Nova Notes

The Newsletter of the Halifax Centre of the Royal Astronomical Society of Canada

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In this issue:

Front page photo : John Liddard
"Moon and the Pleiades"
April 8th 2008 @ 10:15 ADT
Exposure 2 seconds @ f/6.3
ISO 800, Sharpened with iPhoto

From the editor *Quinn Smith*

As I write this, it is Sunday May 24th at 8.55 ADT. I have spent the last 45 minutes watching (OK listening to) the Phoenix Lander successfully land on Mars. It is hard to believe that this "live" event took place some 15 light minutes away. It is an extraordinary event, and for me a very emotional one as I remember another "live" televised event: Man's landing and the first steps on the Moon, nearly 40 years ago.

In 1969, I watched the Moon landing on a black and white television, and listened to it on the radio. I recorded the entire odyssey from launch to return touch-down on about a dozen reel to reel tapes. Sadly to say I have no idea where those tapes are, or if they still exist. This time I was logged into NASA TV on the internet, and had picture in picture on the TV watching CNN and the Discovery Channel (all at the same time!). In 40 years much has changed, and yet much has remained the same.

OK back to business. In this edition you will find two extras. The first is a four page Nova East flyer, with all the latest information on the star party. The second insert is a bundle of 5 Halifax RASC business cards. We have lots, and if you need more E mail the editor (and I will put them in your next newsletter), or pick them up at a meeting. The idea of the cards is to allow members to easily give the basic information of our organization to interested people, and even include your name if you wish.

Have fun, enjoy your summer, and I look forward to seeing many of you at Nova East.

Meeting Announcements

Meetings begin at 8:00 p.m.

Meetings are held every third Friday of the month, except for the months of July and August, when there are no meetings.

Meetings take place in room 176, Loyola Building (#3 on map) at Saint Mary's University.

All members—but especially new ones—are invited to come to the meetings 20 – 30 minutes early to participate in our new informal "Meet and Greet". It's a chance to ask questions about astronomy, the RASC, memberships, or to just say hello.

Executive meetings begin at 7:00 p.m., and all members are welcome to attend.

Next Meeting Dates:

Please note that there are no meetings in July and August

June 20, 2008 - Speakers night
"Water and Sky in the Deep South" Dr. Roy Bishop will be talking about his trip to the southern hemisphere.

September 19, 2008 - Meeting night
A regular meeting night with the emphases on preparations for the upcoming International Year of Astronomy

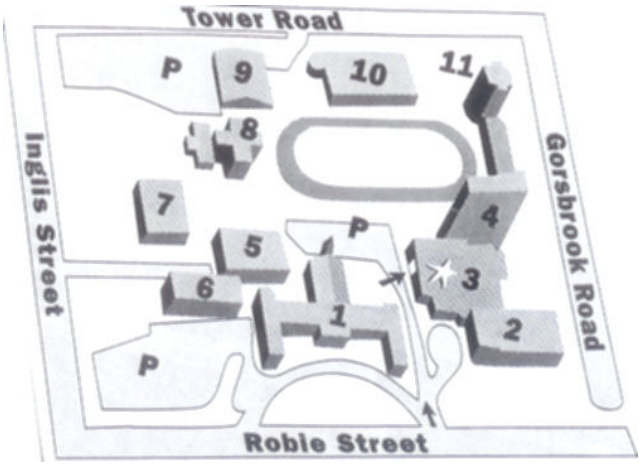
October 17, 2008 - Speakers night
"Computing the Universe" Dr Rob Thacker will discuss how a virtual universe is created in a computer.

[The content of all meetings is subject to change]

Meeting Location:

1. McNally
2. Sobey Building
3. **Loyola Academic Complex**
4. Loyola Residence
5. Patrick Power Library
6. Science Building
7. Burke Building
8. Bookstore
9. Alumni Arena
10. The Tower
11. Rice

P Parking



Halifax RASC Executive, 2008:

Honorary President	Dr. Roy Bishop	902 542 3992
President	Paul Evans	902 827 5977
1st vice-president	Gary Weber	
2nd vice-president	Wes Howie	835-3966
Secretary	Alex LeCreux	404-5480
Treasurer	Pat Kelly	798-3329
Nova Notes Editor	Quinn Smith	852 3894
National Rep.	Pat Kelly	798-3329
Librarian	Gilles Arsenault	864 6654
Observing Chairman	John Liddard	902 865 7607
Councilor	Paul Heath	457 0610
Councilor	Jim Dorey	464-8781

Changes in National Exec.

April 6th 2008

It is with regret that we announce that Society President, Scott Young, has resigned his position, effective Saturday, 2008 April 5.

This came as a surprise to everyone involved, and we are saddened by his decision. His resignation was related to a difference of opinion with his Executive Committee colleagues that made him feel he had lost the mandate to lead.

In the past few months, your Society's leadership and council have been grappling with recent changes to Canadian charities regulations. This has been a stressful time for all involved. A voluntary disclosure was filed with the Canada Revenue Agency on 2008 April 8, and now that this has been done, we intend to communicate more about this issue to the membership in the near future.

We will sincerely miss Scott and wish to acknowledge his many contributions, as Society President for nearly two years, and to the Society's Executive, Council and national committees over the past 6+ years. Scott's accomplishments are many - not least of which was his ability to manage the operation of this large organization, while at the same time continuing his challenging work as the Manager of the Planetarium and Science Gallery at the Manitoba Museum.

He showed us how to keep a level head while chairing National Council meetings; how to draw an astronomical object from the eyepiece; how to skillfully engage volunteers to help further the goals of the RASC; how to strum a guitar in the wee hours at a General Assembly; and how to keep the Executive and Board Pilot Committees engaged and focused. Scott leaves many lasting legacies. Two examples are the newly-minted President's Award and a important improvements to the way National Council meetings are run so that this valuable time is used more effectively.

Scott, we wish you well in your future endeavors.

Dave Lane, 1st Vice-President
Mary Lou Whitehorne, 2nd VP
Mayer Tchelebon, Treasurer
James Edgar, National Secretary

To Members of the RASC
The other members of the Executive Committee, with the endorsement of the Board Pilot Committee, have appointed Dave Lane as RASC National President. Dave will complete the term of Scott Young, which ends on 2008 June 30 (the second National Council meeting at the GA).

As a result of this, Dave has resigned from the position of 1st Vice-President, which we expect will remain vacant until the GA.

We welcome Dave to his new role, and we ask you to give him all of your usual support and enthusiasm.

Regards,
James Edgar (National Secretary)

International Year of Astronomy - update

The Halifax IYA committee has been meeting for several months now and is planning events to celebrate the International Year of Astronomy in 2009.

We are currently working on proposals including multiple Sidewalk astronomy sessions, Mall displays, and presentations at libraries, schools and youth groups, and many other events.

Throughout 2008 we will be participating in the national "Galileo Moments", where. to commemorate the 400th anniversary of the discovery of the telescope, we will encourage as many people as possible to look through a telescope.

The September meeting theme will be "The International Year of Astronomy" where members will talk about the IYA in general and more specifically, what the Halifax Centre has planned.

For more information go to the following links:
http://www.astronomie2009.ca/
http://www.rasc.ca/education/iya/
http://astronomy2009.nasa.gov/index.htm

HALIFAX CENTRE

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Newsletter editor: Quinn Smith

Nova Notes is published bi-monthly in February, April, June, August, October and December. The opinions expressed herein are not necessarily those of the Halifax Centre. Articles on any aspect of Astronomy will be considered for publication.

Deadline for the next edition is July 30th 2008.

Astronomy Week Review

May 5th - 11th 2008
Quinn Smith

I would like to thank all the members who organised, helped out and participated in our Astronomy Week events.

We had three events planned, talks at the Cole Harbour Library, on Wednesday May 7th, a mall display at the Mic Mac Mall on Saturday May 10th, and sidewalk observing at the Cole Harbour library also on May 10th.

Although the weather did not cooperate for the sidewalk observing (which had to be cancelled) the other two events were quite successful.

Andrea Misner and Paul Heath both gave excellent talks at the Cole Harbour library. Andrea spoke about "The Realities of Observing the Night Sky". Paul then spoke on " Why do the Moon and stars look like they do ?". Although the talks were only attended by about a dozen people, both talks were well received. Thank you to Gilles, Andrea and Paul for their hard work.

The mall display on Saturday was well attended by both RASC members and the public. The weather was wet all day, which of course caused the cancellation of the sidewalk observing. However the wet weather probably attracted more people to the mall. Over the course of the day I would estimate that we had in the order of 250 people stop view the display.

Many of the members brought their scopes to the mall, which gave us a very attractive display containing 10 telescopes and binoculars. With so many members on hand, we were able to spend plenty of time with our visitors and answer their questions.

A mall display is a good method of reaching the general public, allowing the astronomical community to go to where people gather, and, thank heavens, is not weather dependent.

A general view of the mall display. I think it turned out very well.

The Centre invested in material for the display (posters, easels, backdrops etc.) and I think the money was well spent.

If you build it, they will come

Although it was not this busy all the time, the display was very well attended by both members and the public.

All photographs thanks to Blair MacDonald

Saint Paul
Paul Heath unravelling the fabric of the Universe

Andrea setting up a dob.
(We had a picture of the Moon taped to a distant post)

Young observers
A young observer learning the basics from Gilles

Priceless
OK so it's not easy figuring out which end to look through

Right some smart
This young lad was very interested (and knowledgeable)

Cole Harbour Place
The attentive audience at the Astronomy Week talks at Cole Harbour Library

Monthly Meeting Report

April 18th 2008
Paul Heath / Quinn Smith

The meeting was brought to order by Paul Evens at 8 p.m. Paul introduced the Executive to the 46 people in attendance. He then greeted the members and guests, and outlined the advantages of RASC membership.

Paul outlined the changes to the National Executive (Dave Lane has taken over as President), and briefly discussed the changes in the tax law and how they will affect the RASC.

Paul reminded the membership about the Astronomy Week events planned in May. And that the next meeting would be "Beginner's Night" as a follow up to Astronomy Week events.

Quinn Smith then gave a brief summary of the IYA planning and asked if any members were interested in joining the IYA planning committee.

Paul then introduced Pat d'Entremont who was giving the first of the two presentations planned for the evening.

Pat's presentation was called "Deep sky tourism from my back yard".

Pat began by saying that he had not been doing less and less observing lately. He thought it would be great to take advantage of early winter nights (without freezing) by creating a remote observing capability. He could stay warm inside, and his scope would do all the work outside in the cold.

Pat described his equipment, which consisted of a Meade LX90, a Meade DSI camera. He also added a remote focuser to the LX90 and a f/3.3 focal length reducer to reduce exposure times.

One of Pat's challenges was to establish a wireless link between his computer and the electronics on the telescope. Such a wireless link would have been very useful last winter, when Pat was trying out some of his equipment at SCO. That was when Pat (and the rest of us) discovered that the ground loop at the observatory was not grounded but was "floating" at 110 volts! This is not a good thing for delicate electronics working at 12 volts. The ensuing electronic firework display could have been worse - but was still an expensive setback. (the problem is now corrected - ed.)

The last part of Pat's system is the Autostar Suite of software to control the scope, camera, and handle some of the image processing.

Pat showed some of his preliminary shots taken with his system, and very impressive they were.

M27 (top) **Horsehead (below)**

M1

During his slide show Pat explained the need to have the finder scope precisely aligned with the main scope, thus avoiding images of "blank' sky.

Pat finished his presentation by answering questions about his set-up, image processing, and the electronic firework display at SCO.

The second speaker for the evening was Gilles Arsenault, who spoke about aspects of Sidewalk Astronomy.

Gilles spoke about the aim of Sidewalk Astronomy being to bring Astronomical observing to the public, by taking the telescopes onto the "streets".

Gilles spoke about the best places to set up for Sidewalk Astronomy. Areas of high traffic, easy parking, a southern exposure and permission from the owner were all important. He also explained that the best time to set up Sidewalk Astronomy was around the first quarter Moon. Most people are impressed with lunar views and views of bright objects such as planets and star clusters. Few novices are impressed by "faint fuzzies" no matter how difficult they are to locate. Because of this light pollution is not usually a major concern with this type of observing.

Gilles also pointed out that it was important to have astronomy related literature to hand out, and that it was important to have a sturdy step for the small children to reach the eyepiece.

Gilles summed up with an overview of the upcoming Astronomy Week events and the plans for Sidewalk Astronomy at Cole Harbour Place.

The meeting closed with an overview of Nova East by Dave Parsons and the consumption of munchies and refreshments (and you thought we went to learn about astronomy!)

Monthly Meeting Report

May 23rd 2008
Quinn Smith

The May meeting was designated "Beginners Night", and was intended as a follow-up to the Astronomy Week events in early May.

Our president, Paul Evens, opened the meeting and welcomed over 40, members and guests. Paul introduced the members of the executive, and reminded the membership of the SCO open house on June 7th, the date and agenda of the next meeting (June 20th), the New Brunswick Star Party, and of course, our Nova East Star Party at

Smileys Provincial Park.
Paul then outlined the agenda for the evening. Four short talks were planned:

Introduction to the RASC / Paul Evens
Telescopes for beginners / Quinn Smith
Preparing to observe / Gilles Arsenault
How to observe / Andrea Misner

Paul began the talks by giving on outline to the goals and aims of the RASC. He explained the benefits of membership and outlined some of the Halifax Centre's assets (such as the SCO). He finished by showing the video made for the upcoming Annual General Meeting in Toronto titled "Astronomy Night in Canada" - (very funny).

Quinn, with the help of Gary Weber and Marc Bourque gave a presentation outlining the basic information needed to choose a beginners telescope. Six telescopes and a pair of binoculars were on display.

Quinn outlined the two basic types of telescope (reflector and refractor), explaining their differences and how each worked. He then discussed the two principle telescope mounts, alt./azimuth and equatorial, explaing the advantages of each.

Next aiming devices were discussed, including finder scopes, red dot finders, telerad and simple sighting marks.
Quinn completed the presentation by discussing eyepieces, magnification and the advantages of aperture.
The presentation ended with a question and answer session.

Gilles Arsenault then spoke about the preparations required for a successful observing session.
He discussed how to determine the expected weather, using the internet and weather reports, and how to dress warmly for your observing session. The golden rule - dress in layers for colder weather that you are expecting
Gilles then discussed how to choose an observing site. He gave an overview on items such as having a good horizon, a dark sky, a wind break, and several safety concerns. He also suggested arriving in daylight, to make finding the site, and setting up easier.

Gilles then gave suggestions in what to

take to an observing session. Other that the actual observing equipment, Gilles suggested spare batteries, hot drinks, a cell phone and all important bug spay. He then discussed the use of an observing log.
For the last part of his talk, Gilles discussed planning an observing session. He suggested making an observing list, and planning ahead using star maps, software, books, and magazines. He ended his talk by outlining several RASC observing programs including the "Explore the Universe" program.

The final presentation "How to observe astronomical objects" was given by Andrea Misner. She started her talk by discussing dark eye adaptation and

the use of red flashlights. She discussed light pollution, and explained that with a dark sky, one can see 3,000/4,000 stars with the naked eye.

Andrea then talked about objects that we can be observed easily. She discussed the Sun, Moon and planets and then star clusters, and Messier objects. She explained the realities of observing by showing a Hubble Telescope image of M51 and then an eyepiece view of the same object.

In conclusion Andrea discussed observing moving objects such as "shooting stars" and satellites.

Paul ended the meeting by thanking the presenters and thanking everyone for their attendance at the meeting.

The meeting concluded with lengthy discussions about the topics raised in the meeting, while we enjoyed the snacks and refreshments supplied.

White Point Presentation

April 26th 2008
Paul Heath

The Halifax Centre was approached by the White Point Resort, and asked to put on an Astronomy presentation and observing session.

Presenters Quinn Smith & Paul Heath arrived at White Point Beach just after 11 a.m. and met with Donna Hatt the events planner for White Point.

Set up took an hour in a board room overlooking the beach. Quinn had astronomy posters and handouts on introducing astronomy. We had a 10" Dobsonian, 8" Schmidt-Cassegrain, a 3" refractor, binoculars and a "dime store" refractor.

After a light lunch we prepared for our first talk at 1:30 PM, to a small group, two staff and three children. We had enough kids to be our Sun, Moon and Earth for my interactive phases of the moon talk. We continued on with how eclipses work. With a toilet paper solar system taped around the wall we talked about the size of the solar system and how we measure it.

Quinn set up the refractor and we looked at the trees past the golf course. Quinn explained how the different types of telescopes worked, and why the views in each telescope were different. Two other youth joined us for awhile.

After the presentation, we spoke with Donna about future astronomy events at White Point and how the resort could make themselves more astronomy friendly, in line with their Eco-friendly programs. We discussed how the Resort could promote astronomy with monthly star charts, bookmarked web pages, and future star parties. Quinn took photos of the outdoor lighting and will get back to Donna with our recommendations for Responsible Lighting improvements at White Point.

We arranged to do a small talk before our observing session but the clouds did not cooperate. After a great dinner we prepared for our talk. From 8 p.m. until about 10 p.m. we did an informal Q&A talk with 10 adults and 5 youth. Two youth from the afternoon session returned with many good questions.

Most of the adults had come down to White Point for the chance to look through the telescopes, and of course were disappointed with the cloudy conditions. We encouraged them to attend our Astronomy Day events in Halifax.

Questions were varied and interesting, from how to get into astronomy, astrophysics, aliens, what a scope can see, how big is the universe, SETI, ISS, astronomy web sites and many more.

Overall the evening went well.

White Point Beach Resort is now a member of the RASC attached to the Halifax centre.

We hope to be able to do this again, but with clear dark skies.

August 1st - 4th 2008

The New Brunswick Centre of the Royal Astronomical Society of Canada invites you to join us for our 1st Annual Mount Carleton Star Party. Mount Carleton Provincial Park offers some of the darkest skies in northeast North America that are easy to access.

Located far from any light pollution typical nights allow visually unaided eye limiting magnitude of +7.0! The park also offers a relaxing location in the Appalachian Mountains with daytime activities that include extensive hiking tails, mountain biking, canoeing, sightseeing and great fishing as well as camping. Come join us and, "Touch the Universe!"

Mount Carleton Provincial Park is located in the north central part of New Brunswick. It is about a 3 hour drive north of Fredericton, 3.5 hours from Moncton and about 4.5 hours from Quebec City. For those from the North East USA it is about a 3.5 hour drive from Bangor, Maine.

It also offers a wilderness location with plenty of wildlife and sightseeing. Some of best salmon and trout fishing rivers in Eastern North America begin in the park! It is not uncommon to share your campsite with rabbits, or see a moose or few while paddling your canoe down one of the lakes. It is this remote wilderness that provides us the dark skies.

For more information please go to:

http://www.mcsp.ca

Buying a Telescope

(part 1)

John Vandermeulen

At this moment a gorgeous six foot tall telescope stands silently outside on my sundeck, under its canvas cover. It is a grey overcast Friday, probably the beginning of more to come over the next few days. So I read about focusing and cameras and Moon filters.

This is not my first telescope, mind you, although that one did come in my later years. That first one came three years ago when on an impulse I bought, off the net, a 4.5" Starblast (Orion's super-famed foot-long Newtonian). It introduced me to looking at stars in a very different way, confirming much of what I had read over the preceding three years. Well, not everything. But I felt a little more 'au courant', that now at Halifax RASC Centre meetings, I could at least nod knowingly at the mention of clusters and HR diagrams.

Then last year a 90 mm Sky-Watcher refractor emerged in the Valley, another $200. I had never seen, let alone looked through a refractor of any kind, so it seemed reasonable to try it out. I spent that evening studying its workings and practiced taking the scope tube off the mount and putting it back on. All by myself I also discovered the principle of balance, as in an instance the tube slid down and I nearly missed catching it about an inch off the floor.

I also discovered Synta-glue, an incredibly sticky goo that the Synta folks apparently believe to be a super grease. Imagine if you can a solid glue. I had read about this glue. I had also read about Eta Carina, the formation of red giant stars, red shift, spectroscopy, and then about the CMB (the cosmic microwave background). I was hooked, line and sinker.

The 90 mm refractor is at the low-end of the Sky-Watcher line and is mated with an Alt-Azimuth mount-tripod combo. Roy Bishop had taken a look at this scope, and had pronounced the optics good, but the mount-tripod shaky. I figured that the scope tube was worth it, and that I would worry about the shaky support later. If need be, I could always lash the tube to a concrete block with a length of wire. Roy was certainly right. If the standard for vibration-damping is three seconds, my newest set-up might do well at 10 seconds on a good day and at the lightest of bumps. The oft-used expression "buttery smooth" came to mind, but I suppressed it.

Despite the Synta-glue holding pieces stickily together, I dismembered my new-old refractor to locate the problem, and found that the tripod was weak-kneed, and that the mount appeared to have been cobbled together with parts from two different size bins. This was not quite the glamorous debut into observing that I had imagined. However, as long as the optic tube would hold reasonably stable I could do some crude observing and also figure out the Alt-Azimuth arrangement. So I put it all back together again, scraping off as much of the Synta-glue as I could with a heavy kitchen knife, and headed for the front door step where the moon was visible.

It was worth all the effort. The simplicity of the Alt-Azimuth system, of course, helped a lot, but this was my first real look at a stellar object through a real telescope. The Moon was indeed as cratered and battered and corrugated, and oddly beautiful, as pictures had shown it to be on paper. Just think of what that same view would be, without vibration, with more magnification, and a larger field of view.

Which brings me to stage three - a real equatorial computerized 8" Schmidt-something. Next issue…..

SCO Break-in

John Liddard

I arrived at SCO around 2:30 p.m. Saturday May 24th to install the new AC inverter. I arrived to find that the windows in the warm room were broken. The door knob, dead bolt, and the accompanying area around the door were pretty mangled as someone made an attempt to get in. The solid door, its casing, and bars in the windows foiled any attempt of the would-be intruders to gain entry. The roll off observatory and the storage room remain unscathed, although there is a big foot print on the storage room door where it looks like they tried to kick it in.

I reported the incident to the Windsor RCMP and picked up some materials to seal off the windows to keep the weather out. My wife (Marilyn Ewer) and I spent the afternoon cleaning up the glass, inside and out. Marilyn decided to give the inside of the warm room a good scrub as well. I've brought the Thurlow Binoculars home with me, in the event that they try to take a second shot at gaining access; unlikely, but just to be safe.

I also want to let everyone know that I have the key to the roll off and the storage room. The damage delivered to the dead bolt made it nearly impossible to insert the key and turn the lock. Please do not attempt to open the warm room door until the necessary repairs have been made. If anyone needs access to the roll off observatory or the storage room in the next few days please contact me and make arrangements to pick up the key. We plan to have the damage fixed as soon as possible.

If anyone has any questions don't hesitate to contact me. I'll keep everyone posted on the progress of the repairs.

Young Crescent Moon
April 6th and 7th, 2008, observations and photos by Sherman Williams

(Above) The young Crescent Moon April 6, observed at 23:12 UT (20:12 local ADT) using 10X50 binoculars. The new Moon (April 6, 03:54 UT) had occurred 19.3 hours earlier.

Certainly this marks my earliest observation of a lunar crescent following New Moon. By 23:25 UT (20:25 ADT) I was able to pick out the crescent naked-eye.

Photo to right taken on April 7th at 20:44 ADT.

Camera used : SONY Cybershot DSC H7 tripod mounted, originals 3264 x 2448 pixels, manual settings: f/ 4.0, focal length 55 mm, ISO 200.

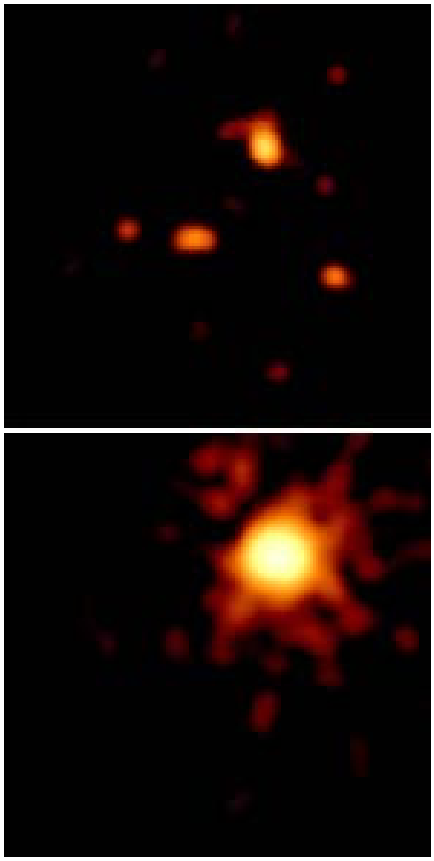
Cosmic Debris

Odds & sods from the world of Astronomy and Cosmology

Supernova sighting leaves astronomers agog (excerpt from the Telegraph newspaper – UK)

The death of a star has been witnessed as it occurred for the first time, in a remarkable observation that will lead to new insights into this cataclysmic cosmic process, writes Science Editor Roger Highfield.

Galaxies typically host a supernova star death – only once or twice every century, making it nearly impossible to capture the instant it starts to spew energy into space, briefly shining brighter than billions of stars combined.



Before and after: The instant the star went supernova.

But the lucky glimpse by a satellite of the spectacular outburst from the very beginning has allowed astronomers from around the world to quickly follow up with eight other orbiting and ground-based telescopes and collect a wealth of new information on what happens when a star is blown to smithereens.

"We usually only get to see them a good few days after they exploded, usually when they go bright at optical wavelengths," says Dr Kim Page, University of Leicester, one of the team that reports the discovery today in the journal Nature But this time they could pick up a tell-tale burst of X rays, which occurs at the outset of star death. Thanks to a satellite, "we got on to it in nine seconds," says Dr Page, who led the X-ray analysis.

This new supernova, named SN2008D, intrigues scientists because it is closer to Earth (at 90 million light years) than any type of supernova ever observed in the act of exploding, giving them the clearest picture ever of a star at the moment of its explosive death.

They can, for example, deduce that a thin outer layer of the star must have been ejected at velocities up to about 70 per cent the speed of light, much higher than ever thought.

Supernovae are explosions of stars more than eight times the mass of the Sun whose cores run out of nuclear fuel and collapse in on themselves to form a neutron star, an ultra dense object, or a black hole.

During the conflagration one can think of the dying star as a leaky bottle containing light radiation. It turns out it is leakier when it comes to higher energy radiation (X rays) than the reds, greens and blues of optical light.

Previous X-ray observations of normal supernovae have been at later stages in the explosion, when stellar material collides with the surrounding envelope of gas and dust shed earlier by the star, generating high-energy radiation.

This is the first time a normal supernova has been glimpsed at the moment of "shock breakout," when the shock wave rebounding from the collapsed core breaks though the star's surface to produce a shower of X-rays.

Dr Paul O'Brien, also from Leicester, says, "understanding supernovae is important as these nuclear furnaces make the heavy elements from which planets like ours form."

Astronomers were fortunate because when the star death occurred, on January 9, NASA's Swift satellite was already monitoring X-rays from another supernova in the same galaxy when the second one exploded. At the same time, astronomers and their colleagues were monitoring the first supernova from the ground and caught images of the new one only hours after the explosion.

"We were in the right place, at the right time, with the right telescope on January 9th and witnessed history," remarks Dr Alicia Soderberg of Princeton University. "We were looking at another, older supernova in the galaxy, when the one now known as SN 2008D went off. We would have missed it if it weren't for Swift's real-time capabilities, wide field of view, and numerous instruments.

Dr Soderberg adds that Swift and other planned X-ray satellites designed to scan the sky for such X-ray flashes should see hundreds more like this in the future, making all-wavelength, cradle-to-grave analyses of supernovae common.

"This first instance of catching the X-ray signature of stellar death is going to help us fill in a lot of gaps about the properties of massive stars, the birth of neutron stars and black holes, and the impact of supernovae on their environments," said Dr Neil Gehrels, principal investigator of the Swift satellite.

"We also now know what X-ray pattern to look for. Hopefully we will be able to find many more supernovae at this critical moment."

St. Croix Observatory

Observing Chair: John Liddard 902 865 7607

Part of your membership in the Halifax RASC includes access to our observatory, located in the community of St. Croix, NS. The site has grown over the last few years to include a roll-off roof observatory with electrical outlets, a warm-room and washroom facilities. Enjoy dark pristine skies far away from city lights, and the company of like minded observers searching out those faint "fuzzies" in the night.

Observing Nights:

Every weekend closest to the new Moon, there is an "Observing Night" at St. Croix. The purpose of "Observing Night" is to encourage Centre members, their guests and visitors to share an evening of observing at St Croix. It's also a great night for beginners to try out different scopes and see the sky under dark conditions. For more information or transportation arrangements, please contact the Observing Chair.

Future dates for Observing Nights:

July	4th, 2008	
August	29th 2008	(Nova East!)
September	26th, 2008	
October	24th, 2008	
November	28th, 2008	

These dates are all Fridays. If this is a meeting night, or cloudy, the alternate date will be the following Saturday.

Directions from Halifax:

1) Take Hwy 102 (the Bi-Hi) to Exit 4 (Sackville).
2. Take Hwy 101 to Exit 4 (St. Croix).
3. At the end of the off ramp, turn left.
4. Drive about 1.5 km until you cross the St. Croix River Bridge. You'll see a power dam on your left.
5. Drive about 0.2 km past the bridge and take the first left (Salmon Hole Dam Road).
6. Drive about 1 km until the pavement ends.
7. Drive another 1 km on the dirt road to the site.
8. You will recognize the site by the 3 small white buildings on the left.

Become a St. Croix Key Holder:

For a modest "key fee", members in good standing for more than a year, who have been briefed on observatory , may gain access to the St.Croix facility. For more information on becoming a key holder, contact the Observing Chair.

Rules for using the SCO equipment:

There are several pieces of astronomical equipment available for members (and guests) to use, including a 17.5" dob and a magnificent pair of tripod mounted, 100mm binoculars.
If you are unfamiliar with the use of these pieces of equipment, please ask for assistance—any knowledgeable member would be more than willing to help you out. Please share the equipment with other members; and treat the equipment, the facilities, and the site with respect. …… Enjoy!