PETERBOROUGH ASTRONOMICAL ASSOCIATION

THE REFLECTOR

Volume 3, Issue 4 April 2004

Editorial

April is shaping up to be a good month for astronomy. First off, in the beginning of the month, all five naked eye planets will be visible in the evening sky. Mercury, Venus, Mars, Saturn and Jupiter will all be visible just after sunset. Venus puts on its best show in years, and it will end up transiting across the surface of the sun on June 6th.

During April, comets LINEAR and NEAT will begin to put on their shows as well, though they will be best early next month. Comet LINEAR is better placed for southern observers, but it will become visible in the early morning hours till the end of the month. In late May and early June it will be better placed in the evening sky. It looks like Comet NEAT will be our comet of the year for observers at our latitude. In early May it will climb in the western sky. It should be at its best around May 6th to 10th, where it should get to magnitude 2.5. NEAT will be closest to Earth on May 6th. It reaches perihelion on May 15th, but gets barely closer to the sun, than we do. Comet LINEAR is closest to earth on May 19th.

Janet Mattei, director of the AAVSO for over 30 years, passed away last month.

The last "great comet" seen in this part of the world was Comet Hale-Bopp in 1997. Comet NEAT may not be as bright, but will be impressive non-the-less.

This year, Astronomy Day will be on Saturday, April 24th. The PAA will be holding a day long event at the Centennial Museum on Armour Hill. This is a time, when we will bring our hobby to the public at large. The daytime show will run from 1:00 until 5:00 in the afternoon. Then we'll break for supper and head up to the peak of Armour Hill to set up our scopes for a night of public stargazing. For more details see the article "Astronomy Day is April 24th…". If anyone is willing to help or just wants to see what is going on, I encourage them to attend this event.

On a sad note, Janet Mattei, director of the AAVSO, passed away this month at the age of 61. To those of you that have been members of the AAVSO she needs no introduction. Born in Turkey, she when to university in the US and joined the AAVSO in 1969. Three years later she became the director of the

Inside This Issue

***Sky and Telescope* releases a new magazine this May aimed at beginners. *Night Sky* promises to be a true beginner's magazine, with an emphasis on how to find things in the sky and how to get the most out of your equipment.**

organization, and saw it go from snail mail and visual observing to the Internet and CCD age. “Amateur astronomers around the world have lost a mentor.” On her 30th anniversary with the AAVSO, Janet was leading the organization into the brave new world of CCD observing.

For those of you who have been looking for a “beginner’s magazine”, there is something new on the block. Sky Publishing is releasing a new magazine called “Night Sky”. It should start hitting newsstands in May. It will be published bimonthly and will be exclusively devoted to beginners. For further information be sure to check out their website at *www.nightskymag.com*.

Just a reminder, the April 16th meeting will be at Don McDonald’s Observatory near Hastings. See our web page for directions. Remember to bring your telescopes and/or binoculars, he has an excellent dark sky site to observe from.

Clear Skies

Charles W. Baetsen
va3ngc@rac.ca

Meeting Notes

March 5, 2004:

The most recent PAA meeting was well attended with over 30 members present. Club President, John Crossen opened the evening’s activities by welcoming three new visitors and announcing the latest additions to our video and book libraries.

Brian Greene's Elegant Universe, Arthur C. Clarke's Mysterious Universe, and "Stargazers: A celebration of Lowell Observatory's first 100 years" comprised the new video additions. Dan Bortolotti's Exploring Saturn was our latest literary addition. By the way, Dan will be speaking to the PAA group on April 30th. If his presentation is anywhere near as good as his book, this will be a must see.

Next on our "new business" list was the introduction of council member Don MacDonald as the headman for our trip to Haliburton Forest Observatory on May 15th. Don has all the information on accommodations, sharing accommodations, costs and setting up car pools. Of the 15 spots we have reserved, 13 are already taken. So if you haven't already signed up for the tour, call Don at 705-696-2977 real fast!

Jim Kendrick showed off some new products that he will be carrying at *Kendrick Astro Instruments* in Toronto.

Our Guest Speaker for the night was Astro-Entrepreneur, Jim Kendrick. Jim presented his new line of wide-field eyepieces to open the presentation. These affordable, Japanese-made oculars deliver 84-degree apparent fields of view at about 1/3 the price and half the weight of comparable Naglers. Jim also showed off his line of Newtonian and SCT collimation tools and the latest high-tech version of his dew-removal system that can actually sense the dew level and lets the user adjust the individual temperature levels of the heating straps.

Jim wound down his talk answering a volley of questions on other new products coming to his line. He'll be back this fall to tell us more of what's new at Kendrick Astro Instruments.

New PAA members Richard Matthews and Stan Pope took possession of their PAA "loaner scopes" to bring the night's activities to a close. Richard took over the 6-inch Dob that John Crossen had rebuilt and Stan will do his stargazing through a 4-inch refractor that has been tricked out with a correct-view finder, red-dot finder, and a specially darkened tube interior.

Just a side note here, Richard has designed artificial satellites during his career and will be giving a talk to PAA members on his experiences this coming fall. In the mean time, clear skies and happy star hopping guys.

Peterborough Astronomical Association

The Reflector is a publication of the Peterborough Astronomical Association (PAA). Founded in 1970, the PAA is your local group for astronomy in Peterborough and the Kawarthas.

Website
www.geocities.com/paa_ca

Email
paa_ca@yahoo.com

Club Mailing Address
c/o Dave Duffus
7 Riverview Hts.
Peterborough, ON, Canada K9J1A9

The March 5th meeting eventually shut down about 10:30 with the member's continuing their conversations outside into the parking lot. It was a great meeting thanks to everyone who attended and especially to our guest speaker, Jim Kendrick.

March 19, 2004:

Friday night, March 19th was the first night in months that a scheduled PAA observing session wasn't clouded out. We gathered in force in the yard of Greg Haynes for some long-overdue stargazing. With trunks loaded with observing gear, we headed south of Peterborough to take in some long-overdue stargazing in Greg Haynes' yard.

We enjoyed some excellent images of Jupiter and Saturn through John Patton's 'home-brewed' 4-inch reflector. For deep sky objects, Colin's 10-inch Dob performed very nicely despite a growing haze overhead.

John Patton's home-brewed 4-inch reflector got lots of use at our first successful observing session of the year.

Personally, I was surprised at the performance of the PAA 6-inch Dob under the command of new member Richard Matthews. It delivered a visually rewarding balance between deep-sky and planetary observing. Naturally, Observing Director Dave Duffus was on hand with his 8-inch Schmidt as were John Crossen and Rene Bowe with giant binoculars and an 8-inch Dob respectively. Joining the fun were Rick Stankiewicz, Rob Fisher, Gary Gauthier, Diane Paterson, Al Day, and our host for the evening, Greg Haynes.

New member Richard Matthews enjoys the view through the PAA's 6-inch Dobsonian .

Thanks Greg for the loan of the dark sky over your property. It was greatly appreciated by all. Our next Observing session will be at Don MacDonald's observatory on April 16th. A map will be posted on the PAA web site for members.

John Crossen
JohnCstargazer@aol.com

Transit of Venus Expedition 2004

Transits occur when an inferior planet moves across the disk of the Sun. This can only occur when the planet is at inferior conjunction (on a line between the Earth and the Sun), and near one of the nodes of its orbit (where the orbit crosses the ecliptic). The geometry is similar to that of an annular solar eclipse. While there are roughly 13 transits by Mercury per century, transits of Venus are much rarer in terms of human life spans. The transits of Venus occur at intervals of 8, 121.5, 8 and 105.5 years. The last transit of Venus occurred in 1882. The next pair will occur on 8 June 2004 and 6 June 2012.

In the 18th century, it was thought observations of the transits of Venus and Mercury would help to determine the distance of the Earth to the Sun. So important were these observations that both England and France, despite frequent wars between them, dispatched the expeditions of Dixon, James Cook, and the unfortunate Le Gentil, among others.

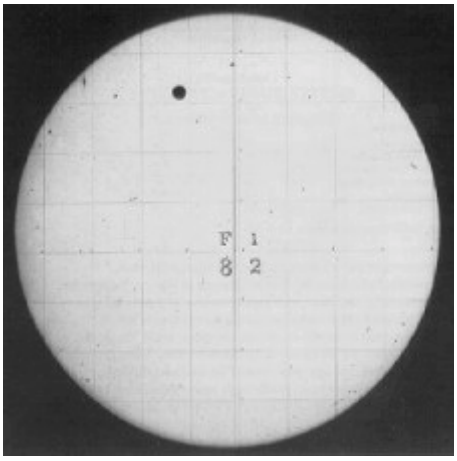
Although observations of transits of Venus are no longer considered scientifically useful, they are a test of one's observational skills. Because of its atmosphere, Venus does not present a "hard-edged" disk, so it is impossible to determine when the planet actually crosses completely on and off the solar disk (the first to fourth contacts). The challenge is to obtain contact times and compare them to the predicted values for the observing site.

We are experiencing a dearth of accessible affordable central solar eclipses, so the Toronto Centre is organizing an expedition to observe the transit of Venus from Egypt next year. The travel agency is Beechwood Travel of Waterloo, the agency that arranged our very successful eclipse expedition to Curaçao in 1998.

Ralph Chou of the Toronto Centre of the RASC is arranging an expedition to Egypt to view this years Transit of Venus in June. Egypt has a favorable position and favorable weather to view the entire transit.

Departing from Toronto on Saturday, 29 May 2004, our group will fly to Cairo, where we will begin our stay in Egypt with a tour of the city, including visits to the Egyptian Museum and the Bazaar. The next day, we tour the Pyramids of

Giza, Memphis and the Hurghada resort area, our observing site for the transit. We return to Cairo on 10 June, and fly to Toronto the following day.



The last transit of Venus (in 1882) could only be recorded on B&W film (or sketched). This year's transit will be captured with film, webcams and digital cameras, all in colour for the first time ever.

For a group of 20, the price is $3245 CAD per person including airfare, ground transfers, designated meals and taxes for double occupancy, $3185 for triple occupancy, with departure taxes of $95. The single supplement is $595. Certain lunches and dinners are not included in the price, nor are tips and gratuities. A deposit of $350 is payable on making your reservation, and travel insurance should be arranged at that time.

Egypt is a relatively safe, inexpensive tourist destination with many interesting places to visit, and an almost 100% chance of clear (broiling) skies on the critical day. If you are interested in participating in this expedition, please contact me by e-mail at *ralph.chou@sympatico.ca* or by telephone evenings at (905) 567-8694. If you wish to contact the travel agency directly about the tour, you can contact Janice at Beechwood Travel by e-mail at *beechwood@bellnet.ca* or by telephone at (519) 884-4770.

Ralph Chou, RASC - Toronto Centre
ralph.chou@sympatico.ca

According to Ralph Chou, there is still some places left, so if anyone is interested, they should contact the travel agency in Waterloo ASAP.—Ed.

Astronomy Day is April 24th. Join in for Fun and Stargazing

International Astronomy Day arrives on April 24th this year. And the PAA has already made plans. That's the day the we're is going to take amateur astronomy out of the dark and shed a little light on our favourite hobby.

At noon we will set up the PAA display at the Centennial Museum on Armour Hill. There will be scopes with solar filters for public observing, a really bad trash scope will be on hand to demonstrate what not to buy, and, of course, a couple of decent scopes will be on hand to show what really works.

A slide show will run every hour on the hour showing some of the wonders of our universe. A selection of beginner's books will be on display to show the public what we recommend. Plus we'll be on hand to answer the questions about astronomy from our solar system out into the universe.

The daytime show will run from 1:00 until 5:00 in the afternoon, then we'll break for supper and head up to the peak of Armour Hill to set up our scopes for a night of public stargazing, weather permitting, We will spend the night taking the public on sky tours of Saturn, Jupiter, Venus, the Moon and some of the brighter Messier objects.

Naturally, everyone from the PAA is encouraged to join in both for fun and to make a strong showing for the club. Besides, if we all get together and wish really hard, we might even get a clear night. But, rain or shine, the daytime show will go on.

John Crossen
JohnCstargazer@aol.com

On April 24th this empty pavilion on Armour Hill becomes the centre of Peterborough's astronomical universe thanks to the PAA and you.

The Sky This Month

MERCURY

Mercury will be at its best for the evening sky early in April. Look for as twilight begins in the north west.

VENUS

Venus is visible in the evening sky after sunset. It is getting higher and higher in the evening sky.

MARS

Located will be located in Aries and is visible in the evening sky.

JUPITER

Jupiter will be in Leo and appears above the horizon the evening.

SATURN

Saturn is visible this month after sunset, located in Gemini. It is the closest it gets for another 30 years.

URANUS

Uranus is not easily visible at this time.

NEPTUNE

Neptune is not easily visible at this time.

PLUTO

Pluto is visible in the early morning hours.

METEOR SHOWERS:

There is one major shower this month:

Lyrids: Apr. 16-25

There are also several minor meteor showers this month. For details on these see *http://comets.amsmeteors.org/meteors/april_radiants.html*

Lions, Crabs, and Spring are in the Air

Leo the lion and Cancer the Crab hang on the hind cusp of winter. Both are well up in the evening sky prior to spring's official entry on March 20th. Cancer is first over the horizon, just behind Gemini, the twins. And Leo follows dutifully along once dim Cancer has scuttled up the celestial beach. What treasures do these two harbingers of winter's end hold for the astute amateur astronomer? A feast is the answer if you're into astronomical eye candy.

Let's start with Cancer the crab. Without a doubt, Cancer is the dimmest of the twelve zodiacal constellations. It is perhaps better known than it is seen. Nonetheless, this faint assemblage of distant suns has played a major role in Earth's geography.

About 2,500 years ago the Sun reached its most northerly point in the sky – now called the summer solstice – when it was in front of this group of stars. If you stood at 23.5 degrees north latitude on June 21st, then the Sun would have been directly over head. This latitude has since come to constitute the northern boundary of the tropics, or the Tropic of Cancer. Today, thanks to the shift in the Earth's axis called precession, the Sun now lies in Gemini, the twins. But the name didn't change; we still call it the Tropic of Cancer, much to the chagrin of the brothers Castor and Pollux.

Biggest and best known of Cancer's offerings is the magnificent open cluster M44. Under dark skies it is easily seen with the unaided eye. And in a pair of binoculars it literally explodes into a riotous buzz of stars. Perhaps that's why it is also known as "The Beehive."

In ancient times, M44 was also known as Praesepe, which means little cloud. Those of a more religious persuasion considered it to be a thin spot in the floor of heaven through which souls passed on their way to the after life.

M44 lies at a distance of 515 light years and contains about 75 visible stars with the brightest being magnitude 4.5. The cluster extends about 80' or three times the diameter of the full moon.

Below M44, and far more difficult to see, is Messier object M67. This telescopic open cluster of about 65 stars lies at a

M44, the Beehive Cluster, is one of the most spectacular open clusters visible in binoculars.

M65, M66 & NGC3593: This beautiful Trio in Leo can be seen in the same field of view with a wide field, low powered eyepiece and a fast scope.

distance of 2,700 light years with the brightest star being 6th magnitude.

Cancer also contains some galaxies, but the only one above 12th magnitude is NGC 2275, which is located on Cancer's southeast corner near the border with Hydra.

Behind Cancer, but far more easily recognized is the constellation Leo the lion. Leo is one of those rare constellations that actually look like what they are supposed to be. Connect the dots and bingo, you've got a lion. Indeed, if the ancient Sumerian, Babylonian, Persian, Syrian, Greek and Roman cultures agreed on one thing it was that this particular configuration of stars looked remarkably like a lion.

A little ocean hopping to South America and we discover that members of the ancient Inca culture came to nearly the same conclusion. However, in keeping with the local wildlife, their mighty cat was a puma. To be different, the Chinese claimed Leo was a horse. Then again, they had an odd version of checkers, too!

By 8:00 in mid-March, The Lion has already sprung free of the horizon and begun stalking the night sky. Leo's brightest star is Regulus, which means "little king" in Latin. Its position within the constellation is just about where the lion's heart would be. Regulus has a magnitude of 1.4.

Bringing up the rear of Leo is the 2nd magnitude star Denebola. You'll find it at the eastern vertex of the right triangle that forms Leo's hindquarters. The balance of the stars in Leo range from 3rd magnitude down to magnitude 4.4. If you can see all the stars in the constellation, you're probably viewing it under a sky with a limiting magnitude of at least 5. That's not bad in today's light-polluted world.

To the rear of Leo is the dim constellation Coma Berenices. For years I knew it as an open star cluster which presented a beautiful sight in binoculars or my finder scope. In addition to representing the golden tresses of the Egyptian queen Berenice, this constellation/ cluster is said to be the tuft on the lion's tail.

Leo is rife with galaxies, and to me that means its springtime again. Among Leo's brighter galaxies are 5 Messier objects. M65 and M66 form a close-set pair of spiral galaxies near Leo's haunches. They are about 10th magnitude and can just be seen in binoculars on a very clear night. Galaxies M95 and M96 may be found below and to the east of Regulus. Just north of them is yet another galaxy, M105.

Let's break out the scopes. Spring and the beginning of galaxy season have entered with a roar.

John Crossen
JohnCstargazer@aol.com

Obituary: J. Beverley Oke (1928 – 2004)

I read with interest this obituary in The Globe and Mail on Thursday, March 18, 2004 (Page-R7), as I had not heard of this person before and I must say that by the time I was finished reading the full-paged article, I was a little ashamed that did not know of them previously. The following is a much condensed version of the article. "Oke" is pronounced "oak" by the way.

John Beverley Oke was born in Sault Ste. Marie, Ontario, on March 23, 1928 (he was 75 years old) and earned his bachelor's degree in physics in 1949 and his master's in 1950 from U. of T. He earned his doctorate from Princeton in 1953. He came back and taught at U. of T. and started work on his machines and by the mid-50's had built his first of many electro-spectrum scanners.

In 1958 he moved to the California Institute of Technology. It was here he further developed the scanner that would revolutionize the people understanding of the universe.

From 1970 to 1978, he was Associate Director of the Hale Observatories (which then included Caltech's Palomar Observatory and Mount Wilson Observatory). At Palomar he invented instrument for the 200-inch Hale telescope and helped develop equipment for the Keck telescope in Hawaii too.

Prof. Oke was a Canadian astronomer

who developed machines that analyze the faint light of "heavenly bodies" billions of light-years away. He took the theory and made the machines that proved the reality. His machines could take the faint spectrum of light from a star and accurately estimate the star's temperature. Methods and techniques that were developed by Oke 34 years ago are still the standard people use today. That is really saying something when you consider the changes in cosmology every year these days!

Prof. Oke also built the prototype for a device used on the Hubble Space Telescope (HST) to analyze the faintest flickers of light that come under its gaze. In 1974, when the Mariner 10 spacecraft was visiting Mercury and NASA was being praised, Astronomy Magazine called Prof. Oke's work the most important of the year.

It was Prof. Oke that helped unravel the mystery of the quasar. Because of his spectral analysis of remote galaxies, he essentially wrapped up the distance debate. After many years, researchers realized that the energy source of a quasar must be material falling into a supermassive black hole.

The day before he died, he was in his office in Victoria, B.C., working on designs for instruments to be used with a proposed new telescope whose backers include some of the Keck partners. At 30 meters in diameter, it would be the largest n the world.

Prof. Oke died of heart failure on March 2, 2004. I venture to say that Prof. Oke will be missed…more than we know.

Rick Stankiewicz, VP
stankiewiczr@nexicom.net

Astrobuysell Helps Build Membership

Just about everyone who has been involved in astronomy for more than a couple of years has visited www.astrobuysell.com a few times. Some make checking it out a daily ritual. The web site is free to amateur astronomers who are selling or want to buy anything from eyepieces to exotic scopes, whole observatories, and more. The fact that it averages over 132,000 hits yearly makes it a good place to have an ad. And that's right your friendly local Peterborough Astronomical Association has an ad, thanks to Charles Baetsen and web site owner Paul Markov.

Charles pulled our banner ad together to meet the required specs for being on the site, and Paul donated the space. Thanks to both you gentlemen for your time and generosity. And if you haven't hit the site yet, crawl out from under that rock and have a peek. I used astrobuysell many times while outfitting the BHO rental scopes and not only are the prices great, but I've never had a problem with anyone I've dealt with.

John Crossen
JohnCstargazer@aol.com

Star Parties 2004

Here in chronological order are the dates of some of the major star party events coming up for 2004. Star Party information was compiled in part by Harold Healy, *Skyline*. Thanks Harold!

Texas Star Party - 26th Annual, **May 16th to 23rd**. Located on the Prude Ranch near Fort Davis, TX.
Web Site: *http://www.texasstarparty.org*
E-mail: *tspreg@texasstarparty.org*

10th Frozen Banana Star Party - **May 19th to 24th** (Victoria Day Weekend), at Munro Park, Powassan, ON. Sponsored by the Sudbury Astronomy Club.
E-Mail: *hhealy@sympatico.ca*
Web Site: *http://www.sudburyastronomy.com*

Riverside Telescope Makers' Convention (RTMC) - The 36th annual RTMC Astronomy Expo will be held Friday, **May 28th - May 30th** (Memorial Day Weekend). It will be held at YMCA Camp Oakes, about 50 miles northeast of Riverside in the San Bernardino Mountains in California.
Web Site: *www.rtmcastronomyexpo.org*
E-mail: *registrar@rtmcastronomyexpo.org*

Solstice Star Party - **June 18th to 20th** at Mew Lake, Algonquin Provincial Park. The sooner people reserve camping sites, the better the selection will be. It's a breeze to register on-line.
Phone: *1-888-668-7275*.
Web Site: *www.OntarioParks.com*

Stargazing Manitoulin - will take place at new moon, **June 17th to 21st** at Gordon's Park.
Phone: *705-859-2470*
Web Site: *www.gordonspark.com*

Gateway to the Universe - **July 17th to 19th**. Sponsored by the North Bay Astronomy Club this event is held at Munro Park near Powassan.
Web Site: *www.gateway-to-the-universe*.
E-mail: *galaxy001@sympatico.ca*

Manitoulin Star Party - will take place before Starfest & just before the new moon on **August 11th to 16th.** Enjoy incredible camping & viewing from the dark sky sanctuary (we've got a reputation for the darkest skies in Ontario) in the fields & meadows of our park. This site features an on site observatory with 360 degree viewing and extremely dark skies. Potluck barbecue turkey supper, astronomy workshops, astrophotography slide show presentation, guided nature hikes, night sky tours & evening public

There is no place like a star party to meet hundreds of other astronomers and look into dozens of scopes.

observing sessions. Everyone welcome!
Phone: *705-859-2470*
Web Site: *www.gordonspark.com*

Stellafane - August 13th and 14th, Breezy Hill, Springfield, Vt. Sponsored by the Springfield Telescope Makers. For convention bulletin and registration card send a self-addressed business envelope (#10) to: Stellafane Convention, P. O. Box 50, Belmont MA 02478.
Web site: *www.stellafane.com*

Starfest - August 19th to 22nd at The River Place Campground, near Mount Forest, Ontario. Sponsored by the North York Astronomical Association.
E-mail: *inquiries@nyaa-starfest.com*
Web Site: *www.nyaa-starfest.com*

Huronia Star Party - Sept 8th to 12th at Location Camp Solaine, Ivy Ontario (North of Thornton on the 20th side road west of Hwy 27). Indoor accommodation available with showers. *(NOTE: "Yours Truly" will be giving a talk at this one)*
Web site: *www.cois.on.ca/~ssaa*
E-mail: *GordRife@aol.com*

Annual Algonquin Adventure - September 17th to 19th, sponsored by the Toronto Centre, RASC, at Mew Lake in Algonquin Park.
E-mail: *astronomers@sympatico.ca*
Web Site: *http://openweb.ca/~rasctoronto/algonquin.adventure.html*

11th Frozen Banana Star Party - October 14th-17th (this is tentative only), Munro Park, Powassan. Sponsored by the Sudbury Astronomy Club.
E-Mail: *hhealy@sympatico.ca*
Web Site: *www.sudburyastronomy.com*

Two Scopes See First Light as PAA Loaners

Being interested in astronomy doesn't mean you have to spend thousands on a telescope. If fact, many people enjoy the hobby with nothing more than a star chart and a pair of binoculars. And if you're just starting out, that's actually the best choice you can make. And if it turns out that astronomy isn't for you, the binoculars are still useful for sports events, birding, and checking out the new neighbours.

But sooner or later, everyone wants to get a closer look that faint fuzzy blob. And that's when astronomy can get expensive – and disappointing. The PAA loaner scopes help make things easier. For starters, they're both reasonable quality instruments. They're also simple alt/az instruments. That means there's no polar alignment required. Just point and peek. And best of all, they're available at no charge to members.

Richard Matthews got first crack at the PAA 6" reflector. Originally built in the mid-sixties by Criterion, about all it needed was a clean up and some fresh paint. Originally on a German equatorial mount, a simple dob base was built for it to make operation a simple and enjoyable experience

Stan Pope took the controls of a 4-inch refractor temporarily on loan from Buckhorn Observatory. Stan had originally purchased a goto Celestron from Cosco. Unfortunately, the only place it went to was back to the store when Stan found that it didn't go anywhere when the weather got cold.

Both scopes come with 10 and 25 mm eyepieces along with a 2X Barlow lens. That lets the operator of each scope choose from 4 power levels. They have also been outfitted with correct-view finders and red-dot star pointers. Working your way through the stars should be reasonably easy, even for a novice.

At the moment, new PAA members Richard Matthews and Stan Pope have the scopes. But a line is already forming behind them with another recent PAA joiner, John Cameron, at the head of it. Could it be we need another couple of loaners? Well, if you've got an old .96 refractor or whatever lying about, unload it on us. We'll fix it up and get it back out under the stars. The same goes for eyepieces, Barlows and star charts. Someone can always use them.

The PAA Library has Lots

The PAA library has lots of books, videos, maps and software, and that means lots more people to thank.

Last week I decided to update our video and book library sheets. It had been one year plus two days since the library first came into being on March 7th, 2003. Back then we had about 49 books and 8 videotapes. Today the library has grown to 138 books and fluffed up the video stack to exactly 40 titles. That's quite remarkable. And it all happened thanks to the help of club members.

For starters, Peter Shewchuk has been a generous donator. And Charles Baetsen boosted the video library plus we've benefited from the donation of a number of books from the late Sid Barry's collection.

John Crossen has salted the video, software, and book libraries with a number of titles. Allan Day and Diane Paterson have bumped up the "map" and "how-to" libraries. Plus we've had a number of additions courtesy of Frank Hancock, Don MacDonald, Paul Brown, Ian Craig, plus Matt and Susannah Walden. Personally, I'm very proud to see how we've all worked together to build the library's offerings so quickly and so well.

With that in mind, here are two new additions to the library:

Yet another excellent double feature lands in the PAA video library. Top pick in my opinion is *Journey of Man*. This is another of those wonderful PBS documentaries that delivers two fact-packed hours of entertainment that will change your mind about race and where we all come from. The video also delves into how climate and habitat have actually shaped the way different cultures look. And it all took place in the last 50,000 years. That's about 2,000 generations. It's exciting stuff, and filled with some spectacular scenery as well. First one to the table gets it. No elbowing, please.

Our second feature is another journey flick. Titled *Journey to Mars*, and narrated by Allen Alda, this video takes you on a behind the scenes look at the space medicine that is being developed to help astronauts on the year-long journey a trip to Mars will require. Everything from recycling all water – including waste water (eeeeuuuuuuuu!) to on-board farming and exercising is covered. It isn't filled with all kinds of trick animation, and special effects, but everything the video touches on is a vital issue if the crew is to return safely. Speaking of which, the rocket fuel for the return trip will be made automatically from existing Martian resources by a mini-factory that will be sent on ahead of the landing party. Interested? I thought so.

By now, most of you will have the new listing of titles in your hands. It was handed out at our last meeting on March 19th. As you scroll your eyes down the pages, I hope you take pride in the fact that this is an astronomy club that exists for – and thanks to – members like you. Now if we could just get a couple of clear nights.

John Crossen
JohnCstargazer@aol.com

You Heard it at the PAA Meeting First

Well, if it's got to do with dew removal systems, eyepieces or telescope collimation tools, you probably did, thanks to Jim Kendrick's recent presentation to PAA members. Jim is well known for his innovative dew removal systems. But since setting the pace in that end of the market, he has also expanded to the point that he, wife Luda, and a staff of four now run Kendrick Astro Instruments in Toronto. It's a fully stocked telescope store that has or can get anything your astronomical heart desires. But Jim's real love is developing new products.

To that end, he is raising the bar in the dew removal world with a computer- operated system that can sense the dew point and turn on automatically. Plus, you can select four different temperatures settings for four different parts of your scope. For instance, there's one for the primary lens, another for your eyepiece, yet another for the finder scope and finally, a separate heat setting for your camera lens. The "brews its own coffee model" comes next year!

But that's just the beginning. Jim is also developing a metal observing chair that has a heated cushion and a seating area that remains level as it moves up and down. It folds down into a neatly transportable package. Jim says it looks great – especially in the dark.

We were also treated to a lesson in Newtonian and SCT laser and barlowed laser collimation. That's right, Mr. Kendrick has been busy with new developments in that field. The niftiest of which is a collimation tool with a 45-degree front piece that lets you see where the laser beam is hitting.

Care for a mega wide-field eyepiece that doesn't cost mega bucks? Try one of the new KK Widescans. With an apparent field of view that's 84 degrees wide (beats Nagler's by 2 degrees) and prices that start at $279, you'll be enjoying a space walk every clear night of the year.

But Jim's talk wasn't all techno-babble. A number of members wanted to know how he got involved in astronomy and how he goes about developing, then having a product manufactured. It's an interesting process that takes a lot of time and listening to what amateur astronomers want and need. It's also still very much a family business. And yes, Luda still sews the name tags on all the dew heater straps.

ARTICLES

Submissions for *The Reflector* must be received by the date listed below. E-mail or "sneaker-net" (i.e., floppy disk) submissions are preferred (Microsoft Word, ASCII and most graphics formats are acceptable). Typed or hand-written submissions are acceptable provided they are legible (and not too long). Copyrighted materials will not be published without written permission from the copyright holder. Submissions may be edited for grammar, brevity, or clarity. Submissions will be published at the editor's sole discretion. Depending on the volume of submissions, some articles may be published at a later date. Please submit any articles, thoughts, or ideas to this address:

Charles Baetsen
4094 Squair Rd
Orono, ON
L0B 1M0

or via e-mail at:
va3ngc@rac.ca

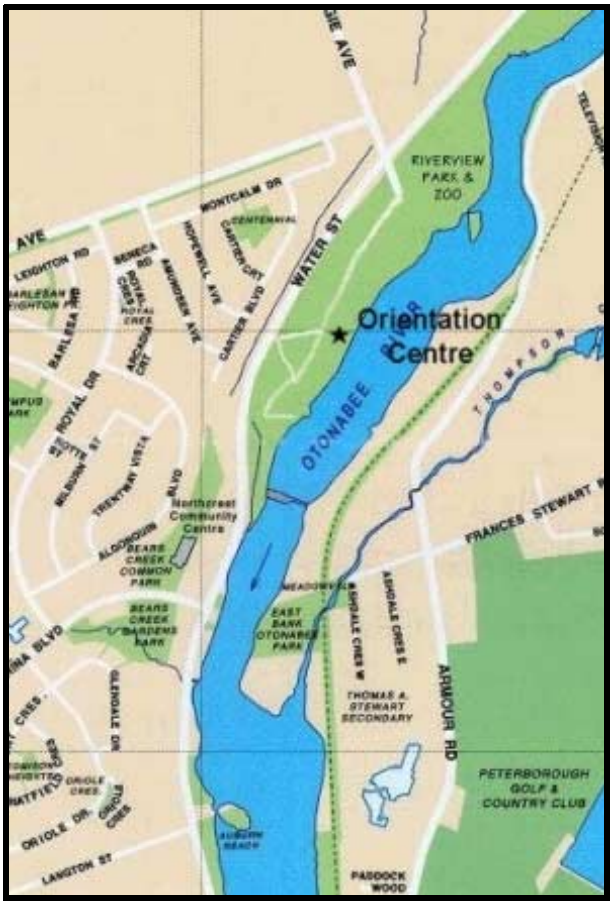
NEXT ISSUE'S DEADLINE IS

Apr 26th, 2004

⌘

MEETINGS

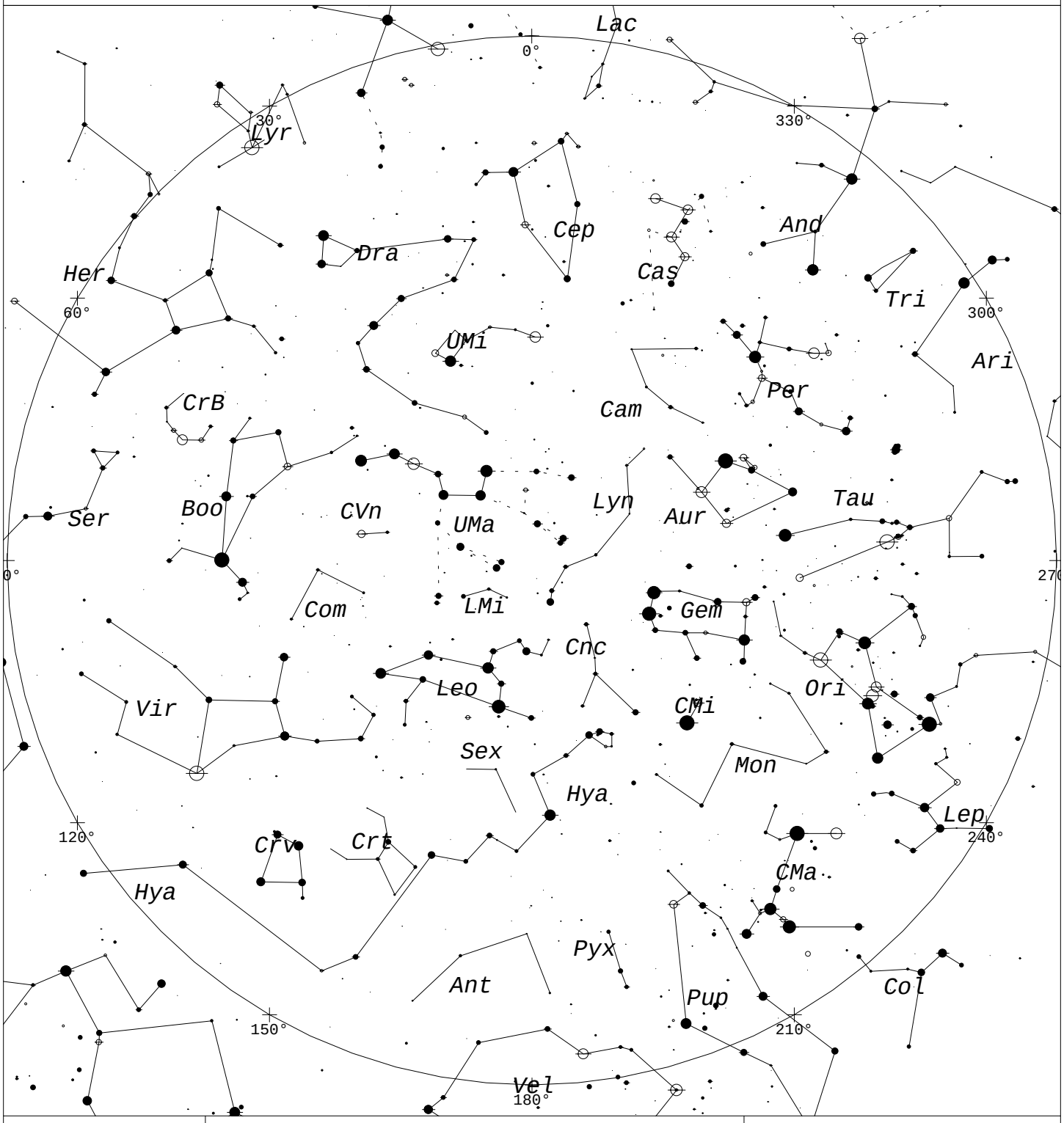
The Peterborough Astronomical Association meets every second Friday at the Peterborough **Zoo Orientation Centre** (Next to the PUC Water Treatment Plant) at **8:00 pm**.



CALENDAR OF EVENTS

April 2, 2004	**General Meeting** — "Digital Imaging" with Brian Colville
April 5, 2004	**Full Moon (○)**
April 11, 2004	**Last Quarter (☾)**
April 16, 2004	**General Meeting** — Observing at Don McDonald's Observatory
April 19, 2004	**New Moon (●)**
April 24, 2004	**ASTRONOMY DAY** at Armour Hill
April 27, 2004	**First Quarter (☽)**
April 30, 2004	**General Meeting** — "Exploring Saturn" with Dan Bortolotti.
May 14, 2004	**General Meeting** — "Stargazer" Steve Dodson

April Skies



STARS			SYMBOLS				
<1	3.5		Multiple star	Dark nebula	Radio source
1.5	4		Variable star	Globular cluster	X-ray source
2	4.5		Comet	Open cluster	Other object
2.5	>5		Galaxy	Planetary nebula	
3			Bright nebula	Quasar	

Local Time: 21:00:00 1-Apr-2002 | UTC: 02:00:00 2-Apr-2002 | Sidereal Time: 09:40:59

Location: 43° 39' 0" N 75° 0' 0" W | RA: 9h40m59s Dec: +43° 38' Field: 182.0° | Julian Day: 2452366.5833