



THE NIAGARA

Volume 26 #1  
January / February 2005

# WHIRLPOOL

25th Anniversary Edition



# NIAGARA WHIRLPOOL

The Newsletter of the  
Royal Astronomical Society of Canada  
Niagara Centre

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**Newsletter Info**

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Original articles on astronomy and related subjects, observation reports, book reviews, letters, images and other items are needed. Please submit them at the meetings, mail them to RASC Niagara Centre, P.O. Box 4040, St. Catharines, Ontario, L2R 7S3, or e-mail them to the editor at astro\_nuts@cogeco.ca.

Classified advertising is free for Niagara Centre members.

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**Niagara Centre Website:  
E-mail Discussion List &  
Member's Only Area**

The Niagara Centre has an e-mail discussion list and a member's area on the website. By subscribing to the e-mail list you will be able to post messages and carry on discussions about astronomy and activities with other Niagara Centre members. This is a great way to interact and get to know other members, or enhance your knowledge of astronomy. Please note that a login procedure is required to initially join the Discussion List. Complete instructions are available on the discussion list page on the website.

A member's only area of the website is also available. This area contains Niagara Centre information for the use of its members only. The member's area contains astrophotography by Niagara members, the Niagara library book list and lots of other Centre related info of interest to members.

To receive the log-ins and passwords for the e-mail discussion list and member's area, contact Les Welgan or Ron Gasbarini and they will send you the needed information by e-mail.

**Upcoming General Meetings:**

Niagara Falls Public Library at 7:30 pm

January 20

February 17

March 17



Editor's Note

By Deloris Welgan

Happy New Year!

This is my first issue as Editor of our newsletter. I'd like to thank Phil Downey for all his hard work on the Whirlpool for the last three years. He stepped down to pursue other goals. I hope I can live up to his high standards.

I've always liked the columnar look of magazines and decided to try it with the Whirlpool. However, as I was going through some of the old issues, I realized this layout has been tried before so welcome to a new-old look to the Whirlpool.

I am honoured to present to you a very special edition. The Whirlpool has been in publication for twenty-five years and I thought it fitting to take a nostalgic look at the Niagara Centre's roots.

I'd like to thank Ron Gasbarini for the terrific article you'll read in this issue as well as providing me the opportunity to present to you some of the covers of past issues. He has every issue!

I'd like to incorporate a new item in the Whirlpool titled "Remember When". If you have any nostalgic or historic memories or photos you would like to share with the membership, please forward them to me.

Remember, your photos and articles are always welcome.

This is your newsletter. Enjoy it! Use it! Advertise your astronomy

equipment for sale. Share your astronomy experiences.

Your comments and suggestions are welcome.

Edmund Scientifics
www.scientificsonline.com

President's Message

by Brian Pihack

I trust everyone is in good health, albeit a little heavier I'm sure.

There must have been some astronomical Christmas gifts out there! I know of one very happy past president to whom Santa delivered a new toy. Therein, it is Glen's fault the weather has not co-operated very well and, judging from his new toy, it might be May before it clears!! As for his new toy, I will let him have his "bragging rights" and justifiably so!

The Christmas party at "Chatter's" was fantastic. Chris Rigas did a great job of hosting it once again. Many thanks, Chris!

Sometime for New Years, I was thinking about celebrating it out at the Observatory. What better initiation of a new year than astronomy.

At the last executive meeting, a team was set up to tackle the "Trillium Foundation". If you have any experience or information, please let Jim Holiko

First Whirlpool Cover



JANUARY 1980



JUNE 1980



OCTOBER 1983

know as soon as possible.

On January 8, there is a members' night at the observatory.

On January 15, we will be hosting a Public Star Night at Fireman's Park in Niagara Falls. If you can, please show up. I contacted the Niagara Falls Review and they will be doing a special feature on our club.

I see that "Astronomy" magazine has published an article on F. Espenak, the famed Mr. Eclipse. Remember, the other half of that team, Jay Anderson,

is our guest speaker for our April banquet. Tickets are available NOW from Joyce Simms. Give her a call!

Thanks to a generous donation from John Dean, we will have two rare antique books on astronomy to auction at our next meeting. They were on display at the December general meeting.

**Secretary's Report**

*by Les Welgan*

This is my first Whirlpool report since being elected last October. I'd like to thank our previous secretary of six years, John Vanderbrugge, for his dedication to this important position and for his assistance in transferring over the duties to me. I look forward to serving our Niagara Centre with the same dedication as he did.

I would like to welcome the following new members to our Niagara Centre: Jeanette Martin, Robert Lewis, Alexander Kuzmin, Todd Bundy, Dave

Fluri, Laura Thomson, Katelyn Thomson and David Raeburn. This puts our current membership at 124.

In the past two months, we've enjoyed visits from some very interesting guest speakers. At the November general meeting, we were visited by our RASC National President, Peter Jedicke. He was accompanied by David Gregory, an avid meteorite collector. I'm sure everyone attending that meeting enjoyed his presentation and collection. Our new vice president, Jim Holiko is working hard scheduling guest speakers for 2005. At our December general meeting, we enjoyed a fine video presentation of Starfest 2004 by Jim Holiko followed by our annual members Christmas party at Chatters.

As a reminder, our next annual banquet will be held Saturday, April 23<sup>rd</sup> at the Delphi Banquet Hall, Portage Rd, NF. Our guest speaker will be Jay Anderson, who many of you may have seen on Discovery Channel. Tickets are now available at \$45.00 per person and can be obtained at the next three general meetings. Also you can contact Joyce Simms at 905-262-5276 to reserve your tickets.

I hope everyone had a safe and Merry Christmas. I would like to wish everyone a Happy New Year and hope 2005 will bring many clear evening skies so that we can continue to enjoy viewing our vast universe.



*Above: Glen with his new telescope handcrafted by John V.*

*Right: David Gregory setting up his meteorite collection.*

*Below: David giving his slide presentation.*



*"How exciting is this?" Deloris Welgan holding pieces of Mars and of the Moon photo by Brian Pihack*

# FEATURE

## A Look Back on Twenty-Five Years of the Niagara Whirlpool

by Ron Gasbarini

The Niagara Whirlpool had a very humble beginning.

Before the first issue appeared, monthly *meeting notices*, which were tri-folded sheets of paper held together with a stamp, were mailed to members. This was during the '60s and most of the '70s. They included only basic information such as the meeting location, time and topic as well as several paragraphs summarizing the details of the previous month's meeting. On occasion, hand-drawn diagrams were included! They served their purpose but, by the late '70s, it was time for the Niagara Centre to have its own newsletter.

Soon after becoming a member in 1973, at the age of 13, I immersed myself in the many Centre newsletters made available at the monthly meetings. Since I could only borrow them, I began subscribing to just about every RASC newsletter to learn more about the Society and its activities. Being an enthusiastic teenager, I suggested to (the late) Hugh Maclean, who was the Centre President at the time, that the Niagara Centre have its own newsletter. Hugh was very receptive to this idea and provided immediate assistance with getting it underway. Late in 1977, Hugh discovered that the National Office had a surplus duplicating machine, an A.B. Dick model, which it donated to the Centre and eventually found a home in Hugh's basement. Beginning in January 1978, *meeting notices* were printed using the A.B. Dick and I did the typing on stencils, a thin porous paper thru which the ink passed, until the first issue of the *Niagara Whirlpool* appeared in Oct. 1979. Volume 1, Issue 1 commenced with the Jan. 1980



Horsing around in Hugh McLean's basement, Robert Jedicke is feeding John VanOpheim through the A.B. Dick printer being operated by Ron Gasbarini.



THE OFFICIAL PUBLICATION OF THE NIAGARA CENTRE



ROYAL ASTRONOMICAL SOCIETY OF CANADA  
NIAGARA CENTRE



OCTOBER

1987

JANUARY

1989

APRIL  
1989

issue. Robert Jedicke became the first Editor and was assisted by a newsletter committee consisting of Hugh Maclean, Charles Fassel, Raymond Osborne, John H. VanOphem and me. It was a monumental task to produce a publication before such things as desktop publishing software and the Internet because a lot of manual effort was required. We met monthly on Saturday mornings at Hugh's place to take on the challenge. It was a full day's work to type the articles, print the pages, collate, staple, sort and stamp the many copies for members and other Centres. Mishaps were commonplace. There were frequent breakdowns caused by paper jams, ink spills, ripped stencils and jammed staplers. In spite of the problems, there was a great sense of accomplishment (and relief!) with every successful issue. More importantly, we enjoyed each others' company and Hugh looked forward(?) to having his house invaded by a bunch of teenagers every month.

From its humble beginning, the *Niagara Whirlpool* continued to evolve. The first cover page, featuring an image of the Whirlpool Galaxy on blue paper, appeared in June 1980. A new, improved image appeared in April 1981. It was a black and white slide image taken by the 200-inch Palomar telescope. Along with the RASC crest on the same blue paper, this cover was used until September 1987. From October 1987 to the present, the cover page has featured images of Niagara Centre events and members' astrophotography. In October 1987, the newsletter switched from an 8.5 by 11-inch format to a handier 5.5 by 8.5-inch size. In November 1989, it reverted back to its original configuration and back to the smaller size in October 1991. It remained in the 5.5 by 8.5-inch size for-

mat until 1998. Greg Saxon, who served as Editor from February 1989 to September 1991, introduced many innovative and novel format changes including a multi-column 'newspaper' look with many font styles. Other Editors over the years included: Steve Brent (1981-82); Ron Gasbarini (1982-87, 1991- 1995); Michael Ilnicki, assisted by John Sviergula (1987-89); David Saunders (1995-97); John H. VanOphem (1997-2000); Carol Legate (2000-01); Dik Lee (2001); Philip Downey (2001-04); Deloris Welgan (2005).

Many new innovative features were added during the last few years with an emphasis on graphics and new columns. As the newsletter continued to grow, it was necessary to create the position of Publisher to help facilitate its production. Dik Lee was the first person to serve in that role in 2001 followed by John VanderBrugge during Phil's tenure. Deloris Welgan, who currently edits the Whirlpool, is the first person to serve as both Editor and Publisher.

With the advent of the Internet, the Niagara Whirlpool was first available online in 1997 in the popular PDF (portable document format) configuration for members to download. No longer being mailed to the majority of the members has resulted in a significant cost savings to the Niagara Centre and an added convenience to the membership.

The Niagara Whirlpool has become an institution in the Niagara Centre, thanks to the hard work of everyone involved with it over the last twenty-five years. Their work has been appreciated by the members who find the Whirlpool to be a valuable benefit of membership. It was a privilege and honour to have been involved with it from the very beginning a quarter century ago. It was great fun and a good learning experience. Best wishes

to Deloris and future Editors as they carry on this fine tradition.

I believe I have the only complete collection of the Niagara Whirlpool. To share them with the rest of the membership and to preserve a large part of our history, I plan to create a CD for our library containing every issue to date. This will take some time but it will be an enjoyable trip down memory lane.

**Kendrick Astro  
Instruments**

2920 Dundas St. West  
Toronto, Ont M6P 1Y8  
Phone 416 762 7946  
Fax 416 762 2765  
www.kendrick-ai.com

**CONGRATULATIONS**



Phil Downey is the first Niagara Centre Member to receive his Messier Certificate. It took four years to log all 110 objects. Brian Pihack presented him with his certificate, issued by the National Office, at the December General Meeting.

**Members' Observing  
and Observatory Director's  
Report**

by Les Marczy

Happy New Year all! I trust everyone had a safe and Merry Christmas. Well, now that the holidays are behind us, we can relax a little and enjoy some stress free observing. We have a very nice comet that is naked eye, as I write

this. If you have a pair of binoculars, step outside after dark and scan the sky west of the Pleiades. It's an easy target to spot; even better in a dark location. Comet Machholz will head in a northerly direction from that location. The weather lately has been great as far as snow goes but the clouds seem to be very frequent, making it tough to get out. If the skies clear, make an attempt to get out to observe this comet... it's quite beautiful.

For those of you who didn't make it to the last general meeting, I reported that the new observatory had been erected on November 27<sup>th</sup>. There is still a lot of work to be done but it is coming along nicely.

This spring the power will go in and the final wiring will be completed. In the mean time, as the weather permits, doors, locks, fascias, vents and drip edges will be installed. I will call you all when needed. Also I would like to thanks those who came out at very short notice to help with the raising.... "Great Job Boys"

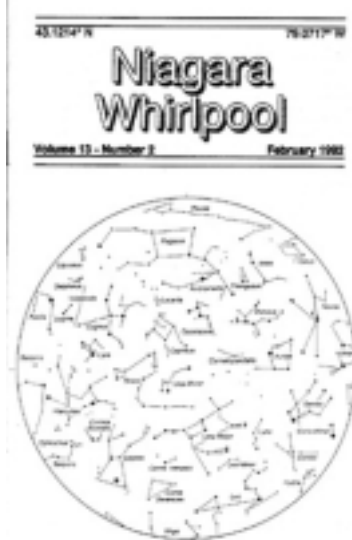
- Up Coming Members' Night's:
- Jan. 8<sup>th</sup> 2005
  - Feb. 5<sup>th</sup> 2005
  - Mar. 12<sup>th</sup> 2005
  - Apr. 9<sup>th</sup> 2005
  - May 7<sup>th</sup> 2005



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*Construction of*

*the new Observatory*



*on November 27*



*by  
Les Marczy*



*and his hard  
working team*



*Photos courtesy of*



*Les Marczy  
and  
Brian Pihack*





**Beginners Under Dark Skies  
Report**

by Mike Panucci

The Winter Night Sky

I hope everyone enjoyed their holidays and had the opportunity to do some winter night observing even though Mother Nature has made clear skies hard to find. Naked eye Comets do not come around often so Comet Machholz is a real treat to observe in addition to the winter constellations. In June 2004, I recall observing Comet NEAT during a BUDS night. It was a delight enjoyed by beginner members.

I would like to send a message to beginner members regarding the Beginners Under Dark Skies program (BUDS). Although the summer nights are more inviting and comfortable for observing, let's plan a Winter BUDS night at the observatory. The last BUDS night was held before September 2004 to which a small group attended.

Saturday February 5<sup>th</sup> will coincide with the planned members' night. The BUDS theme is rightfully called

"Winter Night Sky". For most observers, winter certainly makes for less frequent observing nights. The colder temperatures should not be a deterrent for observers but rather a signal to observe on those occasionally clear winter nights.

As with previ-



*Beginners workshop before the December General Meeting  
Photo by Brian Pihack*

ous BUDS nights, the instrument of choice will be the binocular, an excellent astronomy instrument, but please feel free to bring your telescope. There are some spectacular binocular showpieces in the winter night sky. The Great Orion Nebula is outstanding. This object by itself is worth a night of setting up and driving to any dark site to observe. For some amateurs, this Emission/Reflection Nebula played a significant part in their interest in amateur astronomy. Superb!

Some Binocular showpieces include...

- M42 Orion Nebula
- M31 Andromeda galaxy
- M44, M45 Open Star Clusters
- The Double Cluster

Some Telescope showpieces include...

- M1 Crab Nebula
- M32, M110 Companion Galaxies to M31
- M81, M82 Galaxies

We will Star hop through the night sky and locate these objects. We will sharpen our star and constellation locat-



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ing skills. I recommend you review a star chart and please dress accordingly. It can be pretty cold. Although it gets dark quite early, I would like to begin at 6pm but please feel free to arrive earlier before the sun sets.

Observing the winter night sky is just wonderful.

Come and join us. I am sure you will enjoy yourself.

**Dark Skies & Light Abatement Report**

by Wayne Liebau

This fall, Philip Downey and I met with a planner with the Regional Municipality of Niagara. He is working on Regional Policy Plan Amendment 187, which sets environmental policies for years into the future. The Plan matters to the RASC because we hope to have light pollution recognized as an environmental issue for the first time ever in Niagara.

We greatly appreciate the progressive outlook and support of planners so far. However, the goal is not merely to have light pollution abatement included in an official plan, we also want a wide variety of people to see the benefits of light pollution abatement for themselves so they willingly participate. If you remember the old fable about the sun and wind holding a contest to see which could remove the coat from a traveler, we're taking the sun's approach.

In order to help ensure that policy actually yields desired results, we will probably need to meet with officials in various relevant Regional departments. Likely, we'll also need

to meet with officials in the many municipal governments throughout Niagara. This is an intense and long-term project but there is no quick and simple magic bullet.

I am gradually developing a Powerpoint presentation for such meetings. WE NEED PHOTOS! Shots of good and bad lighting in identified Niagara locations would be really appreciated. If you're taking photos, please ensure that they demonstrate effects appropriately. For example, if you're comparing a streetscape before and after installation of cutoff lighting, but the "after" view is underexposed, the wrong impression results. Photos should be large enough to look good in a presentation; 600 - 800 pixels in width is about right. Light distribution patterns show best in fog and when it's snowing. If anyone is interested in taking photos but isn't sure what we need, please get in touch. Otherwise, please just send them in!

Whether you take photos or not, you can help raise the profile of the light pollution issue simply by making others aware. If you aren't sure of all the basics, [darksky.org](http://darksky.org) is a great place to start. If political representatives hear about light pollution from citizens, they'll be much more likely to support appropriate remedies.

In November, Phil and I also traveled to Rutenberg Sales Ltd. in Mississauga, a high-quality lighting design and sales company. Tony Rutenberg, a technical lighting specialist and a dark-sky advocate, generously took time to provide us with practical advice, the names of some key contact people and a look at some modern light fixtures.

And finally, a group of astronomy buffs may be meeting in Toronto over the next few months to begin developing pro-

vincial light pollution abatement bylaws. We'll be following that initiative and may participate in some way if possible.

Thanks in advance for any photos you may be able to send.

Dark skies!

**Sky Optics**  
Steve Barnes  
4031 Fairview Street, Unit 216B  
Burlington, ON L7L 2A4  
Phone 905-631-9944  
Fax 905-633-8293  
[www.skyoptics.net](http://www.skyoptics.net)



**Khan Scope Centre**  
Ray Khan  
3243 Dufferin Street  
Toronto, Ontario M6A 2T2  
Phone 416-783-4140  
Fax 416-783-7697  
[www.khanscope.com](http://www.khanscope.com)

### FAREWELL

Sadly, we say good-bye to Phil Downey who has decided to move to British Columbia. As well as editing the Whirlpool for the last three years, he and Wayne Liebau have been active at the Niagara Regional Council level concerning Dark Skies and Light Abatement.

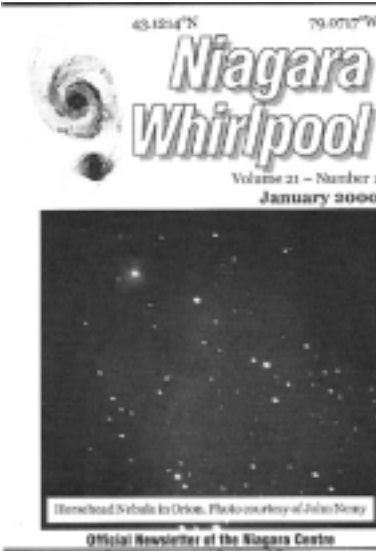
We'll miss you Phil!  
GOOD LUCK and CLEAR SKIES.



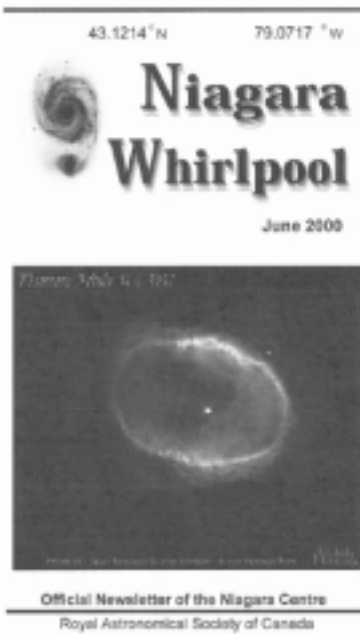
*Some of the executive members got together and gave Phil a going-away dinner at Alfredo's in Virgil.*



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# The Executive Christmas Dinner at Cafe Amore



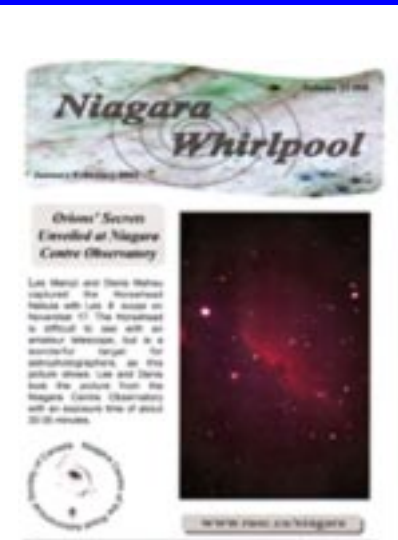
# Members' Christmas Party at Chatters



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### General Assembly 2005

The Okanagan Centre of the RASC is preparing to host you!

RASC members from across the country are warmly invited to join us in Kelowna, British Columbia, next May for General Assembly 2005. This springtime GA, on the Victoria Day long weekend, has a lot to offer. The four-day event includes a variety of tours, displays, contests, and lectures, plus plenty of great food and a sip (or two!) of Okanagan wine.

The Okanagan GA's roster of guest speakers is shaping up well. Confirmed presenters include Jack Newton, Andreas Gada, Tyler Foster, Rajiv Gupta, and Jaymie Matthews.

Saturday evening, the 2005 GA offers a dinner cruise aboard the S.S. Fintry Queen — Kelowna's popular paddlewheeler. There's always a chance that the legendary lake monster Ogoopogo will make an appearance, so keep a camera handy.

On Sunday afternoon, the Ruth Northcott Lecture will be presented by Jaymie Matthews, Mission Scientist for the MOST (Microvariability and Oscilla-

tion of STars) satellite. Dr. Matthews will bring us up to date on the latest results from Canada's own "Humble Space Telescope". Among MOST's scientific goals is direct detection of light from exo-solar planets — a very exciting and competitive area of research.

Astrophotographer Jack Newton is our banquet speaker Sunday evening at Gray Monk Estate Winery just north of Kelowna. Gray Monk boasts a first-class reputation for its wines and cuisine, all in a spectacular setting among vineyards overlooking Lake Okanagan. Jack's talk — planned to follow an optional tour of the winery — will feature many of his finest, and most interesting astrophotos. Crisp focus is required, so go easy on the wine!

On Monday, you can choose to journey south for a special insider's tour of the Dominion Radio Astrophysical Observatory near Penticton. Then, if you like, continue down the valley for an open-house at Jack and Alice Newton's Observatory Bed & Breakfast in Osoyoos.

Of course, you can expect a variety of presentations, activities, and displays throughout the General Assembly at the event's home base among the pines at the North Kelowna Campus of Okanagan University College. Accommodation is available on

site in the student residences. OUC is co-sponsoring the GA.

All in all, we think we have the makings of a very memorable and most enjoyable national convention. As more information becomes available, you can keep track by visiting the GA's web site, [www.ocrasc.ca/ga.html](http://www.ocrasc.ca/ga.html)



### *Librarian's Corner*

by Darlene Sloggett

Happy New Year and welcome to a new feature in the Whirlpool. You can look forward to this being a regular item.

I'd like to use this column to tell you about new additions to the Club Library and share stories and reports about books your fellow members have read.

We have over one hundred and thirty books for your reading pleasure. More books are being donated and we welcome them. If space permits in the next issue, I will include an updated list. I know you'll be amazed at the wide selection of books our library offers and will want to check them out for yourselves. You can do that by asking me at any General Meeting or emailing me your request and picking it up at the next Club gathering. You will sign them out as you would at any library and then return them to me.

I encourage everyone in our club to make good use of this resource. It is available for all of us to enjoy!

*California Nebula  
taken November 14th  
by Les Marczi*



**Niagara Centre Store**

RASC 2005 Calenders	\$13.00
Beginner's Observer's Guide	\$13.00
RASC 2005 Observer's Handbook	\$16.00
Planispheres	\$15.00
RASC Lapel Pins	\$ 6.00
Centre Crest	\$ 5.00
Bumper sticker	\$ 3.00
RASC Cloth Crest	\$13.00

See Dave Stremlaw for above items.

**Magazines**

Group rates available for Sky & Telescope and Astronomy.

Anyone interested in getting the club discount for subscriptions to these magazines should contact Dave Stremlaw. With a group subscription plan you also receive 10% discounts on Sky & Telescope's wide selection of astronomy books.

Sign up with Dave at the next General Meeting or call him at 905-892-2767 to get these great discounts.

Astonomy stuff for sale?

**Free ad space for members.**

Contact Deloris Welgan - see contact information in this issue.

**Slide/Negative Scanning**

For anyone wanting to have their slides/negatives converted to digital files, I can scan them at high resolution, 2800 dpi, and save them onto a CD-R. Cost: \$1.00 per file, \$5.00 for CD-R. Contact Les Welgan at 905-934-4647, astro\_nuts@cogeco.ca

**For Sale**

Supercircuits PC-23C monochrome low lux video camera (unmodified). Asking \$100.00. Contact Rick Eller at 519-426-2471.

**For Sale**

15 inch Obsession-style truss tube Dobsonian telescope

1. Primary mirror f/5-2inch thick with enhanced coatings (96%), Nova Optical Systems (Ronchi test provided), coated by Spectrum Coatings
2. Secondary mirror 2.6 inch with Dielectric coatings (98%), Nova Optical Systems (Ronchi test provided)
3. Protostar spider and secondary holder with internal dew heater
4. Kendricks dew controller and heaters, Telrad with internal heater
5. Sky Commander digital setting circles and encoders (9000 object data base, Go-To)
6. Remote electric collimation system (allows user to collimate from eye piece unassisted)
7. JMI DX-1 two-speed focuser (coarse and fine focus)
8. Astrosystems telescope cover for star parties, etc.
9. Onboard power consisting of 2 x 7 amp rechargeable batteries (14 amps, 12 volts)
10. Cast aluminum altitude bearings
11. Counterweight balance system to allow use of cameras, etc.
12. Quality construction with Baltic Birch hardwood, maple, stainless, aluminum, etc. A complete large aperture telescope ready for deep sky observing. Price: \$5700. Contact John VanderBrugge at 935-9355.

The club has a wide variety of T-shirts and sweatshirts in different sizes and styles for sale.

Contact **Glen Pidsadnick** if you are interested in purchasing one to support the club.

BlackHooded sweat shirts=\$35.00

BlackRegular sweat shirts= \$30.00

Black&Natural T shirts = \$20.00

Black&Natural Long sleeveT-shirts = \$23.00

**For Sale Reduced Price**

Finished but uncoated 8-inch f/3.8 mirror, 1 3/8" thick Pyrex. Comes with proper plywood shipping crate. Suitable for a fast Newtonian or it is cored if you want to make a Cassegrain. If you would like to pick it up I will also include the tube and mirror cell that were built for this as well as a polished but unfigured Cassegrain secondary. Mirror was completed a year-and-a-half ago. It looks ugly as I started with a rough looking blank, but this will have negligible effect on the image. Asking \$50 or best offer. Contact Joe Iannandrea at 905-991-0781.

**Event Horizon**



January 8                   Members' Night, CCCA Observatory  
January 10                  New Moon  
January 15                  Public Starnight, Fireman's Park, Niagara Falls  
January 20                  General Meeting, Niagara Falls Public Library, 7:30pm  
                                  Beginners class at 6:45pm

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February 3                  Beginners class at A.N.Myer School, 7:00pm  
February 5                  Members' Night/BUDS Night, CCCA Observatory  
February 8                  New Moon  
February 17                 General Meeting, Niagara Falls Public Library, 7:30pm  
                                  Beginners class at 6:45pm

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March 3                     Beginners class at A.N.Myer School, 7:00pm  
March 10                    New Moon  
March 12                    Members' Night, CCCA Observatory  
March 17                    General Meeting, Niagara Falls Public Library, 7:30pm