

SKYNEWS



Arizona Skies - by Jack Newton

Wed. June 8th, 2011 - Galaxy Evolution by Dr. Trevor Mendel

Please note

The June meeting will be held in the Bob Wright Bldg, A104 University of Victoria 7:30pm

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NEXT MEETING

September 14th, 2011
University of Victoria
060 Elliott Bldg

www.victoria.rasc.ca

June Speaker

Galaxies and their environments by Dr. Trevor Mendel

Abstract: From an observational standpoint we see that galaxy properties depend on their surrounding environment; however, the extent to which this dependence is an intrinsic property of galaxies (nature) or a result of their particular evolutionary path (nurture) is less well understood. I will discuss our theoretical understanding of galaxy formation and evolution, and confront this understanding with observational evidence relating galaxies to their host environments.

Bio: After finish my Bachelors in Physics and Astronomy at Macalester College in Minnesota, I went to Swinburne University in Australia, completing my PhD there in 2009. I've been a post-doc at UVic since then, working with Dr. Sara Ellison. My research is focused on understanding the statistical properties of galaxies in the local universe.

President's Message



Ahhh.... Can you feel the warmer weather seeping in through your bones? This past weekend there were actually two nights in a row that were clear and warmer than we have had in the last eight months. The proof that summer has arrived, if anyone needed it, was to see the deck in front of the

Victoria Centre Observatory on Friday evening covered with telescopes so thick you practically had to turn sideways to walk on through and then, on Saturday, to engage with a large enthusiastic crowd up at the Centre of the Universe for night sky viewing. We are back in business! I hope you will be able to join in some time soon.

Random conversations heard on the observing nights:

Wow! (a few of those) The moon looks so close. What are those bits on the side of the craters? I thought Saturn would be bigger. All I see is a fuzzy patch. (a few of those too) It is so warm I haven't even put on my jacket yet. D*&^%m mosquitoes. Where did they come from? Come and look at this! What a nice night. Is it that late already?

What was so nice this weekend was that there were new observers and the "regulars", there were mentors and students of the practise of observing who need mentoring (that would be me). There were people who wanted to know how to make something work, or to figure out what they were looking at or wanted to try out someone else's eyepieces (that also would be me...thanks Nelson) and there were always other people there to give advice, lend a piece of equipment and share in the discoveries. It is certainly one of the many pleasures of being part of our astronomical community.

If you have not thought about becoming an active observer at the VCO then now is the time. Every Friday night we have Members – in-Charge who facilitate the site. We have great equipment including our 14" telescope with all the bells and whistles for viewing and astrophotography and a fantastic 20" Dobsonian. You can bring your own telescope or just bring yourself. Just check in with Sherry Buttner, our Second Vice President, for all the details about becoming an Active Observer.

Any member can come up to the Center of the Universe at the Dominion Astrophysical Observatory on top of Little Saanich Mountain on Saturday evenings in the summer to help out with the public. You can bring a telescope or binoculars if you have them but, if not, just come on up and chat with people. Other public outreach observing opportunities in the summer are in Esquimalt for Buccaneer Days, The Strawberry Fair at Elk Lake, and the Saanich Fair. And, of course, I hope you will all come to Metchosin at the end of July for our Annual Rascals Star Party. (Read more about this in the newsletter and keep an eye out for details on-line). <http://victoria.rasc.ca/events/StarParty/> Above all, get out there some time this summer and take some time to look up. Be it on your own, or with a friend or neighbour, as a random sidewalk astronomy session, or with a crowd at the star party, take time to observe our skies. As one young observer last Saturday said, "This is really cool!"

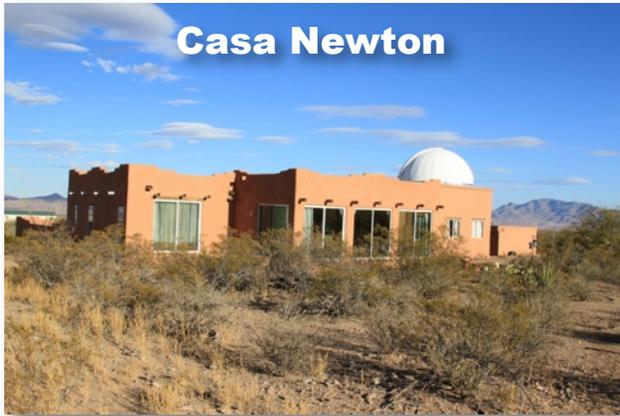
Yes,it is.

Clear Skies, Lauri Roche

Astronomy Cafe Corner

Astronomy Cafe will start up again on September 5th.

Malcolm Scrimger



As most RASCALS know, light pollution is an ever-present threat to enjoyment of the night skies.

Jack and Alice Newton have been running off into the bushes to build homes (& do other stuff, but we won't go there!) for years in pursuit of remote, DARK areas. I remember that when we lived in Happy Valley (which has since undergone such a transformation that we needed Google Earth to find our old abode last time we came to the Island), Jack would tow his 25" telescope to East Sooke Park. His telescope rattled along on a trailer behind his gold Fiero. When he got to the Park, he would have to polar align the whole trailer! Stories abound regarding his "interfacing" with wild creatures, encounters that he credited with his rapidly-receding hairline. I remember him telling of standing high atop a step-ladder late one evening in the furthest reaches of the Park's parking area when a car approached and the driver threw on his high beams as he was pulling up right next to where Jack was set up. Jack was 25 minutes into a 35-minute exposure. Apparently, some rather impolite verbiage spilled out of the mouth of the normally polite Newton...something to the effect of "Turn off your &^\$# lights!" The vehicle's occupant immediately complied. As he stepped from the cruiser, the RCMP officer asked what Jack was doing? "Well, before you drove in and &%^\$\$'d-up my shot, I was photographing the Andromeda galaxy." The cop apologized profusely and climbed back in his vehicle, being careful to extinguish the headlights. As he departed the scene in the darkness his car made some interesting sounds as it left the road and crashed into nearby alder trees and a skunk cabbage bog. The officer could then be heard muttering some rather unprofessional language himself!

If you roll time forward some twenty years, it will reveal that the Newtons are still building homes and domes where others fear to tread! Our Arizona Sky Village is a case-in-point. We now spend our winters in the southeast corner of Arizona, smack up against the New Mexico State line, and surrounded by the Chiricahua Mountains. Cave Creek Canyon, one mile from our village, is the same one in which Geronimo successfully eluded capture many years ago. The

rugged mountain range protects us from light pollution on three sides.

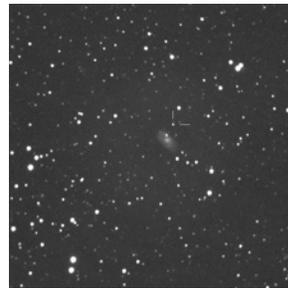
We occasionally get visits from javelinas (wild pigs), skunks, whitetail deer, and even free-ranging horses. We've had to round-up cattle (the appearance of Alice



pursuing a herd of cows while flailing the cane she last used when she sprained an ankle in 1986 is a sight to behold!) Every now and then a Mohave rattlesnake will make an appearance and prove that the Newtons may be getting

older, but they're getting faster!

Casa Newton has both a dome with sleeping quarters attached and a roll-off roof observatory. The roll-off is equipped with 14" & 16" MEADE telescopes that are dedicated to the Puckett Observatory World Supernova Search, of which he's a long-time member (<http://www.cometwatch.com/search.html> .)



NGC 6801 SN-2011df

Jack currently has 73 confirmed discoveries or co-discoveries, many of which were taken with these telescopes. They operate year-round. The latest two supernova suspects were blinked on consecutive nights and Dave Balam at DAO did the spectral analysis on both last night (May 27.) Voila! Supernova 2011de and 2011df. Thanks,

Dave! By the way, the team is looking for new members. So if you have a keen eye and about an hour a day to devote to "blinking", please send a message to jack@jacknewton.com.

PlaneWave Instruments has placed a 17-inch instrument in our dome for shared use until we return in October. At that time we'll be installing a 20-inch scope on a Max Mount.

The hunt for supernovae continues, even though there is a major wildfire (the Horseshoe 2 fire) burning a few miles away. Apparently a little smoke never slows Newton down!

No Sky Village homes are threatened at this point, but the skies overhead are anything but dark!

That's it in a nutshell, if you're ever in Osoyoos stop in and say hi. We miss all of you at or near the Centre of the Universe!

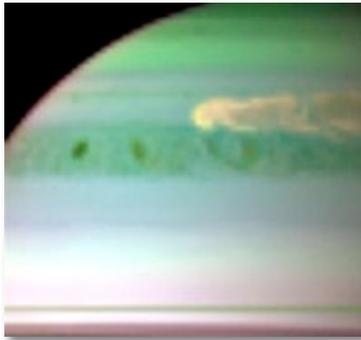
Clear skies and Warm regards, - Alice & Jack Newton

Super Storm on Saturn

May 19, 2011: NASA's Cassini spacecraft and a European Southern Observatory ground-based telescope are tracking the growth of a giant early-spring storm in Saturn's northern hemisphere so powerful that it stretches around the entire planet. The rare storm has been wreaking havoc for months and shooting plumes of gas high into the planet's atmosphere.

"Nothing on Earth comes close to this powerful storm," says Leigh Fletcher, a Cassini team scientist at the University of Oxford in the United Kingdom, and lead author of a study that appeared in this week's edition of Science Magazine. "A storm like this is rare. This is only the sixth one to be recorded since 1876, and the last was way back in 1990."

Cassini's radio and plasma wave science instrument first detected the large disturbance in December 2010, and amateur astronomers have been watching it ever since through backyard telescopes. As it rapidly expanded, the storm's core developed into a giant, powerful thunderstorm, producing a 3,000-mile-wide (5,000-kilometer-wide) dark vortex possibly similar to Jupiter's Great Red Spot.



This false-color infrared image shows clouds of large ammonia ice particles dredged up by the powerful storm. Credit: Cassini.

This is the first major storm on Saturn observed by an orbiting spacecraft and studied at thermal infrared wavelengths.

Infrared observations are key because heat tells researchers a great deal about conditions inside the storm, including temperatures, winds, and atmospheric composition.

Temperature data were provided by the Very Large Telescope

(VLT) on Cerro Paranal in Chile and Cassini's composite infrared spectrometer (CIRS), operated by NASA's Goddard Space Flight Center in Greenbelt, Md.

"Our new observations show that the storm had a major effect on the atmosphere, transporting energy and material over great distances -- creating meandering jet streams and forming giant vortices -- and disrupting Saturn's seasonal [weather patterns]," said Glenn Orton, a paper co-author, based at NASA's Jet Propulsion Laboratory in Pasadena, California.

The violence of the storm -- the strongest disturbances ever detected in Saturn's stratosphere -- took researchers by surprise. What started as an ordinary

disturbance deep in Saturn's atmosphere punched through the planet's serene cloud cover to roil the high layer known as the stratosphere.

"On Earth, the lower stratosphere is where commercial airplanes generally fly to avoid storms which can cause turbulence," says Brigette Hesman, a scientist at the University of Maryland in College Park who works on the CIRS team at Goddard and is the second author on the paper. "If you were flying in an airplane on Saturn, this storm would reach so high up, it would probably be impossible to avoid it."



Thermal infrared images of Saturn from the Very Large Telescope Imager and Spectrometer for the mid-Infrared (VISIR) instrument on the European Southern Observatory's Very Large Telescope, on Cerro Paranal, Chile, appear at center and on the right. An amateur visible-light image from Trevor Barry, of Broken Hill, Australia, appears on the left. The images were obtained on Jan. 19, 2011.

A separate analysis using Cassini's visual and infrared mapping spectrometer, led by Kevin Baines of JPL, confirmed the storm is very violent, dredging up deep material in volumes several times larger than previous storms. Other Cassini scientists are studying the evolving storm and, they say, a more extensive picture will emerge soon.

Stay tuned to Science@NASA for updates.

Credit: Science@NASA

CASCA Meeting, IYA and Beyond

by Jim Hesser

Last week I attended the Canadian Astronomical Society (CASCA) in London, ON. It was a meeting replete with the latest in Canadian astronomy research and developments in our facilities, some good and some not so good. The national IYA2009 and BIYA teams displayed a poster,

"Looking Back...Looking Forward: Year 1 of Beyond the International Year of Astronomy 2009" by J.E.Hesser,

D.R. Crabtree, J. Di Francesco, J.R. Percy, D. Welch (CASCA), J. Bolduc-Duval (BIYA), R. Lacasse, D. Lemay (FAAQ), K. Hay, D. Lane, R. Macnaughton, M.L. Whitehorne (RASC) whose abstract read:

"In addition to extensive national and international reporting on IYA, 'transition' was the operative word during 2010 for those involved in IYA/BIYA:

- . transition from the intense activities of IYA2009 to more sustainable levels that are enhanced relative to pre-IYA2009 levels;

- . transition of the structure, role and membership of the RASC-FAAQ-CASCA partnership co-ordination team; and

- . transition to new programs inspired by IYA.

Among the principal aspects we summarize are the à La Découverte de L'Univers outreach program being pioneered by the partnership this summer in Québec parks with support of the NSERC PromoScience grant; continuation of First Nations programs and the publication of Muin and the Seven Bird Hunters, a children's book elucidating the role of circumpolar constellations in Mi'kmaq culture; and significant efforts on light pollution awareness and creation of Dark Sky Preserves (highlighted by the recent designation of Jasper National Park as a DSP). We sadly call attention to our unsuccessful efforts to persuade Canada Post to modify their marketing emphasis for a new stamp series of constellations of the zodiac from astrology to astronomy education."

One of the images displayed in our poster is the Victoria Centre's light pollution map of Sky Quality Meter readings made last September. The same poster will be on show in Winnipeg for the 2011 GA.

I also continued my efforts begun in summer 2010 to work with the JRASC Editor and Secretary to encourage astronomers who present invited papers at the annual CASCA meetings to prepare a version for publication in the JRASC. Helen Kirk's article last year based upon her Plaskett Medal lecture in Halifax was the initial offering, and I understand at least two more from the 2010 CASCA meeting will appear this year. The JRASC Editor has already invited speakers from this year's meeting to share their exciting research with RASC members, to which I added some personal encouragement in London to several speakers. Here's hoping all RASCals will be able to follow in JRASC some of the world-class research being done by Canadian astronomers.

Observing Reports from Members

Hi all, recently Dorothy and I were camped for 9 nights at 8,600 ft elevation in the White Mountains (East-Central California), approximately 36.5 deg N. We had an unusual amount of high wind during the session, but had some good observing conditions. The last night it was clear and calm and with our telescopes packed securely away in the vehicle for an early departure the next morning, we decided to have a binocular (monocular for me) observing session. While we weren't trying to do a Messier Marathon, I picked off 47 Messier objects with my 10x42 monocular (from Orion - an excellent little ultra compact "scope") and could have seen more, but that wasn't the point. Our initial goal was to observe all 16 Messier objects in Sagittarius at 10X, which both Dorothy and I were able to do. I also saw all Messier objects in Scorpius, Ophiuchus, Scutum, and Cygnus (only 4 of 5 in CVn). We also saw M 83 and Omega Centauri. Earlier in the week, we observed Omega Centauri with my 20" Dob - although it was only about 5 degrees above the horizon, it was still quite a spectacular sight.

Clear skies, Miles

This image of Saturn comes from a session on Friday the 3rd of June. Thanks to Michel who got the Lucam software working we took 2037 frames of which 582 were used for this image.



I also captured a few frames of M51 on at the VCO with my DSLR on the Meade 14". The supernova 20011dh can be seen in the circle on the right pane of the image below. It was absent in a similar image shown on the left that I did at the VCO in 2008. Joe Carr also imaged M51 that evening. He took much longer exposures with the cooled QSI camera and should have a much better quality result (see next page.)



W John McDonald

M51 Whirlpool Galaxy with SN 2011dh
June 4, 2011 1:00AM PDT



Location: Victoria Centre Observatory, Observatory Hill, Victoria, BC, Canada

Whirlpool Galaxy is host to supernovae on a regular basis. This SN was discovered on May 31st by French amateur astronomer Amédée Riou.

Equipment: 14" Meade LX-200 SCT operating at f/10; QSI 583c colour CCD camera; Paramount ME equatorial mount, guided with Orion autoguider & PHD guiding software. Image acquisition by Nebulosity.

Image parameters: 10x5 minute exposures; 1x1 bin; one shot colour. 3x1 minute dark frames; 13.7°C ambient temperature; CCD temperature -20°C



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 MEETING

Wednesday Sept 14th - 7:30pm - 060 Elliott Bldg University of Victoria, 3800 Finnerty Rd.

RASC Victoria Council for 2010 / 2011

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