PeGASus

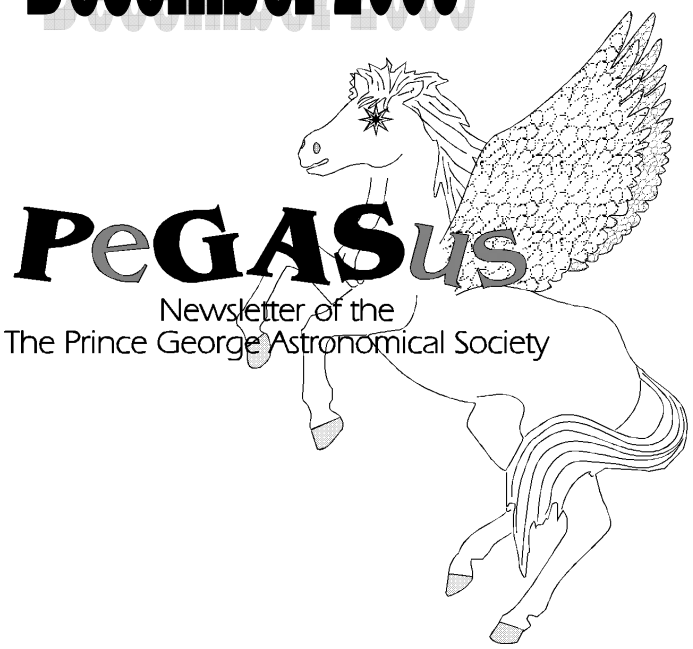
Newsletter of the

Royal Astronomical Society of Canada: Prince George Centre

Published: January to May & September to November. www/rasc.ca/princegeorge

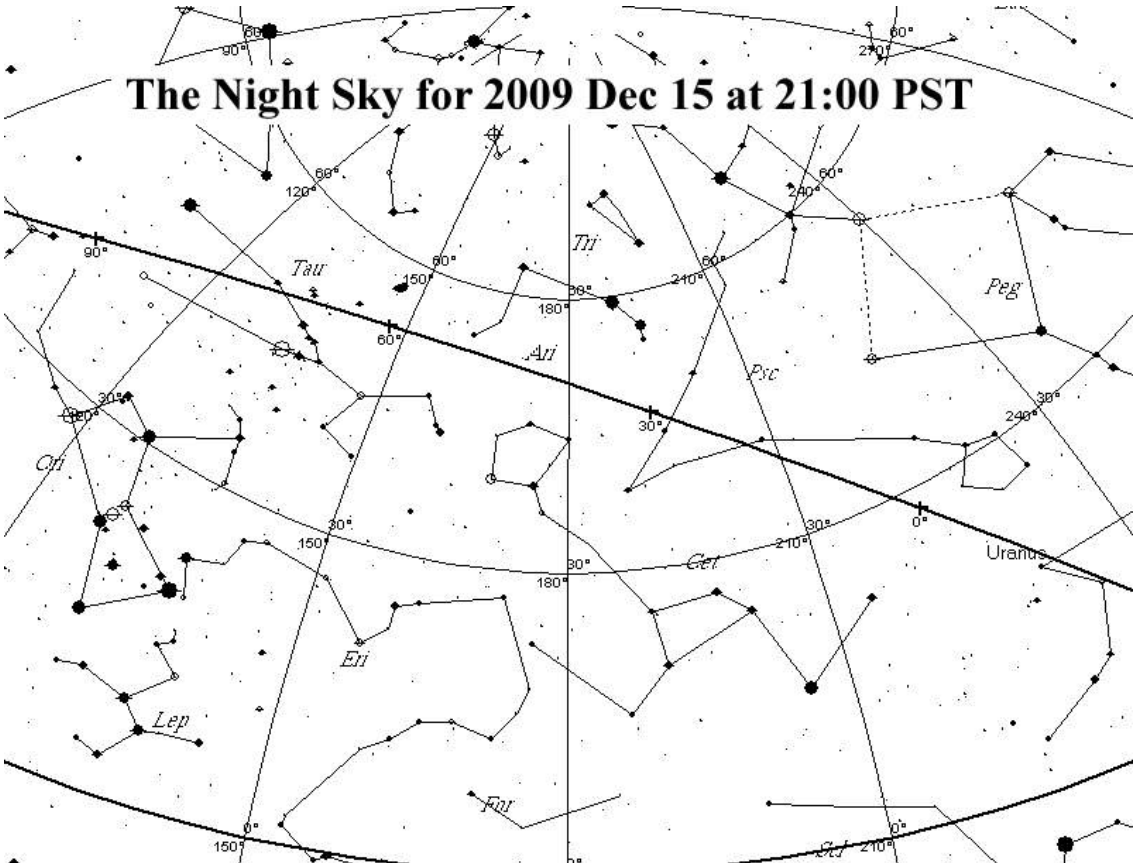
December 2009

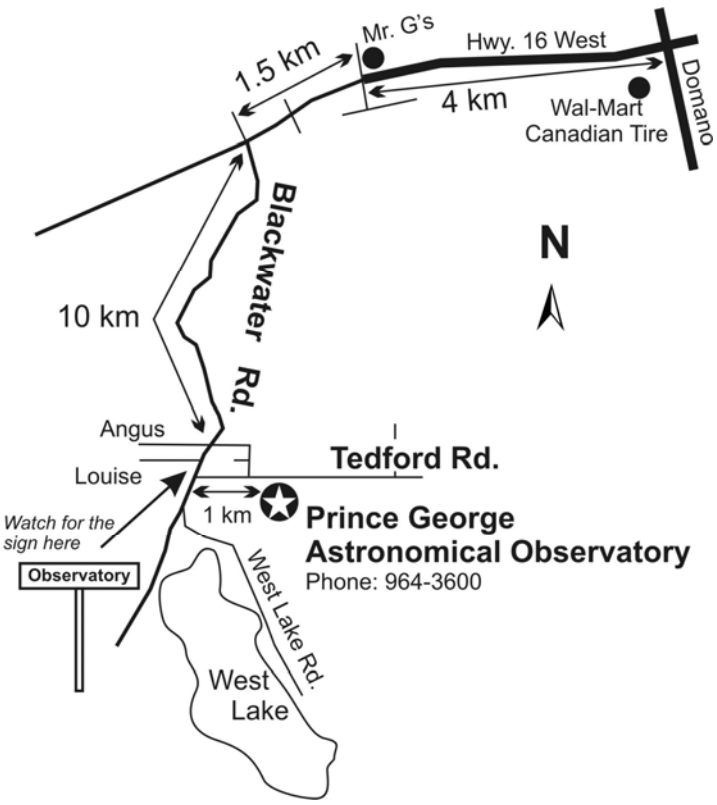
Our pursuits are out of this world.
Our activities are astronomical.
Our aim is the sky.



In Issue # 173

The RASC: Prince George Centre meets next,
Saturday November 28
at the Observatory for the Christmas Pot luck





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RASCPG
Executive, 2009/ 2010

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Bob Nelson
Doug Wayland
Wayne Sanders
Rusty Hoff

Past President
Gil Self

Contributions to the newsletter are welcome.

Deadline for the next issue is
January 22, 2010

PeGASus Editor
Gil Self
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Coming Events

To Volunteer to help run an event please contact Brian Battersby.
brianbattersby73@yahoo.ca
Phone: 614-3316 (cel) 612-4623 (home)

Date	*Event*	*Time*	*Place*	*Volunteers*
Nov 28	Christmas Pot Luck ——-	Doors open at 5:30 eating at 7:00	——-At the observatory,	*everyone welcome!*
Dec 13	Geminids'	7:30 pm	Observatory……	*.everyone welcome!*
Jan 16 ———	Business meeting 6:00pm —-	Members meeting and viewing 7:00pm	————	All members welcome

For an up to date list of the Volunteer Schedule visit our website in the MEMBERS AREA

www.rasc.ca/princegeorge

Tired of viewing the same objects, we are adding a little wrinkle to the "Members Night" viewing on Saturday nights. Each month we will be targeting three constellations that will be in "prime" position during "reasonable" viewing hours.

The objects will range from naked eye to binoculars to small scopes to larger scopes and a couple of challenge objects for the hard core enthusiasts.

The observatory has a number of telescopes ranging from 4 1/5" to 8" for members use. So dig-out your winter clothes, fill your thermos and head-out.

Editorial

By Gil Self

No idea what to give a friend or relative for Christmas? I have a suggestion, sign them up for NOVA. Unless their a neo-luddite what's not to like about astronomy? Even someone with no previous science background will find their niche. There is no other area of science that covers such a broad spectrum. Type astronomy into Google and you will get more than eight million hits, there must be something in there that will interest anyone. Art, biology, chemistry, technology, history the list is endless. It's such an easy sell!

We offer a beginners astronomy course each year. NOVA, New Observers to Visual Astronomy has been recognized nationally by the RASC and is being used as an introductory course in other centre's across the country. What is really special about NOVA is it was developed right here in PG. Brian Battersby spent many hours putting the course together. There are detailed lesson plans, course assignments and handouts. A very professional offering that we can present to the public confident that they will come away from the course with a broad basic understanding of astronomy.

Even if you can't spare the time to donate time to hosting tours or working on the observatory you can be involved. There are two items that we offer each year that help the club survive. You can buy a couple of RASC calendars , keep one for yourself and give one or two away as gifts. But if you really want to help us grow, promote NOVA. This brings us new members, the revenue is minimum but what matters most is it brings us new people.

I have mentioned before that even just a couple of new tour hosts would mean a much easier schedule for everyone. Each year we present NOVA to between ten and twenty people. One or two of those folks stay with the club and as time and comfort grow they evolve into members taking on tours and open house. Your friend or relative that's always wondered what all this telescope stuff is about may be a very keen new member, invite him along to the next members night.

I think the new volunteer scheduling process is the best system we have ever had. It might be worth a moment to point out the advantages to you right now. There are many fixed events throughout the year, they are scheduled sometimes months in advance. There are dates on our web schedule well into May 2010. If you are the kind of person that likes to plan ahead just pick a date that fits your calendar and let us know you would like to be involved. Another change that may not be as obvious is the scheduling for tours. At a planning meeting well in advance of tour dates, members put forward dates that they will be able to host a group of visitors. Lets say that you know you usually are free evening in the first week of the month, with each volunteers offering we are able to produce a list of dates that we can staff the observatory for tours and events. So if your interested in being more involved, it's never been easier. If you check our website you will see that several events have been scheduled for spring 2010. If one of the dates works for you simply click the link at the top " Wayne" and let us know you will be coming—-"that's it" If your just curious what goes on at these events well your always welcome to just show up. When you arrive identify yourself to the host and he or she will fill you in and make you welcome.

The observatory is second to none. We have tweaked and tuned , repaired and improved . One of the core values here is to encourage everyone's ideas. An example of that is the meteor program. Over the last couple of years a simple idea from Glen and Wayne has become a very interesting project. The club has put a little money into the project but they have added their enthusiasm. I suspect we will soon be able to image and document all important meteors in our northern area and maybe even locate where they fall. Quite an accomplishment.

The only way that a volunteer organization can keep operating and hopefully grow is with the help of its members.

Many years ago I was a member of the Prince George Photographic Society, it was and still is a fine group of people helping each other learn and produce better photography. Photography to me was always a solitary pursuit. Creating memorable images was something you pictured in your mind and tried to translate onto film. Astronomy is quite different. Enjoyment of astronomy increases in direct proportion with the number of people involved. Spotting something unique in your eyepiece is memorable and enjoyable, but sharing that experience with others is priceless.

Gil

The Night Sky for December 2009

by Bob Nelson, PhD

Hi Folks,

Aw, shucks! Another month has rolled around and here is another *Night Sky* to write and though I got back from Kenya about 3 weeks ago, I have just gotten over my pneumonia-flu one-two punch that I picked up there or on the way back. (I was helping out at an orphanage, but it seems still true that no good deed goes unpunished!!) Anyway, I am back to full strength and ready to devote my energies to astronomy. More to the point, I plan to upgrade the RA drive assembly with a bigger and better pivot pin that should get rid of the 'mushiness' in that axis. I -- with the aid of other members of the technical committee -- hope to keep making improvements to the 24" telescope so that it works flawlessly and reliably. At least that's the goal. More later.

Here is what is going on in our sky this month. All times are in PST.

MERCURY is an evening object in December. At mid-month, it lies only 6° above the WSW horizon at sunset (which occurs at about 15:44!!). At magnitude -0.5, it might be a real challenge to pick it out of the dusk sky.

VENUS is a morning object in December. At mid-month, it lies a paltry 3° above the SE horizon at sunrise, so it will likely be almost as hard a target to find as Mercury. Better wait until the New Year, when it will be an evening object.

MARS, in Leo all month, rises at mid-month at 20:51 and is visible for the rest of the night, making a transit at 04:06 and lying 28° above the WSW horizon at sunrise. It's a 11" gibbous disk (read "blob") of magnitude -0.4.

JUPITER, in Capricornus until 2010 Jan 5, is an evening object in December. At mid-month, it lies some 21° above the southern horizon at sunset and sets at 20:56. It's a 36" disk of magnitude -2.2.

SATURN, in Virgo until 2012, is a morning object in December. At mid-month, it rises at 00:46, transits at 06:52 and lies some 33° above the SSW horizon at sunrise. It's a 17" disk of magnitude 0.9, not of course varying a whole lot in either quantity.

URANUS, in Aquarius until January 12, (after which it passes into Pisces), is an evening object in December. At mid-month, it lies some 25° above the SE horizon at sunset and sets at about 23:50. As usual, it's a 3.6" disk at about magnitude 5.7.

NEPTUNE, in Capricornus until 2010 (March), is an evening object all month. At mid-month, it lies some 22° above the SSE horizon at sunset and sets at 21:03. On Dec 21 at around 22:00, it passes within 33' of Jupiter. As usual, it's a 2.3" disk at about magnitude 8.0.

CONSTELLATIONS to look for in December (at 21:00) are Fornax, Eastern Cetus, Western Eridanus, Aries, Triangulum and Western Perseus.

Fornax (For, "The Furnace"), is another southern constellation with a number of faint galaxies.

Eastern Cetus (Cet, "The Sea Monster"). In eastern Cetus, we see Omicron Ceti, or Mira ("The Wonderful"). Mira was the first of the long period variables discovered; I've discussed this star before. Six or seven degrees northeast of Mira lies M77, a bright and compact spiral galaxy of 10th magnitude. According to Burnham, it's unusual in that it has three spiral arms. Also, this galaxy (together with the "Sombrero" Galaxy in Virgo) was the first to reveal a large recessional velocity. In November 1913, V.M. Slipher obtained spectra with exposures over 6.5 hours (!) using the 24" refractor at Lowell Observatory.
Western Eridanus (Eri, "The River"). is a large constellation out of the Milky Way; the southern part (which we cannot see from Prince George) zigzags its way south to -60 degrees where the bright star Achernar (Alpha Eri) resides. The triple star system Omicron 2 Eridani consists of a wide (82") AB pair making an orbit in some 7000-9000 years. (The 'A' star is of spectral type K1 V with visual magnitude 4.5.) The inner BC pair is separated by some 9" at the moment; the 'B' star is a white dwarf (magnitude 9.7) and the 'C' star is a faint red dwarf (magnitude 10.8); and the orbital period is some 248 years. This white dwarf was the first to be recognized as such and is certainly the easiest to find with small telescopes.
It is about equal to the Earth in size and a little less than half the mass of the Sun. Consequently, its density is some 90,000 the density of water (it's one big atom, folks!).

Aries (Ari, "The Ram"), is the first entry in the Zodiac and is a northern constellation out of the Milky Way. The brightest star, Alpha Ari is a red giant (sp. K2 III) and lies about 75 light years distant. The really good nebula, NGC 6188 lies, alas, at -48 degrees declination and is not visible from Prince George. NGC 6397, a fine globular, is also too far south for PG astronomers.

Triangulum (Tri, "The Triangle"), is a small constellation

The Night Sky , cont from page 4

just south of Andromeda and contains the famous galaxy M33 ("The Pinwheel"), discovered by Messier in August 1964, and a member of the Local Group of galaxies. As most visual astronomer know, it is a surprisingly difficult target, owing to its large size and low surface brightness. Burnham reports that individual experiences vary – some find it easily in binoculars (or even with the naked eye), whereas others cannot find it at all and conclude that the position must be in error! [My own experiences lie between these two extremes!] And it is truly large! Burnham says that in the best photographs the nearby galaxy measures some 60' x 35'. With truly large telescopes (or a CCD camera on a backyard telescope), M33 is revealed as a huge double spiral with a small nucleus (Hubble type Sc). It was first studied by Hubble himself who found many high luminosity O and B stars, open and globular clusters, Cepheids, irregular variables and novae. (Today we know that the arms are the location of active star formation.) Owing to the many hot stars, M33 is bluer than most galaxies, as would be revealed in a long CCD exposure (that I hope to take next period of clear, steady air). In the early 1900s, the distance was set at 750,000 light years; in the 1950s (when the Cepheid zero point was recalibrated), this distance was more than doubled. It is interesting to note that M33 is practically stationary with respect to our galaxy: it is approaching at a mere 7 km/s. Another fact is that M31 and M33 lie only about 570,000 light years from each other – about 4x closer than we are to either. All three galaxies contain roughly the same mass – about 2 billion solar masses.

Western Perseus (Per, "The hero that saved Andromeda"), is a northern constellation (appearing overhead at times), is in the Milky Way and contains many wonderful objects familiar to many of us. One object is Beta Persei or Algol, the most famous of the eclipsing binaries. Also in this constellation, look for the Double Cluster. It's very prominent to the naked eye, lying as it does about halfway between Alpha Persei and Gamma Cassiopeia (the middle star of the big W in the sky). For what it's worth, the official designation is the "h and X (chi)" Clusters, where the former is NGC 884 and the latter 869. References to the cluster go back as far as 150 BC - both Hipparchus and Ptolemy (early Greek astronomers) noted the clusters - but the actual nature of the clusters was not known until telescopic observations were possible. Today we know that the clusters lie about 7400 light years distant; each has a diameter of about 70 light years and contains about 5000 solar masses. They are a striking view in binoculars, in finder scopes or in telescopes of any aperture.

Cheers,
Bob Nelson

Where Else?
A message from the President

After the Leonid Meteor Shower I was thinking how much our Centre offers, and really starts to add up. This is a great place and great people.

Where else is there an observatory facility like ours, with large telescope and classroom, volunteer run, and near a city of 80,000 people? I am not aware of anything to compare with in Canada. This is a great accomplishment for volunteers and outstanding community support. Prince George is great place for building and making a difference.

Where else can you have free access to an extensive book and DVD library for free with your membership? Our book library is unmatched for astronomical subjects for northern BC, like the now rare 'Atlas of the Moon' by Antonin Rukl. Our DVD library covers many tiles like the groundbreaking series 'Cosmos' and the recent digital spectacular 'The Universe' series.

Where else can you get access to signing out small telescopes for free with your membership? The Centre has number of 4.5" Starblaster telescopes and 6" & 8" dobsonians that are available for the members use.

Where else can we make progress for effective & efficient lighting that can benefit everyone from the taxpayer, driver, and astronomer? Prince George has started to make progress with new lighting, but much of the existing lighting is obsolete and new development needs to be engineered. With continued awareness we can have sky friendly lighting while saving money and less harsh glare and waste.

Where else can you get learn from fellow members on subjects from telescope making, photography, to astronomical research. The depth of knowledge is surprising; just talk to some our veteran members.

Where else can you experience the support of fellow members while sharing your appreciation of the night sky with someone the first time looking through a telescope, and revel in the reward of someone's gasp when first look at Saturn or craters on the Moon.

Where else can you get all the benefits of a RASC membership and access to other experienced amateur astronomers, and observer together regularly while learning from their experiences?

Where else can one's efforts go to build better future through promoting understanding of science, astronomy and our place in the cosmos while enjoying the night sky?

Where else but Prince George, we are fortunate, we can make a difference, and its yours to take advantage of.

Maurice Sluka

Observatory Dome Renovation Complete

This last Saturday Doug and I completed the dome snow seal installation with the installation of the belting donated by Western Belting of Prince George. This completes a very large and necessary renovation project, as you may already know the dome operation had become almost impossible last spring. The existing angle that rested on the rollers was not strong enough and the steel was deforming from dome's weight and wind loading.

On August 8th we removed the dome and installed the new dome support ring beam (W 4x13) designed by Blair Stunder. The dome ring beam was bent circular & fabricated to specification locally by Wolftek Industries, and transported & lifted by crane operator Tom Volk of Sterling Crane. The beam was delivered in two pieces since was too large to transport assembled. We very fortunate to have a professional welder / fabricator Barbara Speed and fabricator Lloyd Giese assemble the ring beam to fit the dome & rollers. Cat Rentals of Prince George supplied the welding machine at very favourable price, and Barbara supplied the welding rod and cutting torch.

The ring halves were set on adjustable jack stands donated for the day by Central Interior Piping for the trimming and welding into one seamless circular beam. Sterling Crane's Tom Volk lifted off the dome.

Once the ring beam joined we test rotated it on the rollers and it fit perfectly. Once the ring beam was confirmed to fit and rotate freely on the rollers, the beam was then painted, since some parts would not be accessible later.

Then the dome was set on the ring beam and fitted with a come-along to pull the dome round to match the ring beam. Once they were matched the existing dome structure was welded to the ring beam. The existing dome steel need considerable straightening by heating with torch and a sledge hammer by Barbara & Lloyd. Barbara was also willing to do additional work of cutting off the un-needed steel of the dome slit rails, which would get stuck in the winter snow.

The now joined dome & ring beam was lifted back onto the observatory. This completed the fist day of work (over 14 hours). We had a number of members volunteering their time: Glen Harris, Doug Wayland, Rusty Hoff, Wayne Sanders, and myself.

On the second day (over 11 hours) we adjusted the rollers and installed the flashing around the dome with the members listed above and Jim Van Doren also. There was lot of trial & error to get all the rollers to support & guide the dome while not binding at any of the 6 roller stations (with three rollers each). The dome now operates with a motorized drive designed & installed by members Jim, Glen and Wayne, which is much easier than the previous hand crank.

This project was extremely successful, thanks to professional work of Barbara, Lloyd, and Tom, and the local companies: Wolftek Industries, Central Interior Piping, Sterling Crane, Cat Rentals, and Western Belting. Our members who volunteered their time & sweat were very effective & professional to doing all the necessary supporting details to complete the work. Everyone worked to together seamlessly; it was very satisfying to work with such great people.

The Prince George Centre can now continue to inspire and educate the people of north central British Columbia through astronomy and science with a fully operational observatory.

Well Done!
Maurice Sluka

WHAT'S OUT THERE
by
Fae Collins Mooney

Our New Executive

We have a new executive for 2009-10. Profiled here are the senior executive members, offering their insights and hopes for the coming year.

PRESIDENT: Maurice Sluka

Maurice has been a member of the PGAS/RASC-PG Centre since 2001, joining, he explains, "after attending a few of the monthly meetings." "I joined the society because astronomy has always interested me and I wanted to learn more while observing with others."

Maurice has been active on the executive "since around 2004," he relates, first serving as a member-at-large. From 2006 to 2009 Maurice served as vice-president, gradually becoming more involved, and this year was elected as president.

The kind of astronomy that he most enjoys is visual observing – of the Moon, planets, clusters and nebulae. He has been interested in astronomy for as long as he can remember: "My first experience was walking at night with my Dad on their property in Vanderhoof and the sky was filled with bright stars that seemed so sharp and close, as if they were almost within reach above the trees."

As president, Maurice has many projects underway for the society, among them: "light pollution abatement, radio features, newsletter articles," and – his number one hope for the coming year "is to get more members out observing."

"My personal projects include developing small improvements to my Meade Maksutov telescope (portability, viewing, etc.) and learning about plans for future space exploration."

The International Year of Astronomy is drawing to a close. For all of us who love to look up into a clear night sky, we each have experienced a Galileo Moment of our own. For Maurice it "was in Vanderhoof when I invited some friends to view through my telescope. We all had a great time and my friends appreciated the rare opportunity to see the night sky and the crescent moon through a telescope."

Providing him with the opportunity for a "Soap Box Moment", this is what he shares:

"My 'Soap Box Moment' is three-fold:

a) We need to fight light pollution; the waste is impairing our future, by limiting our imagination and understanding.

b) Our sharing of the night sky will help gain understanding and appreciation of nature and science, while being very rewarding.

c) The observatory is unique to Canada and offers tremendous benefits and opportunities for members, so take advantage of it!"

VICE-PRESIDENT: Blair Stunder

"I've been a member around five years," says Blair. "It must be 3 ½ to 4 years on the executive" as a member-at-large. "I served on the technical committee for a while, but was primarily a member-at-large."

What prompted him to join the PGAS/RASC-PG Centre? "It started as a place to improve my viewing skills and knowledge of using a telescope. The ability to share information among others with the same interests and pick up viewing, equipment selection and use is priceless." These days, Blair admits, "it seems that most of my viewing consists of others at my telescope eyepiece. Either at the observatory with a tour or on my driveway at home with any of the nearby neighbours that are out on their evening walks." But more personally, "I've been trying to dive deeper into astrophotography and improve my skills in this area."

His very first Galileo Moment came when he was either nine or ten. "Seeing the craters of the moon through a 2" Bushnell refractor started my interest in astronomy. Around this same time, an uncle gave me his microscope that he had used while in university. During the daylight I was making slides to view under the microscope and during the night looking at the moon or trying to find Saturn."

A Galileo Moment shared this year would be "the first time someone looks through a telescope and you see that look of astonishment on their face then lift their head up to try and see with the naked eye exactly where the telescope is pointed."

"My current project is 'Viewing with a Purpose/ Constellations of the Month'," he shares. "This targets the constellations that are in prime viewing. It consists of a number of NGC objects in each constellation starting with targets that can be seen with the naked eye or binoculars, then small telescopes working up to larger telescopes with a couple of 'challenge' objects should test most viewers. Unless someone is working on a specific certificate program, we get trapped into hitting our favourite twenty to thirty targets, then pack up and head home. I am hoping that it will increase the number of members out viewing as well as increase the constellation knowledge."

As vice-president, Blair's hope for the PG Centre this coming year is to "see the viewing time by members at the facility increase. This last spring we did a 'Lunar Marathon' which was a roaring success," he says. "The viewing deck area was packed with members and telescopes both nights. We will be doing this 'Lunar Marathon' again this spring."

Given his "Soap Box Moment" Blair offers this: "Get your name/e-mail on the viewing distribution list so that when a keyholder/member is heading out to the observatory to do some viewing you are notified. Dress warm: bring a thermos of a hot beverage and your telescope. If you don't have a scope, the observatory has a number of them for members to use, one will be provided. It's a great way to wind down and relax and have some fun while learning about the night sky. You might just see something special."

SECRETARY: Denise Stoltz

Denise is new to the society, and the executive. She has been a member for two years and was elected secretary in October. Her interest in astronomy dates back to childhood and her favourite viewing objects are the International Space Station, planets, iridium flares, and the Moon. Right now she is "going for Explore the Universe Certificate."

As a member of the executive Denise would like to see "more schools come out for a tour!"

What prompted her to join the society? "I met Brian," she says.

TREASURER: Brian Battersby

Brian has held almost every position on the executive; he has been Secretary, President, Past President, and now Treasurer, and has served in an executive capacity since the turn of the century/millennium. When did he join? "Gosh, I'm not sure. Since 1998 I think." Time flies…

What prompted him to become a member? "My step-daughter and I attended a tour when she was in Brownies," he says. "Plus Gil Self and Jon Bowen roped me into it."

Brian's interest in astronomy began "when I was a kid in Penticton…. laying on my back at grandma's house watching for satellites." Right now Brian is working on "the RASC Messier Certificate." He enjoys most "looking for comets and visual variable stars."

As a member of the executive, Brian's hope for the PG Centre for the coming year is "for the club members to get excited about astronomy and our extremely unique facility. I don't think people in Prince George really realize what we have here." He summarizes his Soap Box Moment by saying, "We have an amazing and unique facility. Come out and enjoy it!"

His Galileo Moment during this International Year of Astronomy has been "sharing astronomy with my wife Denise. She is working on her Explore the Universe Certificate. It is very cool to see her learning to use the sky charts and telescope, especially when she finds something she has never seen before."

PAST PRESIDENT: Gil Self

Gil held the position of president for several years, and during the 15 years he has been a member he has served "on the executive for most of those years, either as a member-at-large or as vice president

"I joined the PGAS because of Astronomy in the Park," Gil says, "the solar telescope setup on Canada Day." "We should get back to that," he adds.

"One of my on-going hopes for the club is to enable ideas, also this coming year I hope one of my favourite causes will become everybody's cause – Dark Skies."

"My interest in astronomy has changed over the years," Gil admits. "There is so much available on-line you 'almost' don't need a telescope." "But," he adds, "you still can't beat a warm spring evening under the stars." For Gil, "since my children moved out I have been a lot less able to spend too much time out under the skies so the on-line resources are invaluable."

"I've been interested in astronomy since I was a kid; originally, summer skies and Perseids meteors, and by high school telescope building and a big astronomy show in Edmonton when I was about 16. I was hooked. When I was a little older, maybe 23 or 24, my wife and I visited the observatory in Victoria. That was back when on Thursday nights they had an open house and they let you look through the big telescope with an eyepiece. Standing under that giant mirror looking at Saturn – that's a 'got-ya' moment."

"No real soap-box moment," says Gil, "except to remind everyone that what we are doing is a very worthy cause; it can be fun, it can be interesting, but it mainly is a chance to learn and share with others. It's an evolving enterprise; there will be changes and improvements but we must remember all that we have done and insure that what we improve is enhancing that foundation."

Our thanks is extended to all executive members, both past and present, for their on-going dedication and service, and our appreciation to those who have served on the executive for many years.

In the next issue the Members-at-Large will be profiled.

-30-

PRINCE GEORGE ASTRONOMICAL SOCIETY
ROYAL ASTRONOMICAL SOCIETY OF CANADA
PRINCE GEORGE CENTRE
7365 Tedford Road
Prince George, BC
V2N 6S2

Business Meeting Minutes
November 21, 2009

Date: November 21, 2009
Location: PGAO 7365 Tedford Rd

Chairperson: Maurice Sluka
Recording Secretary: Glen Harris
Executives Present: Gil, Glen, Maurice, Wayne, Doug, Rusty, Blair, Bob

Meeting Called to Order at 6:05 pm.

1. **Previous Meeting Minutes**
Minutes of October 17, 2009 meeting were circulated. Motion to accept minutes as circulated. Moved: Blair Seconded: Rusty Carried

2. **Treasurer's Report**
Club Account: $6077.18
Gaming: $591.96
Details on file
Motion to accept treasurer's report as circulated. Moved: Wayne Seconded: Rusty Carried

3. **Correspondence, Secretary's Report**
Various bills, statements, Centre newsletters
.

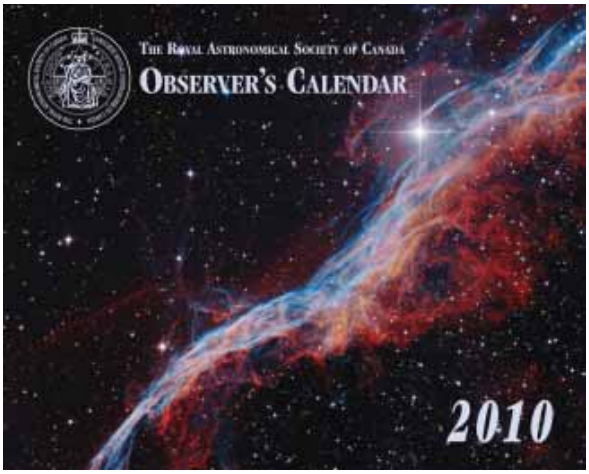
4. **Old Business**
- Replacement computer to run meteor monitor and All-Sky camera applications has been installed.
- Planispheres and red light flashlights have been purchased.
- 100 new CD's have been produced.

5. New Business
- Maurice hasn't had the time to proceed with plans for a Lighting Seminar.
- The International Dark Sky membership will be renewed.
- The Spring viewing session has been planned. Visit the website for more information.
- The YRB plowboard request was denied. Blair will be contacting YRB in an effort to have our request reconsidered.
- Motion: Approve the purchase of a DeWalt corded 1/2" VSR drill to replace the existing battery powered 3/8" drill. Approximate cost ~ $100. Moved: Gil Seconded: Rusty Carried
- Motion: approve the purchase of a new AllSky camera and lens to upgrade the present system. Approximate cost ~ $480. Moved: Gil Seconded: Maurice Carried
- Telescope committee report - perform reflectivity tests on the diagonal mirror and check backlash on the main scope. Subsequent inspection after the meeting disclosed some loose components associated with the RA drive. The mechanism will be modified to remove excessive movement and help prevent further problems. Bob and Blair will be involved in this activity.

6. Presentation
Wayne gave a talk on the methods being used at the observatory to capture meteor activity.
In spite of being invited to attend a thank you evening for their efforts in helping to repair the dome, none of the associated businesses made an appearance. Their 'Thank You' plaques will be delivered personally.

The annual pot luck dinner will be held at the observatory on Saturday, November 28, 2009. Doors open at 5:30pm or so. Dinner will be at 7:00pm.

The next business meeting will be held on Saturday January 16, 2010 at 6:00 pm. Location is the observatory, 7365 Tedford Road.



Available for purchase at
SpeeDee Your Office Experts.
Downtown Prince George, Ccorner of
5th & Brunswick

All proceeds go to the club.

Contact Brian Battersby
250-614-3316
brianbattersby73@yahoo.ca

Want to join the RASC Prince George Centre?
Fill out the form below and mail it in to the address at the top of the form.
Existing members can use this form to renew as well!

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
136 Dupont Street, Toronto, ON M5R 1V2 Canada
Tel: 416-924-7973 Fax: 416-924-2911 Website: http://www.rasc.ca
Join/renew online at: http://www.rasc.ca/join Form Updated: 2008 July 14

ORDINARY MEMBERSHIP APPLICATION

PERSONAL INFORMATION

Name (Please print in full)

Address City

Province/State Country Postal Code

Telephone (Days) Telephone (Evenings)

E-mail Address

YOUR CENTRE AFFILIATION (PLEASE CHOOSE ONE ONLY)

✓	Centre	Base National Fee	Centre Affiliation Discount	Centre Fee	Total Fee
☐	Belleville	67.00	(23.00)	31.00	**$75.00**
☐	Calgary	67.00	(23.00)	36.00	**$80.00**
☐	Charlottetown	67.00	(23.00)	23.00	**$67.00**
☐	Edmonton	67.00	(23.00)	23.00	**$67.00**
☐	Halifax	67.00	(23.00)	23.00	**$67.00**
☐	Hamilton	67.00	(23.00)	36.00	**$80.00**
☐	Kingston	67.00	(23.00)	28.00	**$72.00**
☐	Kitchener-Waterloo	67.00	(23.00)	33.00	**$77.00**
☐	London	67.00	(23.00)	27.00	**$71.00**
☐	Mississauga	67.00	(23.00)	23.00	**$67.00**
☐	Centre Francophone de Montréal	67.00	(23.00)	48.00	**$92.00**
☐	Montréal	67.00	(23.00)	32.00	**$76.00**
☐	New Brunswick	67.00	(23.00)	23.00	**$67.00**
☐	Niagara	67.00	(23.00)	27.00	**$71.00**
☐	Okanagan	67.00	(23.00)	28.00	**$72.00**
☐	Ottawa	67.00	(23.00)	23.00	**$67.00**
☐	Prince George	67.00	(23.00)	27.00	**$71.00**
☐	Québec	67.00	(23.00)	34.00	**$78.00**
☐	Regina	67.00	(23.00)	27.00	**$71.00**
☐	St. John's	67.00	(23.00)	27.00	**$71.00**
☐	Sarnia	67.00	(23.00)	23.00	**$67.00**
☐	Saskatoon	67.00	(23.00)	33.00	**$77.00**
☐	Sunshine Coast (BC)	67.00	(23.00)	23.00	**$67.00**
☐	Thunder Bay	67.00	(23.00)	23.00	**$67.00**
☐	Toronto (see note at upper right)				
☐	Vancouver	67.00	(23.00)	26.00	**$70.00**
☐	Victoria	67.00	(23.00)	25.00	**$69.00**
☐	Windsor	67.00	(23.00)	23.00	**$67.00**
☐	Winnipeg	67.00	(23.00)	23.00	**$67.00**
		OR			
☐	**Unattached (No Centre Affiliation)**	67.00	n/a	n/a	**$67.00**

*Membership in the RASC includes one issue of the annual **Observer's Handbook**, six issues of the **Journal** of the RASC and six issues of **SkyNews** along with benefits that your Centre may also offer.*

APPLICATION

I hereby apply for membership in the Royal Astronomical Society of Canada. I understand that personal information is collected and used according to the Society's Privacy Policy available at www.rasc.ca/privacy.shtml

Note that **Toronto Centre** memberships are processed locally. Visit toronto.rasc.ca/content/membership.shtml for details and to download an application form.

MEMBERSHIP FEE CALCULATION*

Your Total Fee (from table) $ _____

Membership Outside Canada
- ☐ United States **add $16.00**
- ☐ International **add $45.00** $ _____

Journal of the RASC
- ☐ Electronic Edition (Included)
- ☐ Canada **add $16.80** (GST incl)
- ☐ Outside Canada **add $23.00** $ _____

Total Membership & Options $ _____

* Note that membership fees outside Canada are in US currency

PAYMENT OPTIONS

- ☐ My cheque/money order is enclosed
- ☐ Visa or ☐ MasterCard

Name on Card: _____

Card # _____

Expiry date: ____ / ____ (mm / yy)

Signature _____

Please return this form with payment to:

Royal Astronomical Society of Canada
136 Dupont Street
Toronto ON M5R 1V2
CANADA

Office Use Only
RASC ID: _____ Auth # _____

Please keep this portion for your records

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
136 Dupont Street, Toronto, ON M5R 1V2 Canada
Tel: 416-924-7973 Fax: 416-924-2911
Website: www.rasc.ca

Your Membership is appreciated
Thank you.

DATE:_____ Amount paid $_____ ☐ CHEQUE ☐ VISA ☐ MASTERCARD

Royal Astronomical Society of Canada

Prince George Centre

AKA the ***Prince George Astronomical Society***

Phone: 964-3600
Email: pgcentre@yahoo.com
Website: www.rasc.ca/princegeorge

Back issues of PeGASus available on our website.

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