

1995

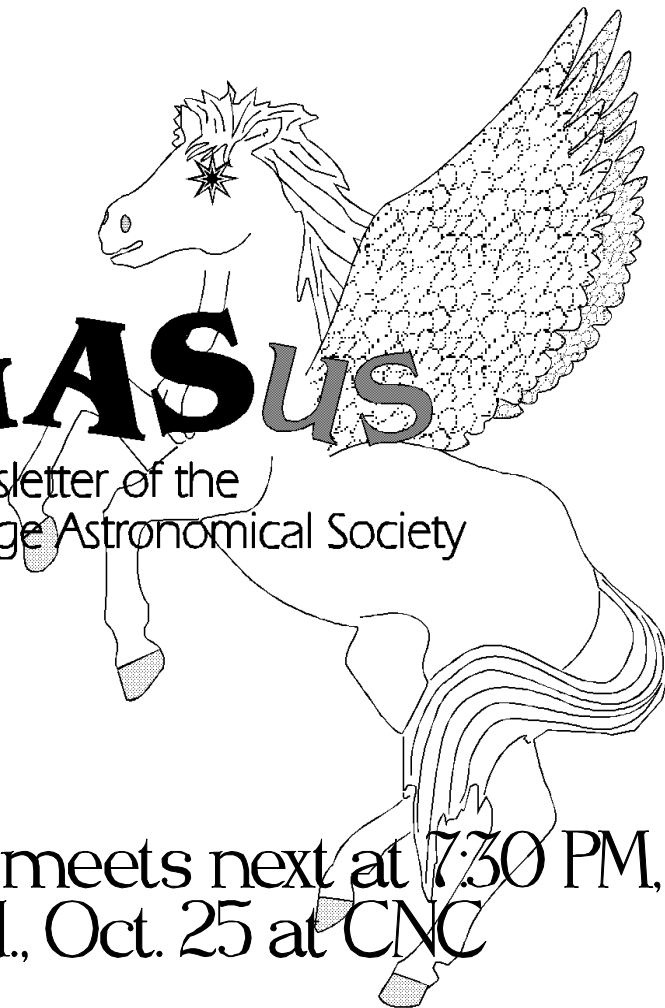
OCTOBER

Issue #60

the

PeGASus

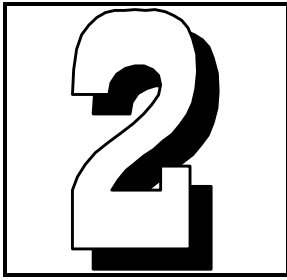
Newsletter of the
The Prince George Astronomical Society



The PGAS meets next at 7:30 PM,
Wed., Oct. 25 at CNC

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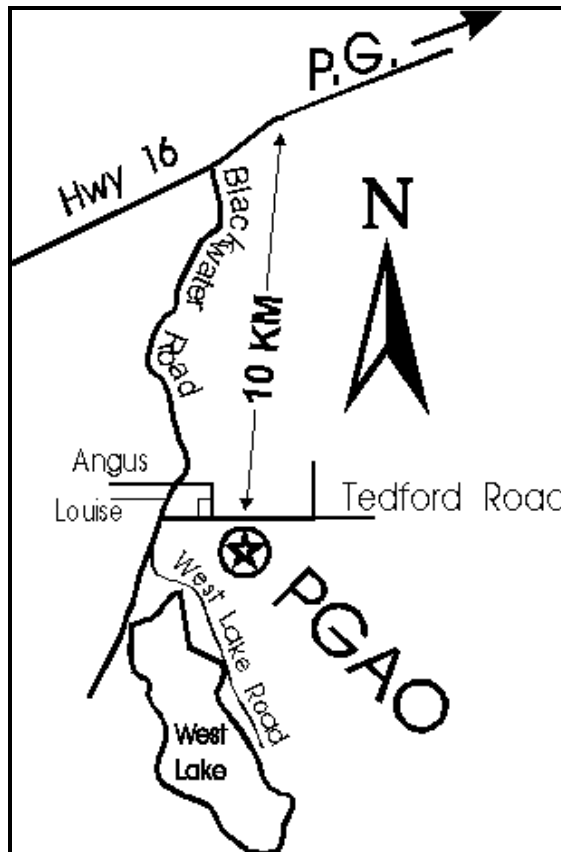
the PeGASus
is published
monthly by the
*Prince George
Astronomical
Society.*

Contributions to the newsletter
are welcome.

***Deadline for the next issue
is November 18.***

Send correspondence to
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Prince George
Astronomical Society
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Eric Hansen 962-7477

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*

Observing Director
Jon Bowen
*

Promotional Director
Orla Aaquist
*

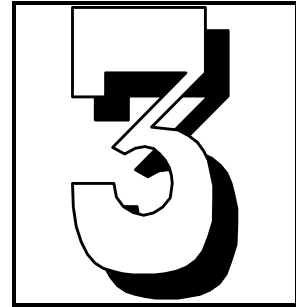
Observatory Director
Eric Hansen
*

Librarian

The observatory phone number is
964-3600. This is a party line, so
if it rings busy, it does not imply
that someone is at the

Editorial

by Orla Aaquist



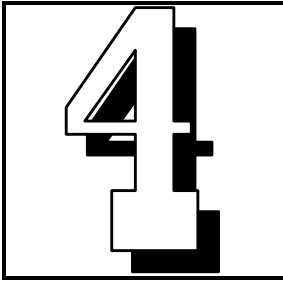
Soon, the PGAS will have a voice in *The Prince George Citizen*. Alan Whitman has volunteered to write a monthly column on the night sky, similar to his monthly contribution in this newsletter. I have agreed to produce star charts and any images that he may need to support his column. As you read this, the first column is sitting on the desk of the Citizen's editor, Roy Nagel, for his consideration.

To begin with, the column will appear once a month; however, when I spoke with Mr. Nagel a few weeks ago, he was enthusiastic about a more frequent contribution. He mentioned that the column need not be just about the night sky. We could write about tips on buying and observing with binoculars, photographing the aurora, moon, and meteors, astronomy on the internet, building an observatory ... Many of the articles already appearing in the PeGASus could be adapted for a regular column in *The PG Citizen*.

A regular column in the local newspaper will be great advertising for the PGAS.

Over the last few years, the PGAS has been expanding its horizons. Publishing a monthly column in the newspaper is only the latest of several developments. In particular, we have obtained grants and materials from several organizations and companies to help complete the observatory. These donations were obtained with the understanding that the PGAS and its members would continue to provide a public service to the community. At present we hold weekly public observing sessions at the observatory; cubs, brownies and many schools know about our activities and call us for observatory tours and group presentations. We participate in community events like Canada Day, the PG X, and Science and Technology Week, and we have regular public events such as Astronomy Day and the Perseid Meteor Shower party at the observatory. We are slowly becoming known within the community, and our community involvement is bound to increase. This is all very good, but we cannot continue to expand, or even maintain our current level of activity without the *active* help and support from our members.

It is therefore important that you attend the next meeting of the PGAS and show your support of our efforts.



Coming Events

If you are involved with any astronomical or otherwise scientific activity on behalf of the PGAS, please list the activity here.

- Sep. to first snow -the observatory is open to the public every Friday evening from 8 PM to midnight. It is a good time for new members to come out and see our observatory in operation.
- Oct 25 -Annual General Meeting of the PGAS to be held at CNC. Election of executive officers will take place. All PGAS members are encouraged to participate in this annual election. Our guest speaker for the evening is Gordon Pfrimmer (BCLS) from the McElhanney Consulting Services will speak about ***daytime astronomical sightings***.
- Oct 28-29 -Science & Technology Week. Display at Pine Centre on October 28 and 29. Be prepared to volunteer once again.
- Oct 29 -daylight saving time ends. Spring forward, Fall back.
- Nov 8 -PGAS executive meets at the Xerox office. If you have any items which need to be discussed by the executive, please call the PGAS President.
- Nov 29 -monthly meeting at the Observatory. The first quarter moon should make for some good observing, too.
- Christmas meeting. Any takers?
- Dec ??

The Night Sky

by Alan Whitman

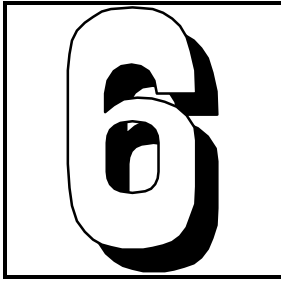


Mercury is still visible until the end of October in the ESE dawn about 45 minutes before sunrise. Start looking at about 6:45 AM on the 22nd 5 degrees lower left of a very narrow crescent moon. By the 29th 7 AM would be the time to look for the magnitude -1 planet in bright twilight.

As Jupiter slides ever lower in the SW week by week, Venus very slowly edges out of the sunset glare. Jupiter, Venus, and Mars are very close together in the week of November 17th to 23rd. However, they are very poorly placed for observers this far north and I'm not certain whether this conjunction will be visible to us. It probably will be about 45 minutes after sunset if you drive to an extremely flat SW horizon. Mars will require binoculars. The three planets will be closest on the 18th but will still be quite close on the 23rd and 24th then the crescent moon joins the scene. The sight will probably be striking enough to warrant driving to a good location with your binoculars (try Beaverley or Foothills Blvd.)

Saturn's ring-plane passes north of the sun on November 19th. For the remainder of the observing season the rings will be seen as a black silhouette across the planet's disk. Depending upon the exact geometry there may be just one wider black line or two narrow ones, one for the ring shadow and one for the ring silhouette. This will be your best opportunity to see Saturn's fainter moons. Enceladus has been visible this year when near elongation (see the chart each month in Sky and Telescope).

Two binocular comets are moving northward through Leo towards Ursa Major, Comets de Vico and Bradfield. Comet de Vico may be visible to the naked eye after you find it in binoculars just before morning twilight begins. Comet de Vico has a condensed coma near mag 5 and a tail extending 2 degrees to the west; it sounds like the best comet in several



years. By the time you read this the dawn sky will be moonless for the rest of the month so give these two a try. Orla posts the comets' positions for each week in the astronomy forum on Free-Net or you can call the Skyline message at 1-617-497-4168 (the message is updated each Friday). You will probably need a basic star atlas to plot the comets positions somewhere north of the hindquarters of the constellation Leo although you might find that de Vico is prominent enough to pick up with binoculars just sweeping between the hindquarters of Leo and the bowl of the Big Dipper. I haven't seen them yet because I'm writing this during full moon and foul weather. When you receive this newsletter in the mail it will be the prime observing time. Don't put off getting up to look for de Vico because active, fairly bright comets don't stay that way for long!

Observer's Calendar

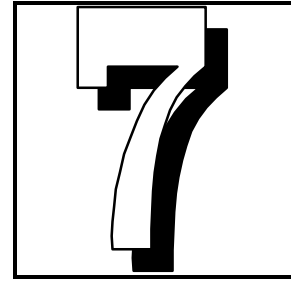
1996

The PGAS has received a sample copy of the 1996 RASC Observer's Calendar. This unique publication of the Royal Astronomical Society of Canada features full-colour and black-and-white photographs taken by members of the RASC. It includes a host of astronomical information useful for the amateur star-gazer.

Orders for this calendar will be taken at the October 25 meeting. You will be asked to pay in advance. The price per copy of the calendars is \$7.50 for PGAS members. The final order will be sent to Victoria early in November so that you can have your calendars well before Christmas.

Dusted off the C-6

by Chris Brougham
(<http://www.wimsey.com/~brog>)



Well after a year (yes!) of collecting dust, I finally hauled the C-6 out this week. The first night was unspectacular primarily because I had forgotten where everything was. Seeing wasn't that great, but I did manage to catch the rings of Saturn. Quite pretty. This was on Tuesday August 15th.

On Wednesday I decided to do a professional job. I ftp'd some astronomy software and printed up some nice charts of the sky area around Libra. I aligned the scope properly and set out to dial-in some objects.

Seeing was great and I had a nice view of M57. I couldn't quite resolve the central star in the f/5 scope even at max magnification (maybe time for a 4mm plossl? maybe time to get a job!). Nonetheless, it reminded me when I was 12 and saw Saturn's rings for the 1st time -- happy happy joy joy. The little smoke ring was so clear!

M13 was spectacular as always. I'm most impressed with this reflector. The view is almost as good as with the Tedford road scope!

I was on a roll dialing in objects (after I re-read the instructions on how to do it). I picked up nice views of M2, M15, and M56.

For the finale, I pointed the scope at Saturn and for the first time resolved some bands (205x using a 9mm plossl and the 2.5 barlow). Seeing was superb and I could easily imagine pushing the magnification to 250x or 275x.

I think I've got the bug again.

Announcements

Welcome to the Club

Peter and Barb Ryks, Sandy Sadowsky, Fred Vogelgesang, Mark Shegelski, Wayne Cossey, and Charles Smith. Peter and Barb live in Vanderhoof, and because of the distance, they probably won't be able to attend meetings very often. How about taking our C8 to Vanderhoof sometime? Any takers? Sandy and Fred want to get involved with astrophotography; let's hope for clear skies so that our club experts can introduce them to the fine art of star tracking.

Belated Thanks

to Mike Hansen. After the last newsletter, where I thanked Eric Hansen and Gil Self for installing the furnace, I was told that Mike Hansen did all of the work while Eric and Gil drank beer. Sorry, Mike. I should have known who really did all the work.

Thank You

Mike Hansen for repairing the roof of the observatory. Was anyone drinking beer with you, Mike?

Messy Observers!

On Friday, October 6, Orla reports that he found the coffee pot at the observatory full of old coffee. He cleaned it out, but he did not appreciate cleaning up someone else's mess. He also asks, why there are so many paper scraps, tools, and miscellaneous equipment scattered around the observatory. And, why does the floor of the observing deck crunch when you walk on it?

Public Viewing

The observatory is open every Friday evening from 8 to midnight until the end of November.

WE NEED VOLUNTEERS TO HELP OUT.

PGAO Daytime Tours

If you get any requests for daytime tours of the observatory, please refer them to the Fraser-Fort George Regional Museum (phone number is 562-1612). The PGAS is trying to establish closer ties with the museum.

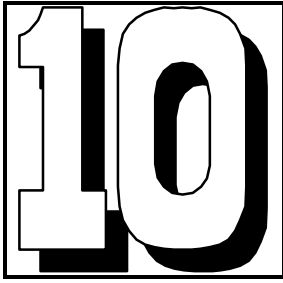
Recent Donations

to the PGOA has been made by the *College of New Caledonia (CNC)* and the *Fraser-Fort George Regional Museum (FFGRM)*.

CNC donated a 9-pin dot matrix printer. Orla and Bob hooked up the printer to the PGOA computer and tested it. It seems to work fine. We can now generate signs, lists, and star-charts on-site. FFGRM donated several boxes of photographic chemicals and equipment for our future darkroom. The equipment includes an enlarger, several large development trays and an electric film dryer.

Letter of thanks have been sent to CNC and FFGRM for their most useful donations.

In the last issue of the PeGASus, we forgot to thank Mike Pearce from ***Cloverdale Paint Inc.*** for donating 17 litres of paint for PGOA's walls. We are sending Mike a copy of this PeGASus and a letter of thanks to show him our appreciation.



Membership Renewal

Its time for you to renew your PGAS memberships for another year. For those new members who joined our society within the last few months, your fees were for the 1995-1996 year, and you should not pay again for this term (unless you want to, of course). If in doubt, call Orla at 964-9626. If you want to pay by mail, send your cheque or money-order to the address on the membership form below. If you don't want to cut up this copy of the newsletter, you don't have to send the membership form below. Just make sure we know who you are and what the money is for. If you require a receipt, let us know, otherwise you will have to trust us.

THE BEST IDEA IS TO COME TO THE OCTOBER 25 MEETING AND PAY DIRECTLY.

MEMBERSHIP APPLICATION

Prince George Astronomical Society

College of New Caledonia

3330 - 22nd Avenue

Prince George, B.C.

V2N 1P8

Name: _____

Address: _____

Postal Code: _____ Phone #: _____

Type of membership (check one):

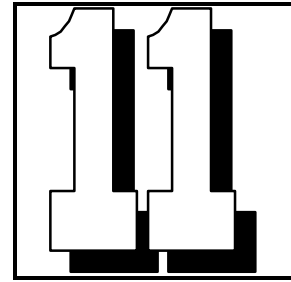
Youth (\$10.00) _____

Regular(\$20.00) _____ Date Paid: _____

Family(\$30.00) _____

The Great Canadian Astronomy Magazine

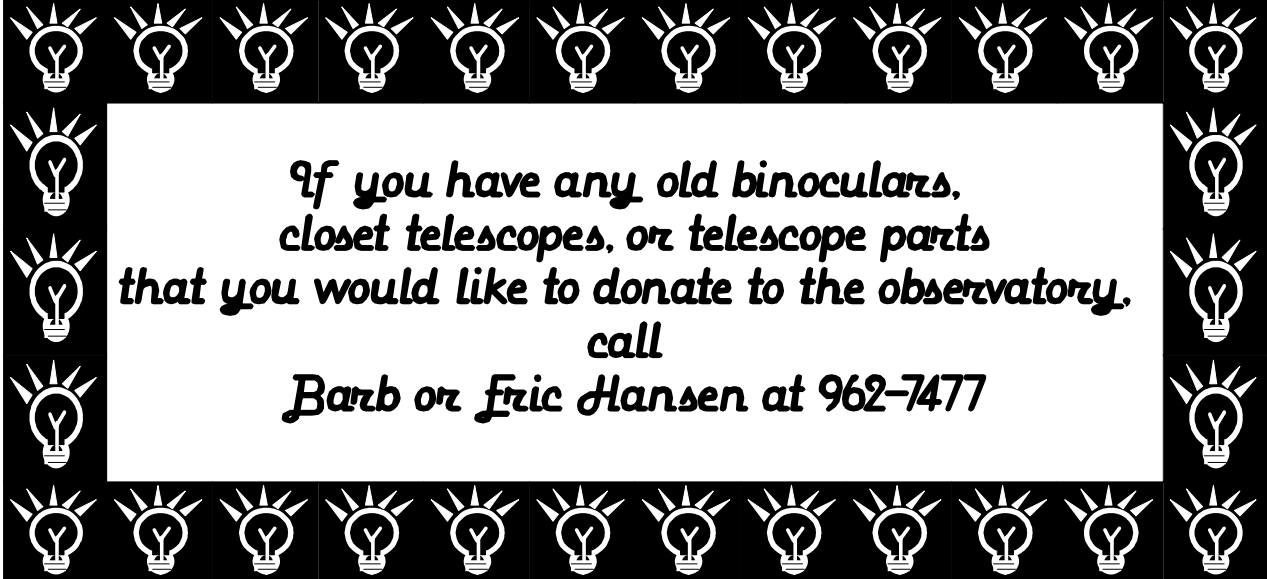
by Orla Aaquist



SkyNews is the name given to the new Canadian magazine of astronomy and stargazing edited by Terence Dickinson. Sitting before me is Volume I, Issue 3. I heard about the magazine when I attended the annual meeting of the Canadian Astronomical Society last spring where I was told that all CASCA members would receive a courtesy copy, but I never did get one. I got my copy of SkyNews from the Fraser-Fort George Regional Museum.

Glossy and full of pictures is one way to describe the magazine. At 30 pages it has considerably less information than *Astronomy* (another popular magazine), which usually comes with over 100 pages of astronomical delights and advertising. I don't have a copy of *Sky & Telescope* in front of me, but I seem to remember seeing more than 30 pages in that magazine, as well. *SkyNews* sells for just under \$4, about the same price as you would pay for its two competitor magazines.

Volume I, Issue 3 has articles by Ivan Semeniuk, Terence Dickinson, Ivan Semeniuk, Ivan Semeniuk, Ivan Semeniuk, Alan Dyer, Terence Dickinson, Terence Dickinson, Terence Dickinson, Terence Dickinson, Ivan Semeniuk, and Ken Hewitt-White, in that order. All of these authors are contributing editors of the magazine. Apparently, like *the PeGASus*, SkyNews is starving for input from other sources. Therefore, SkyNews may be your chance to get published in a wonderfully glossy magazine, but I think that you may have to hurry.



*If you have any old binoculars,
closet telescopes, or telescope parts
that you would like to donate to the observatory,
call
Barb or Eric Hansen at 962-7477*



AstroSurfing

Details of the Science News posted here are available on the astronomy forum on the Prince George Free-Net.

NASA and the Department of Energy (DOE) has been selected to fly on the Space Station and will look for antimatter originating from outside our galaxy and dark matter, the mysterious, yet undiscovered material that some scientists say makes up 90% or more of the universe.

Hans Dehmelt and his colleagues at the University of Washington have imprisoned a tiny spherical drop of 1000 electrons in an atom trap.

Recent advances in computer models and how they use ocean data now allow predictions of El Nino to be made more than a year before the event, new NASA, NOAA and university research indicates.

A NASA lightning detector is intriguing scientists with the possibility of identifying the formation of tornadoes and severe storms from space.

Some materials might exhibit two kinds of superconductivity.

After nearly 22 years of exploration out to the farthest reaches of the Solar System, Pioneer 11 is now beyond the orbit of Pluto and heading out into interstellar space. On September 30 NASA ceased daily communications with the Pioneer 11.

Early Friday morning NASA's Kuiper Airborne Observatory made its last scientific flight.

Members of NASA's Galileo project will provide a behind-the-scenes look at what it's like to be part of the flight team on a pioneering interplanetary expedition when "Online from Jupiter" makes its debut on the Internet in mid-October.

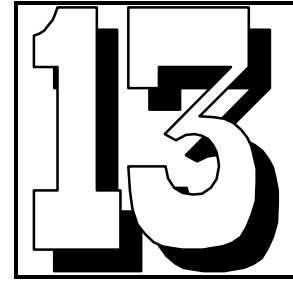
After nearly two decades of continuous operations support, NASA has transferred primary control of the International Ultraviolet Explorer (IUE) to a partnership of the European Space Agency (ESA) and the Particle Physics and Astronomy Research Council (PPARC) of the United Kingdom.

Two NASA-sponsored scientists studying the Earth-crossing asteroid 4179 Toutatis with radio telescopes have found it to be one of the strangest objects in the solar system, with a highly irregular shape and an extraordinarily complex "tumbling" rotation. Both its shape and rotation are thought to be the outcome of a history of violent collisions.

Ultrahigh energy cosmic rays pose a problem for astrophysicists because the rays can't originate from too far out in the cosmos. Do they, as some theorists propose, come from the decay of superheavy primordial particles?

Theodor Hansch and his colleagues at the Max Planck Institute and the University of Munich in Germany have for the first time trapped simultaneously electrons and positively charged ions in the same small region of space. The researchers consider this to be an important step towards the synthesis of antihydrogen.

A photonic wire laser with a cross section of only 0.19 x 0.4 microns is the smallest laser ever realized. Researchers expect that their device will



help them to build other novel photonic nanostructures.

A laser in the sky has been detected by the aircraft-mounted Kuiper Observatory. The laser emission originates at a star about 4000 light years away, probably from hydrogen in a circumstellar disk.

A second brown dwarf candidate has been spied in the Pleiades. Brown dwarfs are star-like objects with masses less than 8% of the Sun's, so they fail to build up the temperatures and pressures in their cores needed to trigger nuclear fusion. Yet they can glow dimly and extremely red as they slowly cool.

On October 9th at 12:00 Universal Time (8:00 a.m. EDT), the Julian Day count turned 2,450,000.

NASA's Hubble Space Telescope has discovered several orbiting clumps of icy rubble that could be the remnants of recently shattered moonlets orbiting near the outer edge of Saturn's ring system.

NASA has begun a new, three-year pilot education program, known as KidSat, designed to bring the frontiers of space exploration into classrooms via the Internet. The program will allow students to operate instruments and download images in real-time from the Space Shuttle and in the future, from the international Space Station.

New pictures from NASA's Hubble Space Telescope of the recently discovered comet Hale-Bopp, still outside the orbit of Jupiter, show a remarkable spiral "pinwheel" pattern and a "blob" of free-flying debris near the comet's nucleus. It looks surprisingly bright, fueling predictions that it could become the brightest comet of the century in early 1997.

Engineering data returned from NASA's Jupiter-bound Galileo spacecraft indicates a problem with the spacecraft's tape recorder, project officials report. The spacecraft remains otherwise healthy and in contact with controllers on Earth.

A discovery of ozone on Jupiter's satellite Ganymede, a possible new active volcano on Jupiter's moon Io and an aurora on Saturn are among the new findings and images presented by Hubble Space Telescope.

The physics nobel prize goes to Martin Perl of SLAC and Frederick Reines of UC Irvine for their discoveries of elementary particles.

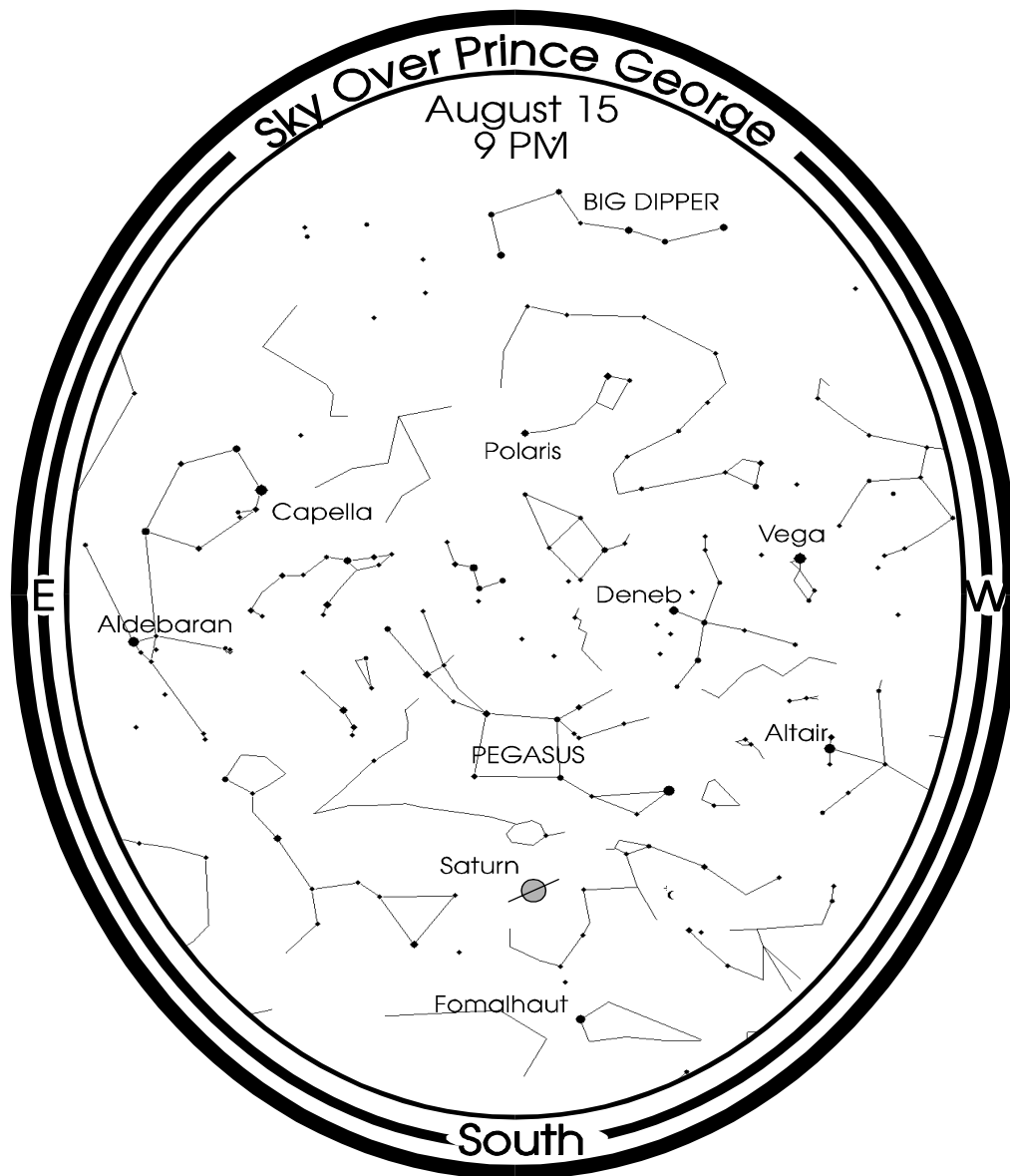
Flipping of the earth's magnetic field has been accomplished, at least inside a computer.

What may be the first discovery of a planet orbiting a normal, Sun-like star other than our own has been announced by astronomers studying 51 Pegasi, a type G5 main-sequence star 42 light-years from Earth.

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Image Gallery

The Sky Chart below was generated using Guide Version 4.0 (Project Pluto). The border and star names were overlaid using CorelDraw 3.0. This map is part of a newspaper column being submitted by Alan Whitman and Orla Aaquist for publication in *The Prince George Citizen*. Look for it soon. Suggestions from the membership are welcome.



PGAS CONTRIBUTORS



The PGAS would like to thank the following individuals, corporations and government agencies who, since 1991, have donated money, goods or services to the construction and operation of the Prince George Astronomical Observatory.

Ministry of Adv. Ed. Training and Tech.	\$25,000
BC Science Council	16,000
BC Lotteries	3,900
Helmar Kotsch (Acme Mas.)	1,932
Northwood Pulp and Timber	1,665
Electrical Services Ltd.	1,583
Royal Bank of Canada	1,500
Regional District of Fraser-Fort George	1,000
The Pas Lumber Co.	750
Canfor Polar Division	744
A.V. Jay Roofing	600
Xerox Canada	500
Russelsteel	465
Lakeland Mills Ltd.	460
Canfor Clear Lake Division	270
Lutz Klaar	200
Canfor Netherlands Division	200
Carrier Lumber Ltd.	160
Pine Drilling	150
Claus Schlueter	

The greatest contributors to the construction and operation of the observatory are from PGAS members who have generously contributed their time to this project. The value of their contribution surpasses all external contributions.

The PGAS is a non-profit organization dedicated to the advancement of astronomy and science in general in Prince George and the neighboring northern communities. Donations of money or materials to the society are greatly appreciated and tax deductible.

**Support
Community
Science**

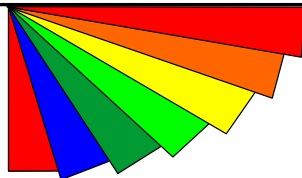
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