SKYNEWS

The scene at the Metchosin site of the 2010 Victoria Centre's RASCals Star Party through a fish eye lens.

"The sky was truly amazing"

IN THIS ISSUE

SEPTEMBER MEETING NOTICE

September 8th
University of Victoria
Bob Wright Bldg.
A104 Lecture Theatre
7:30pm

w w w . v i c t o r i a . r a s c . c a

September 8th Guest Speaker
Chris Muldinger

Chris Mundigler is a local archaeologist and anthropologist who has spent the last 20 years surveying and mapping Roman and Islamic sites in Jordan; researching archaeological sites in Ukraine, Turkey, Syria, Israel, Egypt, Morocco and Spain; and digging everything from Mycenaean palaces and sanctuaries in Greece to Roman villas and farms in Italy. He has taught courses in archaeology, anthropology, and ancient history for the University of Victoria, bringing ancient and medieval history alive by sharing his first-hand field experiences and passion for his work with his students.Chris Mundigler, a UVIC Continuing Ed lecturer will be talking on some aspect of ancient astronomy and technology, focusing on Middle Eastern archaeology

Contact us On-line

Web Site www.victoria.rasc.ca
New Members newmembers@victoria.rasc.ca
General Inquiries info@victoria.rasc.ca

Latest News

MOSCOW — Russia remembered two unlikely national heroes — a pair of skinny street mutts who moved the Soviet Union into the lead of the space race when they became the first living creatures to circle the Earth and come back alive.

Mutts Belka and Strelka were the first living creatures to return safely from a space flight. [TAR TASS photo]

The Aug. 19, 1960 mission by Belka and Strelka was a key step in preparations for the flight of Yuri Gagarin, who became the first human in space about a year later. It showcased the Soviet lead in space exploration and turned the two dogs into global celebrities. Celebrations of the mission's 50th anniversary topped national newscasts on Thursday.

By 1960, Soviet space engineers had designed a returnable spacecraft capable of carrying a human into orbit, but they needed to run an extensive program of animal tests first and many of the dogs died during tests. Only stray mutts were picked up for such flights — doctors believed they were able to adapt quicker to harsh conditions — and they were all very small so they could fit into the tiny capsules.

Laika became the first dog to orbit Earth in a non-returnable capsule but died of overheating after her 1957 launch. Two other dogs died in a July 1960 launch when their rocket exploded seconds after blastoff. Boris Chertok, a top engineer in the Soviet space program at the time, recalled the sense of relief space engineers felt when they heard Belka and Strelka barking in orbit and realized they were in good shape.

"They aren't howling, they are barking — that means they will return," Chertok quoted a colleague as saying. Belka (Squirrel) and Strelka (Little Arrow) were accompanied by mice, rats, flies and some plants and fungi. The spacecraft landed successfully a day after making 17 orbits in more than 25 hours.

"These dogs acted like real pros," said Vladimir Tsvetov, an engineer who took part in the mission, said on Rossiya state television. Soviet official reports claimed that the dogs felt well throughout the flight, but a participant in the program recalled later that it wasn't completely trouble-free. Dr. Vladimir Yazdovsky, who prepared the experiment, said that Belka was very nervous during the flight.

"She was very restless, tossing about and trying to get rid of the belts fixing her and barking," Yazdovsky wrote in his book chronicling the story of Soviet space medicine. However, post-flight medical checkups showed that both dogs were in fine condition without any adverse effects from the flight.

Strelka later had six puppies, one of which, Pushinka (Fluffy), was sent by Soviet leader Nikita Khrushchev to President John F. Kennedy's daughter Caroline. Earlier this year, the dogs' story came to the screen in Russia's first 3D computer-animated movie, "Belka and Strelka: Star Dogs."

Summer Star Party

I'm pleased to report that our RASCals Star Party held at a rural dark site near Victoria on southern Vancouver Island was a success on all counts.

We had a new superb dark site and combined with the great weather, allowed the astro-photographers to image objects we normally can't manage from more urban settings. Visual observers were knocking off objects from their lists, and we were all busy showing the general public familiar objects both during the night sky viewing and also solar viewing during the hot, clear days. Night low temperature was running 11.4°C and daytime highs were 27.7°C, with no bugs, no dew, and no dust.

We heard from two terrific speakers from the Herzberg Institute of Astrophysics for both Friday and Saturday; held workshops under the shade of the oak trees; and generally had fun meeting new people and old friends alike. The kids had a blast just running around, taking part in astro-art activities, and observing on their own terms. Our corporate sponsors were very generous with prizes for both the adults and kids, making the star party experience fun for all.

Our new location this year worked out very well. We found a rural municipality who takes LPA seriously and worked with us to make this event attractive for everyone. This year's attendance was over 200 people, so we did very well as compared with previous years. We always aim to break even on this event, and the preliminary figures indicate we achieved that goal this year, despite it being a new venue with a few "unknowns". I'm sure we will be back next year for the 2011 RASCals Star Party, and it will be even better!

Details and photos:

http://victoria.rasc.ca/events/StarParty/2010/

Joe Carr

Dominion Astrophysical Observatory Named Historic Site

On a 230-metre mountain just north of Victoria, the Dominion Astrophysical Observatory (DAO)'s 1.8 metre reflecting telescope has probed the night skies for 92 years. It's apt now that Parks Canada should designate the observatory as a national historic site to recognize its importance to Canadian astronomy's development.

"The DAO and its early staff helped bring Canadian astronomy to an extremely high level of international regard," says its director, Dr. Jim Hesser. He adds that the Parks Canada designation allows NRC to maintain the Observatory as a working scientific instrument while respecting its historic architecture.

The 1.8 metre diameter Belgian-cast glass primary mirror that first caught starlight on May 6, 1918, was replaced in the mid-1970s with one that is unaffected by temperature changes. The original spectrograph - an instrument that breaks down a star's light to determine its chemical composition - has been upgraded many times. Digital cameras and a new polarimeter developed by the NRC Herzberg Institute of Astrophysics (NRC-HIA) have taken advantage of emerging technologies. But the building, Observatory dome and nine-metre steel telescope frame remain original. According to Dr. Hesser, the Observatory building's design may still say "1918" to casual eyes, but nearly a century of accumulated upgrades make the telescope 10,000 times more sensitive than it was when new - and thus capable of contributing to 21st Century astronomical research.

"It's pretty remarkable that after all these years, we're still using much of the same equipment," says Dr. David Bohlender, the NRC-HIA research officer in charge of the telescope. "We have plans to continue to enhance its operation over the coming years and look forward to carrying on the reputation of the Observatory."

While much of Canadian astronomy's focus has shifted toward larger and newer facilities such as the Canada-France-Hawaii and Gemini telescopes, such upgrades keep the DAO "in the picture." Dr. Bohlender says the Observatory's main strengths include hosting long-term observing programs, providing long blocks of uninterrupted observing time, and training next-generation astronomers for their scientific careers. Dr. Hesser adds that the telescope's original tracking mechanism - a "very beautiful" gravity-driven brass clock drive - remained so accurate that it was only

disconnected in the late 1980s, in favour of a new computer system that automates telescope guiding and improves the accuracy of its pointing

Presidents Message

Hard to believe summer is nearly over. For me the seasons highlight was the Star Party we held at Metchosin. A very big thank you to Nelson Walker, Bruno Quenneville, Sherry Buttnor and Bill Weir for great work in preparing the event and enlisting the active participation of the Metchosin Community. Once all the work of preparing was done, the final requirement was good weather and this year we hit the jackpot. It was warm, clear and dry with no dew for the whole night and no mosquitoes either. To top that off the skies were pristine and very dark over most of the hemisphere. Some glow from Victoria of course but with a long night it was possible to wait for a favourite target to climb into darkness.

Special thanks also go to the people of Metchosin and surroundings. They provided a great field, power for our gear, helped us get lights out, came to the talks and stayed well into the night to enjoy their sky with us. We will be recognizing their support at an upcoming meeting of Metchosin Council.

Finally, I want to acknowledge the continuing support of Island Eyepiece and Telescope who again donated wonderful prizes for the draws and set up shop to give us access to books and gear right on the field. Many thanks Brian and Joanne.

John McDonald

Hams in Space

On July 21 I was able to make a voice contact with the International Space Station after 20 years of trying unsuccessfully. I spoke with **Col. Doug Wheelock**, KF5BOC operating on the ISS as NA1SS while I was traveling in my car in downtown Victoria.

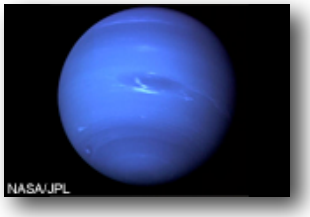
His signal was strong, loud and clear as if he was a typical local ham radio station even tough he was above Victoria at an altitude of 350 km. After the contact I was elated and so excited to have finally been able to make my first contact with the ISS. Many amateur radio operators around the world are delighted to talk to him.

On that same day 92 minutes after my first contact I was again able to contact him again using my other ham radio call sign VA7ISS. That contact will remain a very memorable one.

Malcolm Scrimger

Neptune nears opposition

The planet Neptune will be in opposition — when the sun, Earth, and a planet fall in a straight line on Aug. 20.



The planet will be exactly opposite the sun in the sky, being highest in the sky at local midnight. Usually this is also the point where the planet is closest to the Earth.

This opposition is special because Neptune will be returning close to the spot where it was discovered in 1846, marking its first complete trip around the sun since its discovery. Neptune is close, but still not quite at the finish line of its first orbit since being discovered yet. That will occur in 2011, according to NASA.

Coincidentally, opposition in 1846 also fell on Aug. 20, although the planet wasn't actually spotted until over a month later, on Sept. 23.

Jack Horkheimer dies at 72

Jack Horkheimer, born **Foley Arthur Horkheimer** (June 11, 1938 – August 20, 2010), was the executive director of the Miami Space Transit Planetarium. He was best known for his astronomy show Jack Horkheimer: Star Gazer, which started airing on PBS on November 4, 1976.

Early life

Jack Horkheimer was born in Randolph, Wisconsin in 1938. His father owned a publishing firm and was the mayor of Randolph, Wisconsin for 24 years. He received his bachelor's degree from Purdue University in 1963. He used the stage name "Jack Foley" and then "Jack Horkheimer" when he played the organ in his youth**.**

Horkheimer suffered from chronic pain, the result of a congenital degenerative lung disease known as bronchiectasis. His ailment was not diagnosed until he was 18 years old. He also suffered from radiation sickness and lost his hair as the result of medical treatments for his health problems. His health issues caused him to move to Miami in 1964 for the warm moist air.

He started working for the Miami Science Museum planetarium in the mid 1960s and became its director in 1973.

Career

Horkheimer started his astronomy career in 1964 after he moved to Miami and met astronomer Art Smith who was chief of the Southern Cross Astronomical Society. Horkheimer ran the Miami Space Transit Planetarium when it opened in 1966, after Smith had asked him to do so. Horkheimer worked his way up to become its executive director in 1973.

Horkheimer was the executive director of the Miami Space Transit Planetarium for 35 years, from 1973 until his retirement in 2008.

The Mars Science Laboratory

The Mars Science Laboratory also known as “Curiosity” is a NASA rover scheduled to be launched in November 2011 and would perform the first-ever precision landing on Mars. It is a rover that will assess whether Mars ever was, or is still today, an environment able to support microbial life. In other words, its mission is to determine the planet's habitability. It will also analyze samples scooped up from the soil and drilled powders from rocks.

The MSL rover will be over five times as heavy as and carry over ten times the weight of scientific instruments as the Spirit or Opportunity rovers. The United States, Canada, Germany, France, Russia and Spain will provide the instruments on board. The MSL rover will be launched by an Atlas V 541 rocket and will be expected to operate for at least 1 Martian year (668 Martian sols/ 686 Earth days) as it explores with greater range than any previous Mars rover.

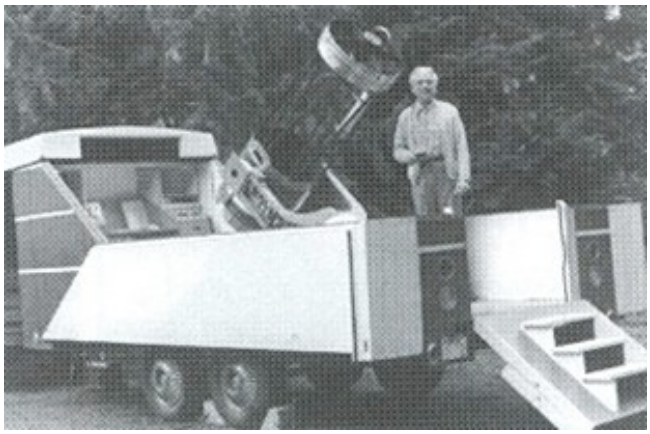
The MSL will have a length of 9 feet (2.7 m) and weigh 1,984 pounds (900 kg) including 176 pounds (80 kg) of scientific instruments. It will be the same size as a Mini Cooper automobile. This compares to the Mars Exploration Rovers which have a length of 5 feet 2 inches (1.57 m) and weigh 384 pounds (174 kg) including 15 pounds (6.8 kg) of scientific instruments.

Mars Science Laboratory is part of NASA's Mars Exploration Program, a long-term effort of robotic exploration of Mars, and is a project managed by NASA's Jet Propulsion Laboratory. The total cost of the MSL project is about $2.3 billion USD.

The Evans, Vander-Byl Mobile Telescope

The Travelling Observatory Project
By Bill Almond

In October 1982, at the new Tillicum Mall, the Victoria Centre proudly unveiled to the public their newest creation, which was a mobile telescope. It was built by Centre member Leo Vander-Byl, assisted by George Ball, Roger Williams and David Kopriva. The 50-cm Newtonian reflector had not yet seen first light because the computer-guidance system was still being designed and installed by an electronics class at Camosun College.



Builder, Leo Vander-Byl, with unit ready for use: Roof rolled off and sides dropped.

The project started from a gift of a mirror blank to Leo by Miro Catapovic of New York, whom Leo had met at the Riverside Convention of 1980. One of Leo's professional activities was making telescopes, so he offered to design and build one for the Centre.

Technicians at the Dominion Astrophysical Observatory aluminized the mirror. The cost of materials was met by a bequest from Robert Evans, a former Director of Telescopes of the Centre.

Building a mobile telescope arose from the Centre's inability to find a suitable inexpensive piece of property on which to build an observatory, so it was decided to place the telescope on a trailer. This would have the advantage of taking the unit to dark skies away from the city by anyone who had a suitable hauling vehicle, because a dedicated vehicle had yet to be located.

It also had to be large enough to house the controls and equipment. A desk in the forward end housed the records and reference tables along with the indispensable coffee-making supplies.

To counter rough ground the telescope was mounted on a shock-dampening device inside the trailer and an exterior stabilizing leg system ensured the telescope's solidity while in use. Polar alignment was a bit of a challenge though.

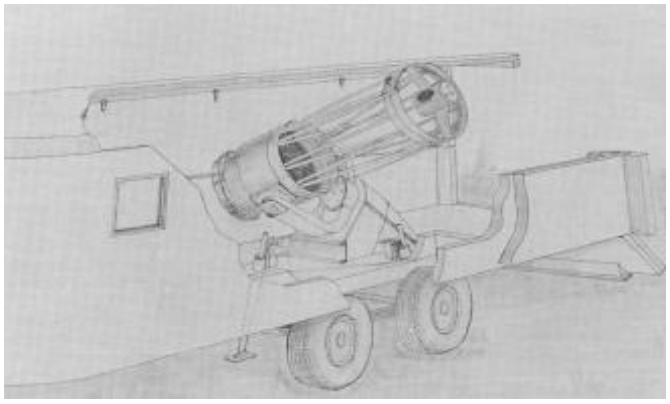
It was accomplished by manoeuvring the entire unit approximately in line with Polaris and then fine-adjusting the mounting by remote control. Precise sidereal tracking was accomplished by means of a computer-controlled clock drive and all the essential vast number of stellar coordinates had to be loaded into the computer prior to use.

Some celestial events required a WWV time signal. And all selected objects could be displayed using a high-resolution camera and a TV set.

While the project was undoubtedly heroic it suffered from a fatal flaw. It was just too much trouble for the average member to be bothered with. By the time a small crew had driven to where the scope was located, hauled it out to a chosen site, roughly polar aligned it, finely aligned it, set it up electronically and mechanically, observed or taken images, packed everything up and hauled it all back to where it came from, enthusiasm for using it quickly evaporated.

For years it stood forlornly in a field until Jack Newton, prior to moving to Florida, bought the trailer from the Centre for one dollar and by agreement the Centre loaned the telescope and its related electronic equipment to Pearson College, where it still resides.

Consequently, the telescope remains the Centre's property. Jack used the empty trailer to haul many of his possessions to his new home.



Cut out showing the 20" scope mounted in its trailer.

RASC General Assembly 2010
Fredericton, New Brunswick
30 June - 4 July 2010

Report by Chris Gainor
Victoria Centre - National Rep

The first RASC General Assembly ever held in New Brunswick will be remembered for first-rate Maritimes hospitality, discussions of the future, and the emergence of a new look for the national office of the RASC.

The GA took place in Fredericton on the campus of the University of New Brunswick, the site of Canada's first astronomical observatory. But the organizers put the accent on the future with several presentations that focused on building the RASC and the hobby of astronomy in the 21st century.

Victoria Stars

For members of the Victoria Centre, the high point of the GA was near the end of the closing banquet, when outgoing National President Dave Lane announced the final award of the evening. This was a new award, the RASC President's Award, which is chosen by the National President for an especially deserving member.

Dave announced that the 2010 award was going to our own Sid Sidhu for his incredible work organizing International Year of Astronomy activities in and around Victoria. Dave said he was impressed when he saw Sid's work during his visit to Victoria last fall. Since Sid wasn't at the GA, I accepted the award in his place.

Two other Victoria RASCals also took a prominent role in the GA. The RASC's Honourary President, Jim Hesser, and our centre's First Vice President, Lauri Roche, took part in a panel discussion on the RASC in the 21st Century. Along with other speakers, Jim and Lauri talked about how to attract members of the public to our hobby and how to keep their interest alive.

Jim attended the meeting with his wife Betty, and Alex Schmid and his mother Maria rounded out the Victoria delegation to the GA.

RASC Business

A new executive took office headed by Mary Lou Whitehorne of Nova Scotia, the fifth woman to serve as National President and the first in nearly twenty-five years. The GA also marked the debut of the RASC's first-ever Executive Director, Deborah Thompson, who had just started the job two days before the GA began.

The RASC Annual General Meeting ratified a proposal from National Council to increase dues by $3.00 a year starting later this year. It is also expected that dues will be increased by another $3.00 next year, although that will have to be approved by council and next year's annual general meeting. The dues increases will cover the salary of the new executive director, who among other things is being charged with looking for new sources of funding and with making the national RASC more efficient and effective.

Compared to recent National Council meetings that featured discussions on increasing dues and the desirability of hiring an executive director, the agenda for National Council at this GA was relatively light. Nevertheless, council approved a new Dark Sky Preserve in Kejimkujik National Park in Nova Scotia. Council also made improvements to the national public speaker's program, which provides funding for speakers at centre meetings. As well, council discussed better management of funds under the society's control.

During the council meeting, I announced Victoria Centre's plan to host the 2014 GA as part of our own centennial celebrations. The meeting was also told about next year's GA, which will take place in Winnipeg on the July 1st weekend.

A second National Council meeting at the GA renewed the memberships of our national committees. I have joined the RASC History Committee.

The panel discussion that included Jim and Lauri was not the only part of the meeting that looked to the future. Many presentations also dealt with this theme, including Jim Hesser's talk on follow-up activities to the International Year of Astronomy. Mary Lou Whitehorne also gave a memorable talk about the importance of the RASC's work in education and public outreach as a means of promoting scientific literacy amongst the public. Audio recording available from David Levy's website: go to Lets Talk Stars and scroll down to the bottom where you'll see the title "The Future of the RASC" dated 7/8/10.

Other Activities

Most people who attended the GA took a tour of the wooden building on campus that served as Canada's first astronomical observatory in 1850. The observatory was built by William Brydone Jack (1819-1886), who among other things was also the first president of the University of New Brunswick.

New Brunswick borders the Bay of Fundy, which is famous for its great tidal range. Many delegates took a tour to the Hopewell rocks, flowerpot-shaped rocks created by the tides, and viewed these rocks at both high and low tides. Later in the GA, Dr. Roy Bishop, the former longtime editor of the Observer's Handbook, gave a talk explaining the physics of the Bay of Fundy's tides.

The GA's best-known speaker was one of Dr. Bishop's former students. David Levy reviewed his career as an observer and comet hunter in an inspiring presentation.

Other activities included a day long sailing trip from St. Andrews by the Sea, where delegates saw Minke whales, porpoises, and sea lions. The tours rounded out a busy, productive and enjoyable General Assembly.

Newton Ball Award

The Newton Ball award is open for nominations for this year and will be awarded at the upcoming AGM in November. The award was established in 2001 to recognize the achievement of Centre members who have given exemplary service to the Centre's objectives and it's membership. Victoria Council will accept nominations and they will be taken into consideration and decide who shall be the recipient of the Award.

Nominations can be sent to president@victoria.rasc.ca

Past winners: Jim Hesser, 2001 and Sid Sidhu, 2002

ASTRONOMY CAFE (EACH MONDAY)

STARTING SEPT 6th

Fairfield Community Centre
1330 Fairfield Rd. Victoria,
7:30pm - 11pm
Call Geoff at (250) 592-2264
for directions and information.
New comers are especially encouraged.

NEW OBSERVERS GROUP

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Email Lists: Contact Joe Carr to subscribe
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NEXT MONTHLY MEETING OCTOBER 13th
University of Victoria, Bob Wright Bldg. A104

RASC Victoria Council

President
John McDonald
President@victoria.rasc.ca

First Vice President
Lauri Roche
vp2@victoris.rasc.ca

Second Vice President
Sherry Butnor
vp2@victoria.rasc.ca

Treasurer
Li-Ann Skibo
treasurer@victoria.rasc.ca

Secretary / Recorder
Nelson Walker
sectretary@victoria.rasc.ca

Librarian
Charles Banville
librarian@victoria.rasc.ca

Past President / Website / E mail lists
Joe Carr
web@victoria.rasc.ca

Skynews Editor
Malcolm Scrimger
editor@victoria.rasc.ca

Telescopes / School Programs
Sid Sidhu telescopes@victoria.rasc.ca

National Representative
Chris Gainor
nationalrep@victoria.rasc.ca

New Member Liaison
Bruno Quennville
newmembers@victoria.rasc.ca

Membership Coordinator
Dirk Yzenbrandt
membership@victoria.rasc.ca

Members at Large
Bill Almond, Sandy Barta, Dave Bennett, Jim Hesser, David Lee, Steve Pacholk, Colin Scarfe, Scott Mair