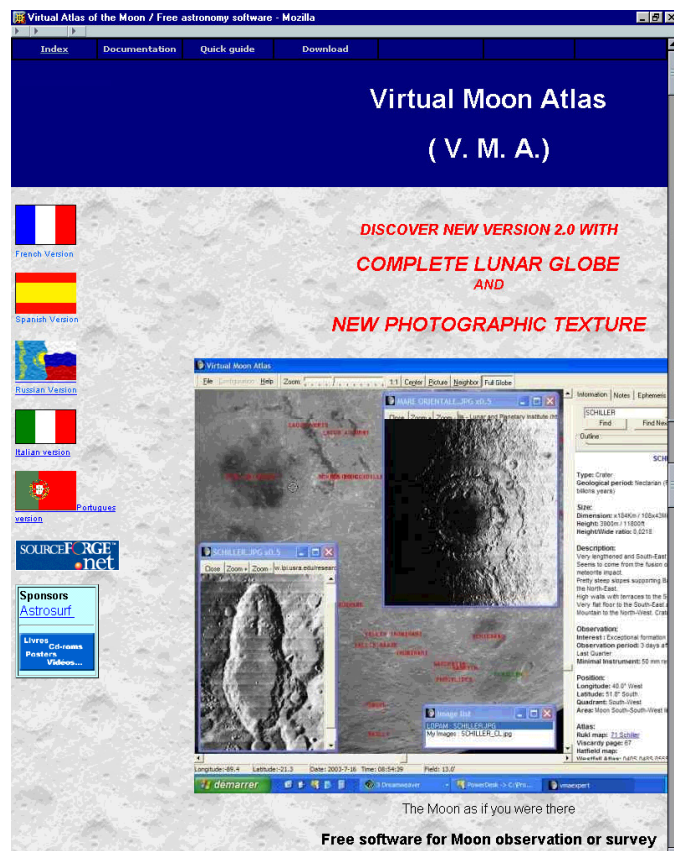


Web Page of the Month



This software is the result of a collaboration between Christian Legrand, a passionate lunar observer and co-author of the guide "Découvrir la Lune" published in French by Bordas (and soon in English by Cambridge University Press under the title "Discover the Moon"), and Patrick Chevalley, author of the freeware "Cartes du Ciel / Sky Charts".

The authors provide this free for amateur astronomers, lunar observers and students who wish to practice selenography. They hope to promote Moon observation and knowledge because our satellite will become one of the next human space exploration steps.

http://www.astrosurf.com/avl/UK_index.html

SRynews



<http://victoria.rasc.ca/>

This Month

Greg Arkos

From Schiaparelli to Spirit: A history of human exploration of Mars

The Red Planet has fascinated man since man first saw it gleaming in the night sky. Join my examination of Earth's neighbour, from its ancient role as a harbinger of war & strife to the recent results of the Spirit and Opportunity rovers. As we unravel the enigma that is Mars we uncover information which may allow us to answer fundamental questions about life and our place in the universe.

Greg Arkos was born in Winnipeg, Manitoba to recently arrived immigrants Julius and Julia Arkos of Budapest, Hungary. He completed a B.Sc Hons degree in Geophysics at the University of Manitoba, and a PhD in Space and Atmospheric Science (Geophysics) at the University of British Columbia. Dr. Arkos spent some time as a post-doc at the University of Calgary in the Space Physics group, before entering the teaching stream at Mount Royal College. He recently took up a faculty position in the Physics, Engineering and Astronomy department at Malaspina UC, and is enjoying both work and Nanaimo.

Address Change? Information Incorrect?

Telephone: (416) 924-7973 (toll-free at (888) 924-RASC in Canada)
 Fax: (416) 924-2911
 E-Mail: mempub@rasc.ca Website: www.rasc.ca
 Postal Mail: RASC, 136 Dupont Street, Toronto, ON M5R 1V2, Canada
 General enquiries: nationaloffice@rasc.ca

Contact Us On-Line

Web Site: <http://victoria.rasc.ca>

Victoria Council members:

president@victoria.rasc.ca
vp@victoria.rasc.ca
treasurer@victoria.rasc.ca
secretary@victoria.rasc.ca
librarian@victoria.rasc.ca
nationalrep@victoria.rasc.ca
newmembers@victoria.rasc.ca
web@victoria.rasc.ca

General Enquiries:

info@victoria.rasc.ca

RASC Victoria Council

This Month

President: Chris Gainor
 1490 Thurlow Road
 Victoria, BC V8S 1L9
 380-6358
cgainor@islandnet.com

Vice President: Bruno Quenneville
 477-2257
brunoq@shaw.ca

Treasurer: Laura Roche
 8581 Sentinel Place
 Sidney, BC V8L 4Z8
 656-2396
lroche@shaw.ca

Secretary and Recorder:
 Li-Anne Dorrance
lidorrance@aol.com

Honourary President:
 George Ball

Librarian & Telescopes:
 Sid Sidhu
J.S._Sidhu@telus.net
 Past President and
 National Representative:
 David Lee
 479-5187
David_Lee@telus.net
 Skynews Editor: Sandy Barta
 Website Editor: Joe Carr
 Email list: Joe Carr
web@victoria.rasc.ca

Members at Large:
 Bill Almond, Jim Hesser,
 Ed Maxfield, Frank Ogonoski,
 Blaire Pellatt, Colin Scarfe,
 Rich Willis

New Members Liason:
 Sandy Barta



Astronomy Cafe

At Bruno Quenneville's
 2019 Casa Marcia Crescent,
 Victoria, BC.
 Call 477-2257 for more information or
 directions.

Newcomers are most welcome.
 Come and enjoy!

October 20

Astro Imaging

**Every 3rd Wednesday
 at
 Bill Almond's**

354 Benhomer Drive

October 29

*New Observer's Group
 At Sid Sidhu's:*

1642 Davies Road (off Millstream
 Lake Road) at 8:00 PM.
 Call 391-0540 for more information or
 directions



Please Note!!

There is NO November meeting
 at Uvic—it's at the Golf Club
 on November 20

Saturday,
 November
 20

Annual Dinner

Gorge Vale Golf Club
 see details inside

December 8

December Meeting

7:30 pm
 Room 060, Elliott Building, UVic

**Yes, We post important,
 timely, member-related
 news to our email list.**

Online information about the RASC Vic
 and Skynews email lists:
<http://victoria.rasc.ca/>
 click on: 'Members Only'

Annual Meeting and Dinner

Saturday, November 20, 2004

Gorge Vale Golf Club

1005 Craigflower Road, Victoria, BC

Bar opens 6:00 pm

Dinner 7:00 pm

Speakers 8:00 pm

Cost \$28.00 per person

Please note: attendance to the business meeting only is no charge

Purchase tickets at the October General Meeting, or order by phone or email with payment at the door.

Let Lauri know by Monday, November 17 so she can reserve you a spot.

PHONE: (250) 652-2361 EMAIL lroche@shaw.ca

2005 RASC Calendars \$13.00 each

100th anniversary mugs \$6.00 each

Island Eyepiece and Telescope



250-743-6633
sales@islandeyepiece.com

Island Eyepiece and Telescope Ltd
Canada's Source for Astronomy

TeleVue, Celestron, Sky-Watcher, Meade
ScopeTronix, Telrad, Rigel, Orion, Sirius Optics
William Optics, Denkmeier, Antares
Solarscope, Speers-Waler, Howie Glatter

8 Years of quality customer service
We Ship Worldwide

www.islandeyepiece.com

647 Hunter Pl, Mill Bay, BC Canada, V0R 2P0
250-743-6633 sales@islandeyepiece.com

President's Message

I have spent the whole month of September in Edmonton, but the Victoria Centre and the RASC have not been far from my thoughts. From my contacts with council members, I was pleased and not at all surprised to find out that the work of the centre has continued quite well in my absence.

The RASC Victoria Star Party in September was successful given the circumstances, with interesting talks, good food and great people compensating for a bad break from the weather. Thanks to Rich Willis and the many people who helped him pull this off.

Bruno Quenneville has been busy organizing our monthly meetings, and David Lee is putting together our new council, which will take office in November. Council also met in September to get ready for our fall activities.

I have gone to Edmonton to pursue studies at the University of Alberta, and those who suffered from the September rains that hit Victoria will be gratified to know that it snowed here in Edmonton during my first week of classes. The same day, there was an interesting space symposium to go to, so I didn't feel too bad about my situation.

A few days later, I attended a monthly meeting of the Edmonton Centre at the Odysium, Edmonton's science and space centre. I found a well attended meeting of a very active centre. The Edmonton centre is so busy that the business portion of the meeting was much longer than I was accustomed to seeing in Victoria.

One reason for the Edmonton Centre's high level of activity is that the Alberta government has maintained charity casinos, and the Edmonton Centre has

(Continued on page 4)

The deadline for the next issue of *Skynews* is

October 24 2004

Get your *Skynews* early and in colour. Tell Lauri, our Treasurer, that you get *Skynews* on line and we won't mail you a copy.

President's Message Continued

been able to take full advantage of that fact. They have sums in the five-figure range to spend on various observing and outreach activities. That's something we can only dream about in B.C.

Unfortunately, B.C. governments from both sides of the political divide have hacked away at gaming proceeds for charities to the point where the Victoria Centre and other community groups are forced to go cap-in-hand to the government for amounts of money that are chickenfeed by Alberta standards.

On a happier note, SpaceFest 2004 is coming to Vancouver in the first week of October. This event involves many astronauts and leading experts in the field of space exploration. I am taking a break from my studies to be in Vancouver that week, and I hope that many of you have the opportunity to attend.

Chris Gainor

Nominations for Council

It's about a month away from the Annual Meeting and we're looking for nominations for council.

If you are interested in serving, or wish to nominate someone please let David Lee know at or before the Annual Meeting in November.

Phone: (250) 479-5187
Email: David_Lee@telus.net

On the Cover!

Evidence of clear skies at the Star Party ... at least for a while. Despite the weather it was fun to get together with everyone. Linda's talk was well worth it.

Camera: Fuji S2
Lens: 16mm AF Nikkor (cropped)
Exposure: 30 seconds at f/2.8 untracked

David Lee

(Centre of the Universe Continued from page 12)

scattered through our atmosphere leaving red light to strike the surface of the moon. The total eclipse will begin at 7:23 pm and end at 8:45 pm reaching its greatest maximum at 8:04 pm. A "bite of the moon" will be visible until about 10:25 pm. Make sure you head outside and take a look at this awesome site as there will not be another total lunar eclipse anywhere in the world until 2007! If you would like to view the eclipse, join us at the Centre of the Universe from 5:30 pm onwards for great programs and eclipse viewing!

For more information on this lunar eclipse, visit:

http://skyandtelescope.com/observing/objects/eclipses/article_1340_1.asp.

The Orionid meteor showers will peak in the late evening of October 20 and early morning of October 21. Named for the constellation Orion, all of the shooting stars will appear to radiate, or come from that part of the sky. You can expect to see about 10 meteors per hour during this years Orionids. For more information on upcoming meteor showers, please visit:

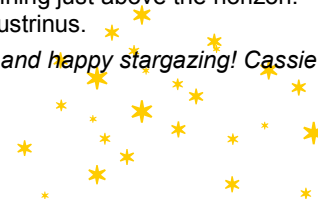
http://skyandtelescope.com/observing/objects/meteors/article_588_1.asp.

Look to the East at 9 pm to find the "Great Square" of Pegasus, a beautiful fall constellation. This is a large diamond shape of bright stars high off the horizon in the East. Attached to the far star of the left hand side of the diamond, you may see a shape like the front end of a canoe. This is the constellation Andromeda. Above Andromeda and slightly to the left, or Northeast, is the giant "w" of the sky, Andromeda's mother Cassiopeia. If you use the right hand part of the "w" as an arrow, you can point towards the Andromeda. You may be able to see a small, hazy patch of sky just before you run into the canoe of Andromeda. This is the Andromeda Galaxy, our closest galactic neighbour and the only galaxy you can see with your naked eyes. The Andromeda Galaxy is about 2 million light years away, making it also the farthest object away from the Earth we are able to see with our naked eyes.

While you are gazing at the fall constellations in the East, look just above the horizon. You will see a cluster of blue stars just above the horizon. This open cluster stars is called the Pleiades. An open cluster of stars is a group relatively new stars that have formed in the same region of space. Point a pair of binoculars or a small telescope at the Pleiades to reveal more hot blue stars and gas and dust surrounding them.

Look to the North to find the "Big Dipper" parallel to the horizon. High in the West, you will the bright star Vega, a bright star in the constellation Lyra. Look to the southern horizon to see a bright blue star shining just above the horizon. This is Fomalhaut, part of the constellation Picis Austrinus.

Clear skies and happy stargazing! Cassie



(Centre of the Universe Continued from page 7)

Equipment required: None! The course is intended for those who have little or no equipment and are interested in the possibilities of astrophotography. However, if you have an SLR camera or advanced digital model, you're welcome to bring it (and telescopes, too) for consultation and experimentation after class.

Did you ever see an amazing photograph of the night sky and think, "Gee, I wish I could do that!" In fact, you can get started in astrophotography with relatively simple gear. This two-evening course introduces you to the possibilities of night sky photography, both film and digital, starting at the most basic level and examining what is possible with more advanced equipment. The course will be a combination of informal lectures, multimedia presentation, question-and-answer, and, weather permitting, night-sky observing at the Dominion Astrophysical Observatory.

David Lee is well-known in Victoria as an amateur astrophotographer. He is an advocate of public outreach in Astronomy and the Sciences and is currently the National Representative of the Royal Astronomical Society of Canada, Victoria Centre. His photographs have been published in Skynews, Sky & Telescope and various space related websites.

David Lee has a BSc from the University of Victoria (Mathematics and Psychology) and a Visual Communications Diploma from the Banff Centre School of Fine Arts. He has been an instructor in digital photography at Camosun College at both introductory and advanced levels.

For more information on either course or to register, please email the Centre at cu@nrc.gc.ca, or call (250) 363-8262.

The Sky This Month: October 2004 (All times and dates local to Victoria, BC)

October 2	Crescent Moon near Jupiter after 2 am
October 6	Last Quarter Moon
October 7	Moon near Saturn in morning sky
October 12	The best view of Mercury this fall - look for it low in the East about 1 hour before sunrise
October 13	New Moon
October 20	First Quarter Moon and Orionid Meteor Showers
October 25	Moon near Saturn around 10 pm
October 27	Full Moon and Total Eclipse of the Moon visible from all of North America
October 30	Last Day of Daylight Savings Time
October 31	Halloween

October 27 brings a total lunar eclipse and a "red moon rising"! During a lunar eclipse, a full moon passes through the Earth's shadow. We see this as a dimming of the moon. For people living in Victoria, the eclipse will be underway before the moon rises. Look to the eastern horizon to see the moon rise at 5:50 pm (local time). The moon will appear red in colour as blue light from the sun is

(Continued on page 13)

Report from the Centre of the Universe

Happy October!

Fall is here and the nights are getting longer— perfect for star gazing and catching the total lunar eclipse at the end of this month!

The Centre of the Universe is open daily from 10 am to 6 pm. We are still offering our Eternal Egypt planetarium shows (http://www.hia-ih.nrc-cnrc.gc.ca/cu/egypt_e.html) daily at 10:30 am and 1:30 pm until the end of October. We are also open Saturday evenings from 7 to 11 pm for stargazing and some great presentations! October is loaded with guest speakers and spooky fun on these nights!

School programs are in full swing at the Centre of the Universe! We have some great new programs to offer as well as professional development days for teachers. For more information, please visit http://www.hia-ih.nrc-cnrc.gc.ca/cu/teacher_e.html.

Here's what's on this month ...

Guest Speakers

The Centre of the Universe is located at the Herzberg Institute of Astrophysics, home to some of the world's best astronomers. We have asked a few of our colleges to give guest lectures at the Centre this October ...

Saturday, October 9 at 9 pm

Dr. Jennifer Johnson, Dominion Astrophysical Observatory Research Associate: "The Origin of the Elements"

Saturday, October 16 at 3 pm

Dr. Jaymie Mathews: "Small Telescope, Big Questions", the MOST space telescope, Canada's "humble" space telescope. (Please note: this talk will take place in the daytime).

Or you can join Jaymie on Saturday night at UVIC. For more information on the UVIC lecture, visit http://www.hia-ih.nrc-cnrc.gc.ca/public/lecture_16oct_e.html.

Saturday, October 16 at 9 pm

Dr. James Di Francesco, a radio astronomer working in the Herzberg Institute of Astrophysics' Millimetre Astronomy Group

Saturday, October 23 at 9 pm

Dr. JJ Kavelaars, our resident "moon hunter" will be speaking tonight. Dr. Kavelaars helped discover new moons around some of our gas giant planets.

(Continued on page 6)

(Centre of the Universe Continued from page 5)

Saturday, October 30 at 9 pm

Dr. Doug Johnstone will take you into a night of the life of an astronomer, showing you what it is like to use some of the largest telescopes in the world.

And, don't forget our Halloween show this night! More details follow ...

Red Moon Rising

Wednesday, October 27 from 5:30 to 11 pm—a total lunar eclipse and a "red moon rising"! Make sure you head outside and take a look at this awesome site as there will not be another total lunar eclipse anywhere in the world until 2007! Join us at the Centre of the Universe for programs on eclipses, planetarium shows and eclipse viewing!

All Hallows Eve at the Centre of the Universe

Saturday, October 30 from 7 to 11 pm—Trick or Treat at the Centre of the Universe! Does a ghost haunt the Plaskett telescope? Are there aliens out there? Come in costume, take a lantern tour of the Plaskett telescope, join in some fun Halloween games and maybe even see some aliens!

Centre of the Universe Courses

Stars—An Introduction to Stellar Astronomy and the Fall Skies

Wednesday, October 13 and Wednesday October 20, 2003
7:00 to 10:00 pm

This exciting 9-hour course introduces you to general astronomy, in-depth information on how stars form, evolve and die, and lots of time for guided explorations of the night sky. You'll be taught by trained astronomers and educators, and have a chance to tour the Plaskett telescope, work in the Skylab planetarium, and observe with research-grade telescopes.

The "Stars" course requires no previous astronomy background, and is most appropriate for adult learners. Any interested students under the age of 18 are asked to contact the Centre to discuss their enrolment. The course will run from 7-10 p.m. on October 4th, 12th and 18th. Admission is \$79+GST for Centre of the Universe season's pass holders, and \$89+GST for all others. The course will be held at the Centre of the Universe, located at 5071 West Saanich Road.

Astrophotography at the Centre of the Universe

An introductory two-evening course taught by David Lee

Bonus: Photograph your own lunar eclipse on October 27 at the Centre of Universe (weather permitting). Students of the course are invited to bring their own equipment or just participate in observing the eclipse.

Cost: \$89.00. Class size limited to 30.

Continued on page 12)

2004 Annual Meeting and Dinner

MENU

Breads and Rolls Relish Trays Seasonal Vegetables & Dip
Fresh Fruit Tray Assorted Deli Meats Cheese Platters
Decorated Salmon

Salads

Seasonal Greens, Red Baby Bliss Potato Salad, Traditional Caesar,
Coleslaw, Greek Salad, Bow-Tie Pasta
Marinated Vegetable

Hot Carved

Roasted Potatoes
Roast Strip loin with Herb Au Jus
Rice Pilaf
Seasonal Vegetables

Hot Entree

Vegetarian Lasagna

Desserts Pastries

Coffee ☐ Tea

BUSINESS AGENDA: 9:00 pm

Presidents Report
Treasurer's Report
Secretary's Annual Report
Site Selection Committee Report
Newton-Ball Award
Ernie Pfannenschmidt Annual Award for Amateur Telescope Making
RASC Victoria Centre Awards for Astrophotography
Volunteer Awards
Elections of new Council Executive
Door Prizes
Closing Comments by our New President

(2003 Annual Meeting Minutes, Continued from page 9)

After calling for further nominations three times for each executive position, all of which had only one nominee, the executive panel as nominated was installed by acclamation.

David introduced the executive for 2004:

President	Chris Gainor
Vice President	Bruno Quenneville
Treasurer	Laura Roche
Secretary and Recorder	Li-Ann Dorrance
Honorary President	George Ball
Librarian and Telescopes	Sid Sidhu
Past President and National Representative	David Lee
Sky News Editor and New Members Liaison	Sandy Barta
Website Editor	Joe Carr
Members at Large	Bill Almond, Jim Hesser, Ed Maxfield, Frank Ogonoski, Blaire Pellatt, Rich Willis, Colin Scarfe

Thank you

Sid Sidhu recognized and thanked the public outreach program volunteers. These included: Guy Walton, Dave Bennett, Sandy Barta, David Lee, Frank Ogonoski, Ed Maxfield, Bruno Quenneville, Bill Weir, Chuck Filtness, Brenda Stuart, Joe Carr, Alex Schmid, Li-Ann Dorrance, John Love, Brian Robillard, Mark Wheen and the Pearson College Students.

Lauri Roche thanked the Gorge Vale Golf Club employees for the wonderful dinner.

David Lee thanked Lauri Roche for organizing the dinner.

Guest Speaker: David introduced Greg Fahlman, the Director General of the NRC Herzberg Institute of Astrophysics (NRC_HIA) who gave a talk on the Canada France Hawaii Telescope (CFHT) and the Wide Field Infrared Camera, WIRCAM.

2004 Annual Meeting Speakers

Dr Sara Ellison and Dr Jon Willis Living on Thin Air

Many of the world's most powerful telescopes are situated on the lonely expanses of the Atacama desert in northern Chile. Drs Jon Willis and Sara Ellison spent three years living and working in Chile at the European Southern Observatory, home of the four 8-metre Very Large Telescopes. Drs Willis and Ellison will present a talk encompassing several aspects of their Chilean experiences, including their work at the telescopes, scientific research done at these premier facilities and life at 2400 metres.



Hunting Gravitational Waves: Space Technology 7

Among the mind-blowing implications of Einstein's general theory of relativity, direct verification is still missing for at least one: gravitational waves. When massive objects like black holes move, they ought to create distortions in space-time, and these distortions should spread and propagate as waves—waves in the fabric of space-time itself.

If these waves do exist, they would offer astronomers a penetrating view of events such as the birth of the Universe and the spiraling collisions of giant black holes. The trick is building a gravitational wave detector, and that's not easy.

Ironically, the gravitational waves spawned by these exceedingly violent events are vanishingly feeble. Gravitational waves exert a varying tug on objects, but this tug is so weak that detecting it requires a device of extraordinary sensitivity and a way to shield that device from all other disturbances.

Enter Space Technology 7 (ST-7). This mission, a partnership between NASA's New Millennium Program and the European Space Agency (ESA), will place a satellite into a special orbit around the Sun where the pull of the Earth's and Sun's gravities balance. But, even the minute outside forces that remain—such as pressure from sunlight—could interfere with a search for gravitational waves. To make the satellite virtually disturbance-free, ST-7 will test an experimental technology that counteracts outside forces. This system, called the Disturbance Reduction System (DRS), is so exquisitely sensitive that it can maintain the satellite's path within about a nanometer (millionth of a millimeter) of an undisturbed elliptical orbit.

DRS works by letting two small (4 cm) cubes float freely in the belly of the satellite. The satellite itself shields the cubes from outside forces, so the cubes will naturally follow an undisturbed orbit. The satellite can then adjust its own flight path to match that of the cubes using high-precision ion thrusters. Making the masses cube-shaped lets DRS sense deviations in all 6 directions (3 linear, 3 angular).

ST-7 is scheduled to fly in 2008, but it's a test mission; it won't search for gravitational waves. That final goal will be achieved by the NASA/ESA LISA mission (Laser Interferometer Space Antenna), which is expected to launch in 2011. LISA will use the DRS technology tested by ST-7 to create the ultra-stable satellite platforms it needs to successfully detect gravitational waves.

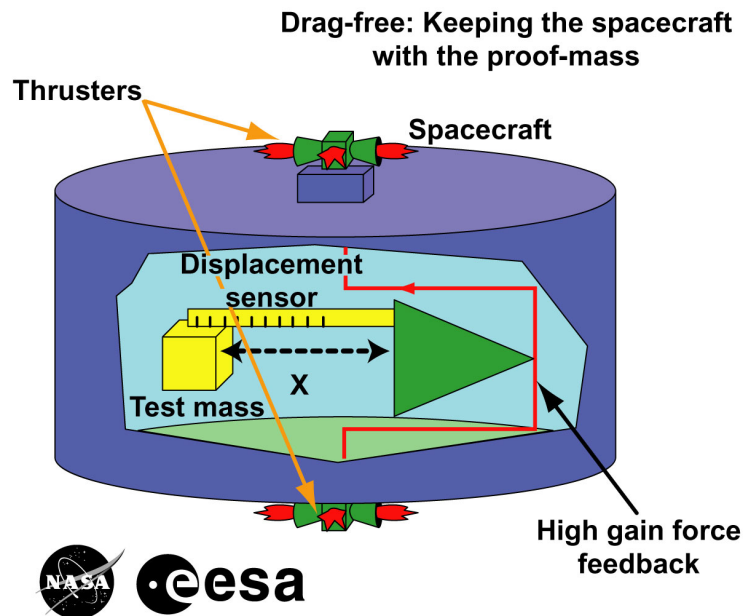
(Continued on page 8)

The Space Place Continued

If ST-7 and LISA succeed, they'll confirm Einstein (again) and delight astronomers with a new tool for exploring the Universe.

Read more about ST-7 at <http://nmp.jpl.nasa.gov/st7>. Kids in a classroom setting, check out the "Dampen that Drift!" article at http://spaceplace.nasa.gov/en/educators/teachers_page2.shtml

By Patrick L. Barry and Tony Phillips



Space Technology 7 will test a technology to be used in detecting gravitational waves in space.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

2003 Annual General Meeting Minutes

November 22, 2003 at the Gorge Vale Golf Club

The 2003 annual meeting of the Victoria Centre of the Royal Astronomical Society of Canada, which took place at Gorge Vale Golf Club, commenced at 8:30 p.m. with David Lee presiding in place of President Chris Gainor. 57 people attended.

Minutes: Sandy Barta read the minutes for the annual meeting for 2002.

Presidents Address: David read President Chris Gainor's report.

Secretary's Report: Li-Ann Dorrance read the Secretary's report on behalf of Robert Walker.

Financial Report: Lauri Roche presented the financial report.

Announcements: David Lee announced that the Michael Smith Award for Science Promotion was given to Scott Mair for his achievements in building strong educational programming and promoting science activities. Scott informed members that there was recognition of Dr Rajiv Gupta on the same web page, which coincidentally was David's next announcement.

David announced that the National RASC President, Dr Rajiv Gupta accepted the Michael Smith Award for Science Promotion as well on behalf on the RASC.

Lauri Roche announced that the RASC Victoria Centre inadvertently had received a cheque for \$10,000, which was meant for the National Society and had been forwarded.

David announced that Bill Weir was presented with a certificate for the 110 Finest NGC Objects Award from Kim Haye, the National Secretary. Bill mentioned he used a 6 inch scope and a lot of time and patience. His final NGC Object was found at 2:30 am at the Island Star Party, and he took his inspiration from other observers.

The Newton Ball Award was presented to Bill Almond by David Lee for his service to the RASC and his hard work in promoting the Centre and astronomy. Bill said he was touched and honoured to receive this award.

David announced the death of Ernie Pfannenschmidt on November 17, 2003. He informed the members that a service would be held November 29, 2003 and that information on a memorial may be found on the website. Jim Hesser spoke to members about Ernie's life.

Executive Nominations 2004:

David announced that Rich Willis will step down as Vice President and that Robert Walker will step down as Secretary and Recorder.

(Continued on page 10)