in TODAY!

Subject: **Can you stand this story???**
Sent: Sunday, April 14, 2002 4:46:53
From: sherrodc@ipa.net (Clay Sherrod)

Okay - we've heard it all, right?
Got a call late last night from a guy driving in from Oklahoma City next week....needs some help with his NEW 8" LX 200 GPS.

Just got it in and decided that the optics were NOT clean enough, being new and all.

He was crying into the phone....voice trembling....the guy needed help. Clearly.

He followed my instruction on the 'net completely. First you blow off all the particles of debris (he admitted there WERE NOT any, but did this anyway....) from the corrector plate prior to cleaning. He mixed up the proper solution of isopropyl alcohol 1/4 to 3/4 distilled water and added a small amount of Ivory liquid to the solution in the proper amount. All is good and the sun is shining bright!

Even went to the store make SURE he had distilled way and ONLY Ivory liquid as prescribed by Doc Clay....

Smart man, really smart man. (but remember, this is in Oklahoma!)

But, he does not find "compressed air in a can." Nor does the gentleman pursue the fine arts so an artist's paint brush is not a common item around the house.

So....he remembers that he has this nice rubber ear syringe in the bathroom....never used on narry an ear in the house! One good shove on that rascal and it will blow the crap all the way to Arkansas! Little did he know!

So off comes the dust cap, exposing the virgin glass to the elements of Oklahoma for the first time....lights from the hanging bulbs (poetic license here....) reflect near perfect images unimpaired by the elements of mankind upon this pristine surface....

....and he proceeds to BLOW!

Out comes the viscous glob of spewing yellow liquid....in its purest form, the saving grace of mankind's winter months, the chemical we know and love as ETHYLENE GLYCOL, our automobile knows as "anti freeze."

Little droplets like a sneeze from Tuberculosis Tommy, spread in a pattern across the coated corrector plate that only God could know and love.

And then he "remembered." No, this had NOT been used on anyone's ears...ever. It had, however, been used several times last year when he overfilled his car's radiator getting it winterized for the season.

Oh my God! What should he do?? Well, Hell! Wipe the damned stuff OFF....of COURSE! So he runs out to his shop to get - what else, when you get anti-freeze all over something> - SHOP RAGS! Of COURSE!

So he rubs it down really hard to get all the gooey yellow stuff off—except that which has already seeped down inside the corrector retaining ring.

His story continued, his sobs getting deeper although over the phone I could tell this was an Okie with pride, his best attempts made to cover his sobs....

Oh NO....he knew that wasn't the thing to do....there were huge gaps starting to show up in the UHTC coatings that he had just paid $300 for! So he quickly rushed back to the shop for just what YOU and I would get at this point!

ALLEN WRENCHES!!

Drop and roll, baby!

He quickly disconnected the OTA from the fork arms and jerked the scope tube assembly off and rushed it to the bath-room where the tub had been started, hot water rapidly filling the Baptism cavity at that point.

And down it went....once, twice, many times thereafter, the healing hot waters scalding and penetrating, permeating the work of art that had just been shipped out of the manufacturer....the first to go was the Inspection Sticker, floating away in the tub as if to surrender early in this fight.

But THEN, he did the right thing! He rinsed with distilled water, just as Doc Clay prescribes! Got to do that final rinse!!

A careful one hour session with the hair dryer finished off the story....and the telescope.

"It all seems to be okay, but I just know it's not perfect anymore," he cried, periodically removing the mouthpiece of the phone away so that ears could not detect his weaker side.

In front of him, he admitted, was only a part of a telescope....the coatings here in some places, gone in others....the finder was full of water, dripping out the eyepiece end. Droplets still oozed from the small seal behind the focus knob.....

"I just can't bring myself to using this - you know, NEW and all, - until I bring it by for you to look at and tell me it's O.K.!" he begged.

OKAY??!!? What? First you squirt anti-freeze on the poor devil, then rub it down real good with a shop towel, then dunk it in a tub of boiling water and try to kill it off with a blow dryer??

And YOU want ME to fix it??

And the moral of the story....it's on its way to Doc Clay Monday.

[true story!]

Clay

Dr. P. Clay Sherrod
sherrodc@ipa.net
Arkansas Sky Observatory
www.arksky.org

Mythology and Cosmology

By Carlos Felix

This month: Lyra

Mythology

In the zenith of the heavens, in the summer months, and declining westwards in the fall is the small but significant con-stellation, Lyra. It's shape roughly resembling the outward form of a lyre is representative of Orpheus, when the Greek gods immortalized him by placing his musical instrument into its present fixed place in the sky.

Genealogically, Orpheus was begotten of a Thracian king and the Muse of Poetry. The lyre was given to him by Apollo, and the muses taught him how to play. Indeed, his playing surpassed all so that it was said that with music he would tame wild animals and could dislodge stones and mountains. Orpheus has the distinction of being the only mortal, with the possible exception of Hercules, who successfully entered the fearful underworld and returned, the purpose for which

was to retrieve his newly beloved bride who had died of a serpent's bite. And this fearful and daunting task, he accomplished by charming hell's horrible characters and evoking the pity of Persephone, the goddess of the underworld. Quite an accomplishment for a mere mortal. But in the end , the human weakness of doubt impelled him to turn around and look at Euydice, his beloved and object of his quest, against the injuction of the gods. And so he lost Eurydice, irretrievably, as she died a second time.

Perhaps the most common theme in opera is the Orpheus story. Indeed, from the very first opera, composed in 1607 by Monteverdi, "L'Orfeo", through to Gluck, Offenbach, and Philip Glass, the Orpheus story popularly recurs in opera as it is retold again and again. And thematically it is, generally, a tribute to music and song. It was once said that there was music in the spheres.Shakespeare's plays attest to this belief, although perhaps in a metaphorical sense. Perhaps this can be attributable to Orpheus' lyre. After all, it is, as I think, the only musical instrument in the sky.

Cosmology

If Lyra seems to be an obscure constellation, its significance is established by the prominence of Vega. Vega is the third brightest star in the sky, surpassed in apparent luminosity only by Sirius and Arcturus. This is so because of this bluish white star's comparative proximity, only 25 light years away. Vega's greater significance has an historical basis, however, for it's eminent distinction lies in that it was the pole star twelve thousand years ago. And so it was the star by which north was determined.

M57 in Lyra
Courtesy of
Roger Hill

Please visit our website! It is found http://www.hamiltonrasc.ca
Send an email to Mark Kaye (see the director's list below) to join the centre mailing list.
See http://www.rasc.ca/computer/rasclist.htm for the national list.

Directors and contacts

President – John Williamson	John.Williamson(at)sympatico(dot)ca
Treasurer – Andrew Blanchard	ablanchard(at)cogeco(dot)ca
Observing—Paul Brandon	pbrandon(at)sympatico(dot)ca
Orbit Editor – Roger Hill	Roger.Hill(at)hiteach(dot)net
Email lists—Mark Kaye	mark(dot)kaye(at)sympatico(dot)ca

For all the latest in events going on in the Hamilton Centre, visit the calendar at
http://www.hamiltonrasc.ca/forums/cal_lite.php?cl_m=11&cl_y=2007

November 1	General meeting at the Steam and Technology Museum
November 7	Board meeting—Contact John Williamson for details.
November 9	Dark of the Moon—Observing at the Observatory
November 20	Astrophotography group at the Observatory—See Andy Blanchard
November 30	Orbit Deadline for December Orbit—See Roger Hill

Comet Holes from Milton—taken with a Canon 10D at ISO 800 through a Williams Optics 80mm f/6 Zenithstar

30 Second exposure

15 Second Exposure

8 Second exposure

4 second exposure

2 second exposure

1 second exposure