

# SRynews



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

*This Month*

**Henk Hoekstra**

**Looking at the Dark Side of the Universe**

The contents of the universe are dominated by two mysterious components: dark matter and dark energy. In both cases their existence has been inferred from astronomical observations. To learn more about the dark side of the universe I use nature's own weighing scales: gravitational lensing. Massive structures in the universe deflect the paths of photons passing near them. By measuring the amount of deflection (or a related quantity) we can infer the masses of such structures. This relatively new technique is rapidly gaining ground because of its unique sensitivity to dark matter, and more indirectly to dark energy. I will show some examples gravitational lensing and my research, which nowadays is driven by larger and larger data sets.

Henk received his PhD. In 2000 from the University of Groningen; 2000-2002, Postdoc CITA, Toronto; 2002-2004, Senior Research Associate, CITA, Toronto; and 2004 to the present, Assistant professor, CIAR scholar, Uvic. His research focuses on observational cosmology, using the distribution of matter and clusters of galaxies to study the properties of dark matter and energy.

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*On the Cover!*

**Plaskett at dusk**

As dusk was approaching on Astronomy Day. Porrima is 2.74 magnitude star in Virgo (Gamma Virginis).

*Photo by David Lee*

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*Contact Us On-Line*

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### *Old Magazine*

Just how carefully have you examined the Plaskett Telescope? That would be the big one atop Little Saanich Mountain.

Ever notice the name of the company that manufactured it, as well as the dome that surrounds it?

Don't go rushing up there to find the answers to those questions. It was the Warner and Swasey Company of Cleveland, Ohio that did the job, completed in 1918.

Its name honours the famous astronomer, the late Dr. J.S. Plaskett, who was the designer and longtime director of the federal observatory. The telescope and Dr. Plaskett get favourable mention in the May, 1930 issue of Popular Telescope, a monthly publication from Minnesota and long since defunct.

Some urge compelled this writer to glom onto the about-to-be-recycled magazine at the last monthly RASC meeting. (Don't tell Sid but the date happens to coincide with the month and year that I arrived on this planet.)

At first glance, it's not a wow of an astronomy mag, compared to what we buy today. Looks like excellent material to substitute as a sleeping pill.

To paint the picture a bit better, the first item was a long obituary. Then followed 63 more pages of heavy going. Interest heightened marginally when the index was found at the back, followed by six pages of interesting ads (and prices.)

Days passed. On a dark and stormy night the obituary was tackled and found to be a rather good read. It was a fond tribute to Worcester Reed Warner (1846-1929) of Tarrytown-on-Hudson, NY, who had died while on holiday in Germany.

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### *Address Change? Information Incorrect?*

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Postal Mail: RASC, 136 Dupont Street, Toronto, ON M5R 1V2, Canada

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The deadline for the next issue of *Skynews* is

**May 27 2005**

Get your *Skynews* early and in colour.

Tell Joe Carr ([vp2@victoria.rasc.ca](mailto:vp2@victoria.rasc.ca)) that you want to get *Skynews* online and we won't mail you a copy

## ROYAL ASTRONOMICAL SOCIETY OF CANADA • VICTORIA CENTRE

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*(Old Magazine Continued from page 3)*

The eyes finally reached the good stuff, where the obituary-writer tells us that Warner and partner Swasey ran a company that manufactured turret lathes. Warner's interest in astronomy steered them into making small telescopes. Then bigger ones—much bigger and each one bigger than the last.

First, they made a 36-inch for the Lick Observatory in California. Next, one of 40-inch caliber called the Yerkes telescope in Wisconsin. Then came the big one for the government of Canada. The obituary-writer got lost in his geography at this point. He located the 72-inch Plaskett in Vancouver, B.C. (See Paragraph 1).

Back to Warner. He loved to tell a story about his aged parents, who lived on a farm on the eastern slopes of the Berkshire Mountains in Massachusetts in 1882. His Very Educated Mother, whose name was Vesta, by the way, was a dedicated reader of almanacs. She had read that Venus was going to transit the Sun on December 6.

Mrs. Warner was not going to miss that. She darkened a room that had an east-facing window and pulled down a dark-green blind. She then pricked a hole in the blind with a needle and mounted a bedsheet on the opposing wall. It showed the Sun beautifully.

And right on time, Mother was able to make out a small black dot on the edge of her quasi-Sun. She went out and dragged Father in to see it. They sat and watched the dot make its way across the Sun.

They were aware that the next time that such a sight would be seen was 2004. Did you see it? Thought not. Hang about, there will be another in 2012.

Dr. Plaskett gets the lead item in General Notes, found well into the magazine. It reports that he had been awarded the gold medal of the Royal Astronomical Society for his "valuable observations of stellar radial velocities and important conclusions derived from them". The note went on to say that Dr. Plaskett was to deliver the George Darwin Lecture at the next society meeting. The subject was to be "The High-Temperature Stars."

*By George Gibson*

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### *RASC Star Party*

The 5th Annual (yes it's actually been 5 years) RASCa's 2005 Star Party will be held at the Victoria Fish and Game Club on September 2, 3 and 4 (Labor Day weekend). This year our star party is listed on the RASC national site so we may expect more people from out of town.

*More news soon! Rich*

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## ROYAL ASTRONOMICAL SOCIETY OF CANADA • VICTORIA CENTRE

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*from the National Office*

### Journal of the RASC on line

As a member of the Royal Astronomical Society of Canada, you can access the on-line version (in Adobe Acrobat format) of the April 2005 issue of the Journal of the RASC. The printed version along with *SkyNews* magazine will be mailed shortly.

To access the issue go to: <http://www.rasc.ca/currentjrasc/>

You will need the username and password—contact Sandy ([sbarta@shaw.ca](mailto:sbarta@shaw.ca))

### Change in the username and password

The username and password used to access the members' area of the national website (<http://www.rasc.ca/membersonly.htm>) has been changed.

The old username and password will continue to work until at least June 30, 2005.

Again, contact Sandy for the new username and password.

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### *Island Star Party* **July 1, 2, & 3**

**Location:** Victoria Fish and Game Protection Association, Holker Road (opposite Whittaker Road turnoff to Spectacle Lake)

**Accommodation:** camping area on site or motel/hotel in Victoria or Duncan.

Facilities include toilets, hot showers (depending on water supply), qualified first aid attendants on site, a large lecture hall, fishing (don't forget your licence!) and nature trails.

Excellent food is available from Brenda's Kitchen (vegetarian available).

**Activities:** lectures, and guided nature walks.

**Registration:** pay at the gate. (fee covers entire weekend, including day use)

\$15.00 per person, \$20.00 per couple

Children under 16 are free (up to maximum of 3 children).

### Door prizes drawn Friday and Saturday

For additional information contact:

Frank Ogonoski

(250) 748-5110 (PDT)

[C.V.StarFinders@telus.net](mailto:C.V.StarFinders@telus.net)

Rich Willis

(250) 881-7523 (PDT)

[richly@telus.net](mailto:richly@telus.net)

**Please ... no pets!**

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### *Upcoming Meetings*

June 8

Russell Robb, U Vic



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### ***Asian Tsunami Seen from Space***

When JPL research scientist Michael Garay first heard the news that a tsunami had struck southern Asia, he felt the same shock and sadness over the tremendous loss of human life that most people certainly felt. Later, though, he began to wonder: were these waves big enough to see from space?

So he decided to check. At JPL, Garay analyzes data from MISR—the Multi-angle Imaging SpectroRadiometer instrument aboard NASA's Terra satellite. He scoured MISR images from the day of the tsunami, looking for signs of the waves near the coasts of India, Sri Lanka, Indonesia, and Thailand.

Looking at an image of the southern tip of Sri Lanka taken by one of MISR's angled cameras, he spotted the distinct shape of waves made visible by the glint of reflected sunlight. They look a bit like normal waves, except for their scale: These waves were more than a kilometer wide!

Most satellites have cameras that point straight down. From that angle, waves are hard to see. But MISR is unique in having nine cameras, each viewing Earth at a different angle. "We could see the waves because MISR's forward-looking camera caught the reflected sunlight just right," Garay explains.

In another set of images, MISR's cameras caught the white foam of tsunami waves breaking off the coast of India. By looking at various angles as the Terra satellite passed over the area, MISR's cameras snapped seven shots of the breaking waves, each about a minute apart. This gave scientists a unique time-lapse view of the motion of the waves, providing valuable data such as the location, speed, and direction of the breaking waves.

Realizing the importance of the find, Garay contacted Vasily Titov at the National Oceanic and Atmospheric Administration's Pacific Marine Environmental Laboratory in Seattle, Washington. Titov is a tsunami expert who had made a computer simulation of the Asian tsunami.

"Because the Indian Ocean doesn't have a tsunami warning system, hardly any scientific measurements of the tsunami's propagation exist, making it hard for Dr. Titov to check his simulations against reality," Garay explains. "Our images provide some important data points to help make his simulations more accurate. By predicting where a tsunami will hit hardest, those simulations may someday help authorities issue more effective warnings next time a tsunami strikes."

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*(Asian Tsunami continued from page 6)*

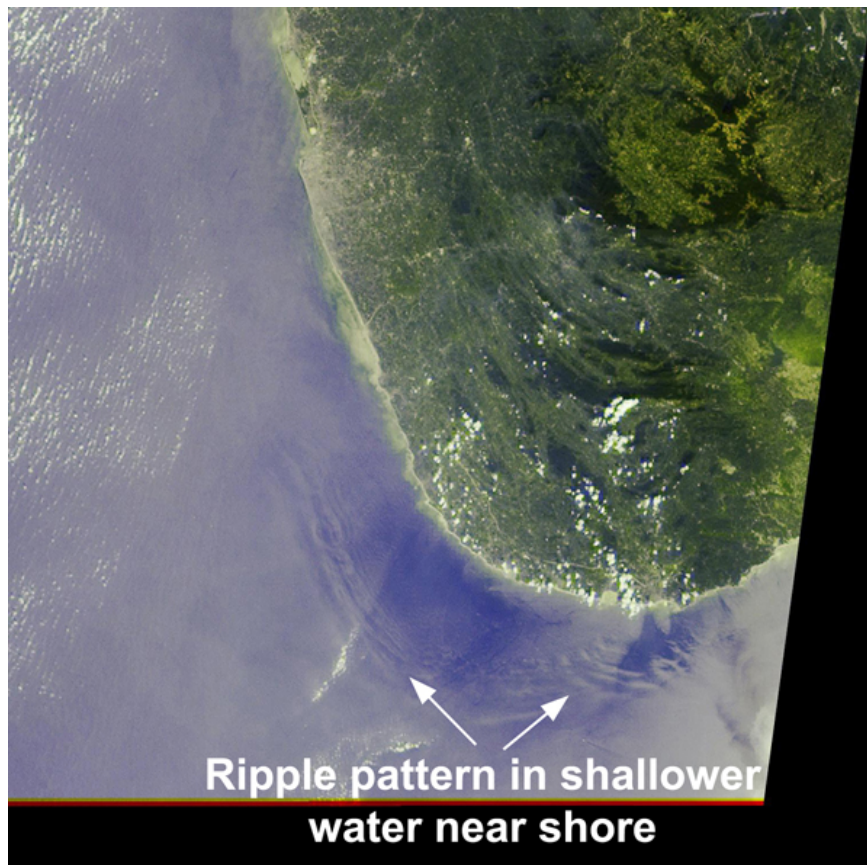
Find out more about MISR and see the latest images at:

[www-misr.jpl.nasa.gov/](http://www-misr.jpl.nasa.gov/)

Kids can read their own version of the MISR tsunami story at:

[http://spaceplace.nasa.gov/en/kids/misr\\_tsunami](http://spaceplace.nasa.gov/en/kids/misr_tsunami)

*by Patrick L. Barry*



This December 26, 2004, MISR image of the southern tip of Sri Lanka was taken several hours after the first tsunami wave hit the island. It was taken with MISR's 46° forward-looking camera.

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

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## ROYAL ASTRONOMICAL SOCIETY OF CANADA • VICTORIA CENTRE

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### *Centre of the Universe*

New Hours: Now Open 7 Nights a Week!

The skies are clearing and summer is upon us! We are very excited to announce that we will be open every night of the week from 1:00 to 11:00 pm starting on Saturday, May 21. Join us for a new theme every week throughout the summer months! Also new this year, our evening programming will be expanded to include Science Shows in our gallery and Product Demonstrations. Please note that evening entrance rates will apply from 7:00 to 11:00 pm. Our annual passes are a great value—by purchasing one, you will have entrance to any or all of the evenings we are open.

April 1 to May 20:	10:00am – 6:00 pm (Sunday to Friday) 10:00am – 11:00pm (Saturday)
May 21 to September 30:	1:00pm – 11:00pm, 7 days a week (closed in the mornings, except for private group tours)

Check last month's issue for admission rates.

#### **Summer Astronomy Course: And Beyond...**

Sign up now for our summer astronomy course "And Beyond..." This 9-hour course will give you an introduction to basic astronomy and a tour of the constellations, planets and deep sky objects of the season. We'll also explore more deeply the big questions in astronomy: Where did it all come from? How's it going to end? And are we really alone?

And Beyond... runs Wednesday nights, June 14, 21 and 28, from 7:00 to 10:00 pm. No previous astronomy background required (is most appropriate for adult learners). Any interested students under the age of 18 are asked to contact the Centre to discuss their enrolment. Course registration is \$89+GST or \$79+GST for season's pass holders. Space is limited, so sign up now!

#### **Summer Space Camps**

If your kids are into space, why not sign them up for our Summer Space Camps? These four or five day long camps are geared for kids aged 6 to 13, and will include fun hands-on astronomy activities and crafts, planetarium shows, and many other interactive presentations. We held our first Space Camp during March Break, and the kids had a blast!

Camps run from 9:00 am to 3:00 pm each day. Camp fees are \$150+GST per week, or \$120+GST for each additional child from the same family. For the four-day French camp, fees are \$120+GST, or \$96+GST for additional siblings.

Sign up now! Space is limited! Check with the Centre for a schedule of the Summer Space Camps.

To register, and for more information, call the Centre at 363-8262.

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**Happy Birthday to us!** May 6 was the 87th birthday of the Plaskett Telescope at the Dominion Astrophysical Observatory! Since 1918, the 1.8-metre research telescope has been in use every clear night of the year by astronomers. Once the largest telescope in the world, the telescope was put together using some real "horse power"—horses and people were used to put together the structure still standing today. Every Saturday night since "first light", the Plaskett telescope has been dedicated to the public and this year is no exception! For more information, please visit

[http://www.hia-ihp.nrc-cnrc.gc.ca/cu/hours\\_e.htm](http://www.hia-ihp.nrc-cnrc.gc.ca/cu/hours_e.htm)

### **The Sky This Month: May, 2005**

(All times and dates local to Victoria, BC)

May 8	New Moon (1:45 am PDT)
May 16	First Quarter Moon (1:57 am PDT)
May 23	Full "Flower" Moon (1:18 am PDT)
May 26	Moon beside Jupiter
May 30	Moon at last quarter (4:47 am PDT)
May 31	Moon northwest of Mars before dawn

Look to the north-eastern horizon to find a very bright star called Vega—a sign that summer is fast approaching. If you watch Vega for a while you might notice it twinkling and changing colours. A bright star low on the horizon will look like it is changing colours because the Earth's atmosphere. When starlight shines through the atmosphere, the atmosphere acts like a lens and bends the light and causes what we call "twinkling". As the density of the air changes between you and the star, the colours will change. Because the atmosphere is the thickest closer to the Earth's surface a star will twinkle more when it is on the horizon than when it is overhead.

**MORNING PLANETS:** Mercury is very low in the east before dawn. Mars rises in the morning and shines orange in the southeast before dawn. Look for the moon and mars together on the morning of May 31st.

**EVENING PLANETS:** Saturn dims slightly but remains well placed in the west in the evening sky. Jupiter is still visible almost all night. Look for bright Jupiter in the southeast after dark. Can you see Venus very low in the west-northwest in bright twilight? Venus is the brightest planet in the sky and is getting higher and higher every week.

What is a full flower moon? Many Native American and first Nations People kept track of the seasons and months by giving names to each full moon. Algonquin people call May's full moon the flower moon because flowers were abundant in most regions by this time of year. The Saanich people call May's moon Penawen—the Moon of the Camas Harvest. At this time of year, the Wsanec or

*(Continued on page 10)*

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## ROYAL ASTRONOMICAL SOCIETY OF CANADA • VICTORIA CENTRE

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(Continued from page 9)

Saanich people traditionally harvested blue Camas (a native flowering plant) for their bulbs. The bulbs were cooked for up to two days to improve taste and food value. Baked camas can be eaten right away, but for long-term storage the cooked bulbs were sun-dried, mashed, shaped into a flat loaf, and baked again. (Only blue Camas can be harvested and eaten; white Camas or death Camas is poisonous).

*Clear skies and happy stargazing! Stasia and Margaret*

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### WANTED!

By the Victoria Observing Site Selection Committee

### LAND!

Do you have a half acre of useless (rocky?) land with:

- ☆ no lights
- ☆ road access, and
- ☆ low horizon all the way around?

Do you know someone who does, and who would be willing to sell or lease the area to RASC-Victoria?

If so, please contact Dave Bennett, Site Selection Chair

[dgbennett@shaw.ca](mailto:dgbennett@shaw.ca)

or by telephone at (250) 727-9509

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## ROYAL ASTRONOMICAL SOCIETY OF CANADA • VICTORIA CENTRE

### RASC Victoria Council

### This Month

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Ed Maxfield, Frank  
Ogonoski, Blaire Pellatt,  
Colin Scarfe, Rich Willis

New Members Liaison:  
Sandy Barta



### *Astronomy Cafe*

At Bruno Quenneville's  
2019 Casa Marcia Crescent,  
Victoria, BC.  
Call 477-2257 for more information or  
directions.  
Newcomers are especially welcome.  
Come and enjoy!

May 18

### *Astro Imaging*

**Third Wednesday of the month  
if it's clear at  
Bill Almond's**

354 Benhomer Drive  
478-6718

May 27

### *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



June 8

### *June 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 RASCVic  
and Skynews email lists:  
<http://victoria.rasc.ca/>  
click on: 'Members Only'

## ROYAL ASTRONOMICAL SOCIETY OF CANADA • VICTORIA CENTRE

### *Web Page of the Month*



A local retailer...

<http://www.urban-astronaut.com>

Check out the "Save the Hubble" tee shirts.

**Urban Astronaut**

4167 Oakridge Crescent

Victoria, BC V8Z 4X8

Fax/Phone 1-250-744-3313

[email@urban-astronaut.com](mailto:email@urban-astronaut.com)