

SKYNEWS



Composite image of the May 20th Solar Eclipse
by David Lee

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JUNE MEETING

Galactic Archaeology
Dr. Else Starkenburg
Wednesday June 13th, 2012
University of Victoria
A104 Bob Wright Bldg.
3800 Finnerty Rd.

www.victoria.rasc.ca

On the Cover

by David Lee

The top left corner is an image from the Saturday prior to the eclipse. You can see the 3 prominent sunspots that appeared almost in a straight line. The bottom right corner shows the initial bite out of the sun.

All images were done with a Televue Pronto, 2X Televue Powermate, Thousand Oaks 2+ Solar Filter, 32mm Televue Plossl and a Panasonic Lumix TS3 camera positioned afocally above the eyepiece.

For more images <http://rascvic.zenfolio.com>

June Speaker

Dr. Else Starkenburg,
CIFAR Junior Fellow, UVic

There is much to be learnt from our own “cosmological backyard”: Only in our own Milky Way and some surrounding galaxies we can resolve and observe individual stars and learn from them about galaxies in general. Because stars keep a chemical fingerprint during their lives and also preserve kinematical information for long times, studying the present-day stars can teach us about the past.

In my talk I will discuss various topics in this area of Galactic archaeology. One of the topics will be the search for remnants of disrupted dwarf galaxies around the Milky Way, victims from a process called “cosmic cannibalism”. Subsequently we focus on the study of the smaller satellite galaxies that (still) survive the gravitational forces from the much bigger Milky Way they orbit. A surprising result from earlier work was that no very primitive stars were found in these small galaxies. I will show however that these stars are present and we can learn a lot from them.

Bio: Else Starkenburg is a CIFAR Junior Fellow working under the supervision of Cosmology and

Gravity program Fellow Julio Navarro in the Department of Physics and Astronomy at the University of Victoria. She completed her Ph.D. in 2011 at the Kapteyn Astronomical Institute of the University of Groningen in the Netherlands, with Profs. Eline Tolstoy and Amina Helmi as her thesis advisors. Else also holds an M.Sc. in Physics and Astronomy and an M.A. in Theoretical Philosophy, both cum laude from the University of Groningen. She enjoys teaching and taking the opportunity to share her knowledge with wide audiences. She has delivered several public lectures, has been interviewed on Dutch national television and has authored articles in Dutch popular science magazines.

Else is investigating our astronomical “backyard”, as she is mainly interested in studying the history of our own galaxy, the Milky Way, and the smaller galaxies surrounding it. Because we can study these galaxies in much detail by looking at individual stars, it is a perfect place to test our theories on how galaxies form and evolve. She is currently working on modeling these galaxies with the help of computer simulations and comparing their predictions to observations. In her observational work, she is particularly interested in finding the oldest stars, since they provide us with valuable information on the early history of the Universe. During her Ph.D., she found that in the small galaxies around the Milky Way many more of these stars were “hiding” than was previously thought. In her future work, she will follow up on these findings by studying these stars in detail and comparing these studies to results of modeling to get a better grip on the big puzzle of how galaxies in the Universe form.



Presidents Report

by Lauri Roche

Wasn't that just one glorious afternoon we had for the Transit of Venus! We were so very lucky here in Victoria to

have the clouds uncover at just the right time so that we were able to unpack the telescopes and get out to various locations around the CRD. The RASC volunteers were at their

best, and they had to be to ensure that the crowds of people who came to see the Transit were all given time at the telescopes. Down at the museum there were over a thousand visitors, some having come from the mainland at the last moment, some making time out of their working day to come to view Venus and some just wandering over to see what the crowds were all about, not knowing they were seeing an astronomical event for the last time this century. Mount Tolmie had snaking lines of people waiting patiently to look through the various telescopes, at the same time trying to keep from being blown away with the wind. Cattle Point was very busy and Metchosin site had many locals dropping in there as well. Sid Sidhu has said that this was the biggest one day event for the RASC in Victoria since he has been with the club and since he is the keeper of the "numbers" I won't doubt him at all.

We have had a full spring line-up with Astronomy Day in April, the clouded-out partial Solar Eclipse at the end of May and now this Transit. In between have been school visits, a "Beaveree" out in Sooke, council meetings, light abatement strategy sessions, Community Fairs to attend, the start-up of the Center of the Universe evenings and observatory maintenance. There are so many volunteers to thank. Literally hundreds of hours of time have been generously given by our members to this organization so that we can be an important part of the Victoria community. It's an amazing accomplishment.

So have some quiet time for your own observing in the next few weeks during what we hope will be a great summer for clear skies. But make sure you come out to Metchosin for our RASCals Star Party from August 17th to 19th. There will be lots going on. We have a great speaker and workshops planned, star walks in the evenings and

dozens of telescopes on the field. Hope for good weather for us (but bring your windbreaker jacket, just in case!). See you there.

Sky Events

RASCals Summer Star Party

August 17-19, 2012 - Metchosin Cricket Field. A fun and easy-going camping and observing weekend which the whole family can enjoy. Free admission!

17th Annual 2012 Island Star Party at Bright Angel Park

Cowichan Station "The Hub of the Universe" From July 20 at 4:00 pm Til July 22 at 12:00pm

<http://www.starfinders.ca/starparty11.htm>

An Eclipse in Cedar City, Utah

by David Lee

My journey to Utah started off as a curiosity about the annular solar eclipse -- not as spectacular as a total solar eclipse but with its own unique qualities. On May 20th, 2012, I would have the opportunity to witness such an eclipse without too much expense and not too far from home. Was this enough to make me want to leave Victoria, the rainy city? Well, I'm sure you know the answer to that.

In April I started to research where I should be for this event. I could stay in Victoria, weather willing and witness a partial solar eclipse or I could head for the centre line and see the legendary "Ring of Fire". Using Google Map I wandered around the streets of a number of communities in the United States. Many were considered good sites and near the centre line. I weighed the possibilities of a more westerly destination but remembered how variable west coast weather is. New Mexico looked promising

but I was uncertain about the terrain. I wanted to see as much of the eclipse as possible and this particular eclipse would end very close to the horizon at sunset.

By now the Internet was filling up with articles about the upcoming annular solar eclipse. Of special interest was an article about Kanarrville, a small town of 300 people not far from Cedar City, Utah. I zoomed in on the area and wandered virtually around the surrounding areas using Google Map again. This seemed like a good choice and very close to the centre line. It was being billed as the "Sweet Spot" for the Ring of Fire Solar Eclipse. After a few calls to some local Utah astronomers I settled on this destination.

It's late April and a lot can happen weather wise in a few weeks. Remember the recent wait for the transit of Venus? I delayed making a final decision, not wanting to waste resources on a trip to a place with more cloud and rain. For a few weeks I monitored the weather reports daily. On Wednesday before the eclipse I purchased my plane tickets, in a panic, as I could see available seats to Cedar City disappearing quickly. On the positive side, I could see that the forecast was clear skies for the coming week. On that Friday Cedar City had rain and thunderstorms. The weather gods do play with us, don't they?

With carry-on luggage regulations I knew it would not be easy to transport the necessary equipment to my destination. The thought of checking in my camera and my favourite refractor made me nervous so I opted for a carry-on backpack. The ThinkTank Airporter Ultralight worked very well, carrying everything photographic except for the tripod. This went in the check-in luggage wrapped in a makeshift tube of 1/2 inch blue foam, a reasonable sacrifice from my camping kit.

Leaving Victoria in the afternoon, I passed

through Seattle and then Salt Lake City before arriving at the Cedar City Regional Airport. It was 11:00 pm before I arrived. On the way to Cedar City I could see the belt of Venus through the windows of the plane. It was especially beautiful as shining above the velvety blue belt was Venus itself against the black sky. Stars were just starting to break through.

It was late when I arrived at my accommodations in Cedar City. Unpacking, I thought it would be a good idea to check the telescope and the camera. To my surprise I had not packed an essential extension tube so I could bring the telescope to focus with the camera body in place. This was not a good discovery. Cedar City does not have a telescope supply store, though they do have a 24/7 Wal-Mart Supercenter and Home Depot.

I spent Saturday morning strategizing what I could do. Note to self ... check all equipment before you leave home. As with most situations there's more than one way to do things: I did bring a diagonal with a 30mm eyepiece; I did bring my point and shoot camera. The afocal technique can certainly work in a situation like this, and for some people this is the only way they photograph through a telescope. Basically, if you set a camera at infinity and point it in to the eyepiece of a telescope, it's the equivalent of you looking in with your eye. Amazingly simple and effective.

Having solved this preoccupation, I decided to go to the newly built Cedar City Aquatic Center. They were hosting morning and afternoon presentations on the upcoming eclipse. A lot of the activities were focused on what it was and how to safely view it. The offer of eclipse glasses was also a lure. By this time eclipse glasses were at a premium and the buzz was that only a few people had a supply

and "free" had gone up to \$5.00. Isn't supply and demand wonderful?

Kanarraville seemed to be the focus of the advertising but representatives from the town also suggested other sites that would be suitable within Cedar City. Outside the Center, I met a professor from Southern Utah University who teaches astronomy, Brent Sorenson. He was showing people the Sun with his solar telescopes. Public outreach being second nature to me now, I instinctively set up my telescope with a solar filter and spent the afternoon showing the Sun to the local community. During the afternoon two Utah newspaper journalists interviewed me and asked me where I was from. They were interested that I had come from Canada on such short notice just to see the eclipse. I had read a few articles that stated this area of Utah was very interested in "astro tourism" and had, in fact, a long history of attracting amateur astronomers to its dark skies. Bryce Canyon is not far away and is the site of the Annual Astronomy Festival. The annular solar eclipse was featured at this year's 12th Annual.

After some consideration I decided to stay in Cedar City to photograph and observe, avoiding the crowds in Kanarraville. As it turned out, this was a good decision because I avoided the traffic jams that ensued after the event. Remember the population for that evening rose from 300 to several thousand.

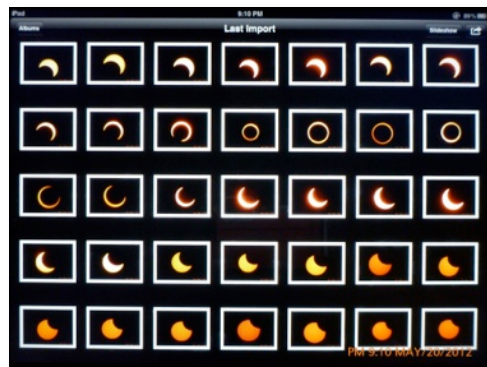
Sunday morning I met a family who had come to Cedar City to observe the eclipse. They were assembling a Tasco refractor. I was interested in how they were going to view the eclipse and they responded they were still trying to figure it out. In the interest of public outreach and safety I offered some suggestions. Not having a proper solar filter the best choice appeared to be projection. We located a suitable 25mm eyepiece. I demonstrated the positioning of the telescope

using the shadow of the telescope and behold we had an image of the Sun projected on a piece of paper. What followed was an excellent example of citizen science because the rest of it they figured out on their own. In their trunk they found a small box that they used to shield the Sun from the projected image. The image at the bottom of the box was large and detailed showing a line of sunspots. Amazing!

Sunday evening I trekked with my equipment to a nearby school, Cedar City Middle School. It was dotted with eclipse chasers all waiting for the moment of first contact. I set up on the sidewalk beside the school. A couple that I had met the day before at the Aquatic Center asked if they could watch the eclipse with me. Photographing afocally this was not a problem, so through the evening we were switching back and forth between viewing and photography.

And so the evening unfolded, from the first little bite of first contact to the beautifully distinctive crescents. At the moment of maximum I could hear the kids behind me chanting "Ring of Fire ... Ring of Fire". At some point I recall seeing a jet pass through the view with its vapour trail marking the Sun like graffiti.

Was it worth it? Yes.



This is quick shot of my iPad screen 40 minutes after the sun had set on Sunday. It shows part of the annular eclipse sequence from Cedar City Utah.



John McDonalds image of the progression of the transit on June 5th 2012.

Observers in Victoria were certainly the lucky ones on the West Coast of Canada to catch most of the Transit of Venus. There were many RASC'als who were stationed at various locales around Victoria. The B.C. Museum, Mount Tolmie, Cattle Point, Uvic, Metchosin and the D.A.O were just a few. From all who participated everyone agreed this must have been the most anticipated sky spectacle for some time and one of the best. The public were awed by the Sunspots, Solar views and the carnival atmosphere that day.

More images are online at <http://rascvic.zenfolio.com>

ASTRONOMY CAFE



Fairfield Community Centre

1330 Fairfield Rd. Victoria,
7:30pm - 10pm

Call Malcolm at (778) 430-4136 for directions and information.

New comers are especially encouraged.



New Observers Group

Hosted by Sid Sidhu
1642 Davies Road, Highlands. Call (250).391-0540 for information and directions.



Email Lists

Observer / CU Volunteers / Members

Contact Joe Carr to subscribe
web@victoria.rasc.ca

NEXT REGULAR MEETING

Wednesday September - 12th 7:30pm - A104 Bob Wright Bldg, University of Victoria, 3800 Finnerty Rd.

RASC Victoria Council for 2011 / 2012

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