

This and that

Stand and be Counted

At the end of October the terms for the President, 1st VP and two Members at Large will become vacant. Any members wishing to stand for council office are very welcome to apply. Please contact Scott Mair (scottmair@gmail.com) if you are interested in standing for office or would like more information about what sitting on our Centre's Council entails.


Everyday is Sun Day

As part of his day job as a CRD Parks Naturalist, Scott Mair will be hosting a Sun observing event at the **Beaver Lake Regional Park from 11am - 2 pm, August 9th**. Any RASCals that would like to bring their solar filters and telescopes and join in are very welcome.

skynews

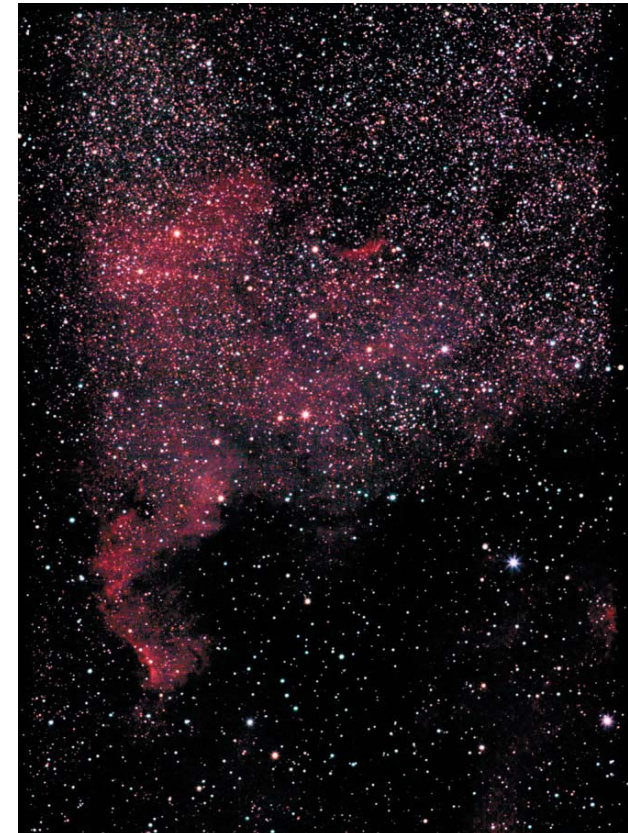
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this month

Cowichan Valley Star Finders Island Star Party

Friday - Saturday, July 21 - 22, Victoria Fish and Game Association

Friday's Lecture 7:30 pm: **Michael Chriss - *The Crimes of Galileo***
Saturday Lecture 7:30 pm: **Chris Gainor - *Apollo and Lunar Science***
Saturday Workshop 2 pm: **Making Small Refractors**

Guided nature walks
Lots of Door Prizes (Adult and Kids only prizes)

Pay at the Gate (Main Lodge Hall) No advanced registration required.
\$20.00 per person, \$25.00 per family.

For additional information contact: **Norm Willey 250.246.1102**

North America Nebula

Joe Carr

This is how I finished off our June 30/July 1st observing session at Cattle Point - shooting the N.A. Nebula using my Canon 400mm telephoto and 30D dSLR piggy-backed on my Meade LX-90. Charles Banville and John McDonald had both imaged this nebula with good results (see page 8) so I wanted to see what my gear would deliver.

I used ISO 3200 at 30 second exposures. When processed, of the 30 original images, there were 27 keepers. This allowed me to enhance the overall signal-to-noise ratio, and supported my aggressive digital development of the resultant image you see here.

Overall I think John's Pentax ist DS dSLR has the edge for infrared imaging (a surprise), with Charles' Canon 20 Da certainly in the same league. My Canon 30D isn't as red sensitive, but with aggressive processing and lots of images, I can certainly do emission nebulae justice.

Joe

RASC victoria council

*this month
monday nights*

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Sandy Barta
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Astronomy Cafe
See you again in September

**ASTRONOMY
CAFÉ**



second wednesday of the month

Monthly Meeting

7:30 PM, Elliott Lecture Theatre, Rm 060, UVic

NOTE: no meetings in July and August

as sky and interest dictate

New Observers Group

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

by email

Observer/CU Volunteers/ Members email lists

Contact Joe Carr to subscribe to these email lists for important, timely, member-related news.

astrophotography continued



Guy Walton - M31
I finally got my CEQ mount polar aligned so it tracked quite well. The thirty second exposures were made with a Nikon D50 on an Orion 1000mm, f9ED refractor at ISO 1600

Joe Carr - M51

I acquired 30 images of M51 on Observatory Hill using my Canon 30D at prime focus on my LX-90. 14 of the images were of suitable quality to stack. This is my first image of M51 in which some detail



Three Dumbbells - M27



Charles Banville



Joe Carr

John McDonald

Centre of the Universe

July Star Parties

We've got an exciting line up of Star Parties for the month of July! Join us any night of the week from 7 – 11 pm for tours of the big telescope, virtual star shows in the planetarium and special talks on a different theme each week. When the weather's clear, we'll have small telescopes to look through, and we'll show you what the big one is seeing.

Are your kids interested in coming to a Star Party? Plan to come on a Sunday night for our Family Friendly Sundays! The Star Party theme is the same as the rest of the week, but the shows and programs are presented with kids in mind. We've also got extra crafts, games, activities and game shows to entertain and educate!

July's Star Party themes:

July 17 – 23: Zero G

What is life like in zero gravity? What problems do astronauts encounter? Find out what life is like for the astronauts in space!

July 24 – 30: The Invisible Universe

There's more to the universe than meets the eye... see what the sky would look like if you could see radio waves, x-rays, microwaves and more!

July 31 – August 6: Telescopes

Some are big, some are small, some are made of metal and some of liquid. Come and find out about the fascinating types of telescopes and how they differ.

Summer Space Camps – space is still left!

Is your child interested in space? We still have spaces available for most Space Camp sessions:

July 17th – 21st

July 24th – 28th

July 31st – August 4th

August 21st – 25th.

There's also space available in the French Space Camp from August 14th – 18th for kids who would like to learn about space en français!

Each camp is intended for kids aged 6-10. From 9 am – 3 pm each day, campers will participate in hands-on astronomy activities, crafts, planetarium shows and many other amazing presentations. We've got new instructors this year and many new activities, so even camp veterans from last year should find lots of fresh and exciting adventures!

If you're interested in Summer Space Camps, call now to reserve your spot. Camp fees are \$150+GST per camper, or \$120+GST for each additional camper from the same family.

The Sky this Month - July 2006

July 20th	Moon rising in front of Pleiades (1:40 am)
July 24th	New Moon (9:31 pm)
July 27th	Mars 3>°> South of Regulus
July 28th	Delta Aquarid Meteor Shower at maximum

All times and dates local to Victoria, BC

Summer has arrived and we are finally enjoying some sunshine and warmer weather. A common misconception is that it is warmer in the summer because Earth is closer to the Sun. It might surprise you to learn that our planet is actually at its farthest point from the Sun in July. Earth's orbit is not a perfect circle, but an ellipse. The farthest point from the Sun on this elliptical orbit is called aphelion. Earth reaches aphelion this year on July 3rd, when the days are the warmest for us in the Northern Hemisphere. So, if the earth is farther away from the sun at this time of year, then why is it warmer? The Earth is tilted about 23° on its axis which makes one hemisphere receive more (or less) direct sunlight at certain times of the year. The Northern Hemisphere is tilted toward the Sun in the summer and we get warmer weather – at the same time, the Southern Hemisphere is tilted away and is experiencing winter.

>

>With the onset of summer comes not only warmer weather, but also a greater chance of clear skies - perfect for gazing at the stars. The highlight of the summer sky is the Summer Triangle which, in about three weeks, will be directly overhead after dark. Look for Vega, currently high in the southeast, Deneb, lower in the northeast and Altair, low in the southeast, to complete the triangle. Vega is the brightest star in Lyra the harp, which looks like a little parallelogram in the sky. Deneb is the tail of Cygnus the Swan (also nicknamed the Northern Cross) which

astrophotography



Charles Banville - Lagoon and Trifid Nebulae

1 July 2006 from Pearson College
Telescope: TeleVue NP-101 f/5.4
Exposures: 20 light frames of 60 sec @ISO800. 15 darks, 15 flats and 15 bias frames.
Processing: ImagePlus



Joe Carr - Trifid Nebula

Camera - Canon 30D dSLR - ISO 3200
Exposure: 30 seconds
Mount - LX/90



M8 (Lagoon); M20 (Trifid) and M21
© 2006 W J McDonald

John McDonald - M8, M20, M21
Cattle Point between 12:15 - 1:15 AM PDT
Exposures: 45 - 30 second shots at ISO 800
Processing: ImagesPlus, Photoshop and Neat Image

observers group

RASC Victoria Centre and the National Research Council have signed a License to Use Land Agreement which gives members of Victoria Centre expanded access to NRC property on Observatory Hill, including access outside normal operating hours of the Centre of the Universe.

If you are a member in good standing of Victoria Centre RASC, consider yourself an “active observer”, and wish to take advantage of this opportunity, please send an email to the 1st or 2nd Vice President indicating your interest. More information on this program is available on our web site.

astrophotography



John McDonald - North America
Nebula
Telescope: WO 105mm with 0.8x flattener/reducer
Camera: Pentax ist-DS
Exposures: 17-30 second shots at ISO 800
Processing: ImagesPlus, Photoshop, NeatImage



Charles Banville - North America
Nebula
Telescope: TeleVue NP-104 f/5.4 on a Vixen GPD mount
Camera: Canon 20Da
Exposures: 40 light frames of 60 sec @ ISO 800. Processed and cropped with ImagesPlus. 15 darks, 15 flats, 15 bias frames

flies south through the Milky Way. Altair is the brightest star in Aquila, the eagle. The Triangle is a perfect tool to understand the dimensions of the sky with Vega being at a distance of 25 light years away, Deneb 3000 light years away and Altair 16 light years away. Despite the difference in distances, all three stars appear to be about the same brightness to our eyes. Deneb is an extremely luminous star and one of the most distant stars that we can see with the naked eye.

Look directly to the south to see a Supergiant in the sky. Antares is a red star (red = old and cold) about 500 times the diameter of the sun that is running out of fuel. The presence of Antares is a telltale sign that the scorpion or Scorpius is in the sky. Being close to the horizon, Antares may twinkle or even appear to change colour in the sky due to bending and distorting of the starlight as it comes through our atmosphere. The name Antares means “rival of Mars” because many people get Antares and Mars mixed up!

MORNING PLANETS: Venus remains in the sky as the “Morning Star”. It rises in the northeast shortly after 4 am for the month of July. Venus is the brightest of the planets in our sky and is truly a sight to see.

EVENING PLANETS: Jupiter, the king of the planets, will continue to shine brightly in the southwest this month. If you own a 10 or 12 power pair of binoculars be sure to point them up to the sky to look at Jupiter’s 4 largest moons. They will look like little stars close to the larger disc that is Jupiter. Saturn and Mars are still hanging around in the early evening twilight. Look for them low in the western sky just after the sun dips below the horizon.

THE MOON: According to the Farmer’s Almanac, July’s moon is called the Full Buck Moon. This is due to the fact a buck’s antlers appear in a velvety coating on their heads. Other names for this moon are Full Thunder Moon (greater occurrence of thunder storms at this time of year) and Full Hay Moon. The Saanich people call July’s moon CENHENEN - the moon when the humpback or pink salmon return and fishing for them begins.

Clear skies and happy stargazing!

Margaret & Stasia

From Thunderstorms to Solar Storms...

by Patrick L. Barry

When severe weather occurs, there's a world of difference for people on the ground between a storm that's overhead and one that's several kilometers away. Yet current geostationary weather satellites can be as much as 3 km off in pinpointing the true locations of storms. A new generation of weather satellites will boost this accuracy by 2 to 4 times. The first in this new installation of NOAA's Geostationary Operational Environmental Satellites series, called GOES-N, was launched May 24 by NASA and Boeing for NOAA (National Oceanic and Atmospheric Administration). (A new polar-orbiting weather satellite, NOAA-18, was launched May 2005.)

Along with better accuracy at pinpointing storms, GOES-N sports a raft of improvements that will enhance our ability to monitor the weather—both normal, atmospheric weather and “space weather.”



“Satellites eventually wear out or get low on fuel, so we've got to launch new weather satellites every few years if we want to keep up the continuous eye on weather that NOAA has maintained for more than 30 years now,” says Thomas Wrublewski, liaison officer for NOAA at NASA's Goddard Space Flight Center. Currently, GOES-N is in a “parking” orbit at 90° west longitude over the equator. For the next 6 months it will remain there while NASA thoroughly tests all its systems. If all goes well,

it will someday replace one of the two active GOES satellites—either the eastern satellite (75°W) or the western one (135°W), depending on the condition of those satellites at the time. Unlike all previous GOES satellites, GOES-N carries star trackers aboard to precisely determine its orientation in space. Also for the first time, the storm-tracking instruments have been mounted to an “optical bench,” which is a very stable platform that resists thermal warping. These two improvements will let scientists say with 2 to 4 times greater accuracy exactly where storms are located. Also, X-ray images of the Sun taken by GOES-N will be about twice as sharp as before. The new Solar X-ray Imager (SXI) will also automatically identify solar flares as they happen, instead of waiting for a scientist on the ground to analyze the images. Flares affect space weather, triggering geomagnetic storms that can damage communications satellites and even knock out city power grids. The improved imaging and detection of solar flares by GOES-N will allow for earlier warnings. So for thunderstorms and solar storms alike, GOES-N will be an even sharper eye in the sky.

Find out more about GOES-N at goespoes.gsfc.nasa.gov/goes .

For young people, the SciJinks Weather Laboratory at scijinks.nasa.gov now includes a printable booklet titled “How Do You Make a Weather Satellite?” Just click on Technology.

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

address change? information incorrect

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