Web Page of the Month

Our very own Joe Carr's web site.

Joe's web page is a "must bookmark" resource—and a good way to keep up with our local flavour of amateur astronomy..

http://www.joecarr.ca/astro/

SKYNEWS

http://victoria.rasc.ca/

This Month

Stephen Courtin

The Evolution of the Ecliptic Calendar

For more than twenty years I have explored the graphic potential of showing the world my view of the cosmos. I see it as the big picture and can be used as the base map for seeing the Earth's perspective from a singular point of view. With the movements of the Sun, Moon, and Planets, I've followed the marvels of human discovery and the expanding visual realms of our Universe. I see the Ecliptic Calendar as a bridge to knowledge through this common point of reference and by mapping of the solar systems movements find the key to unlock my own grand unified theory.

I plan to provide a chronology of visual arts as a starting point for my talk and discuss the future directions in the art of science.

Address Change? Information Incorrect?

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Bill Almond, Jim Hesser,
Ed Maxfield, Frank Ogonoski,
Blaire Pellatt, Colin Scarfe,
Rich Willis

New Members Liason:
Sandy Barta

This Month

NEW !

Astronomy Cafe

At Bruno Quenneville's
2019 Casa Marcia Crescent,
Victoria, BC.
Call 477-2257 for more information or directions.

Newcomers are most welcome.

Come and enjoy!

March 17

Back by Popular Demand

Every 3rd Wednesday
Astro Imaging at
Bill Almond's

354 Benhomer Drive
478-6718

March 26

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

April 14

April Meeting

7:30 pm
Centre of the Universe

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'

Observatory tie

If anyone is interested in having a hand cross-stitched "Observatory tie" like Jim Hesser was wearing at the RASC annual dinner please contact Mary-Clare Carder at 380-3838 or Carders@telus.net

President's Message

This month we are celebrating the 90th anniversary of the Victoria Centre with a special program led by our Centre Historian, Bill Almond.

When our founders set up this centre in 1914, work was under way on Little Saanich Mountain to build the Dominion Astrophysical Observatory. Now 90 years later, we are talking about acquiring an observing site for the use of our members.

As I outlined in my message last month, council met in late February to consider this matter and the disposition of astronomical equipment that our Honourary President George Ball is donating to us.

Council decided to move George's dome and equipment to a temporary location for storage while we decide how best to use the dome, telescopes, eyepieces and other equipment that he is giving our centre.

In the past few weeks, council members have heard all sorts of ideas about possible observing sites for the Victoria Centre. These include using existing sites at the DAO and Pearson College, a Scouts Canada camp in Sooke, the Gonzales weather observatory in Victoria, and another park site or private property in Greater Victoria.

Council discussed these and other ideas, and decided to set up an Observing Site Committee chaired by Dave Bennett, with Bruno Quenneville, David Lee, Sandy Barta and myself as members.

Dave is going to work on the initial document setting out the scope of the committee's work, which will include looking at what sort of facility members want, and where it would best be established.

Needless to say, many of these choices will involve a great deal of work and financial support to make a reality. Opinions will vary on what sort of facility will

(Continued on page 4)

The deadline for the next issue of Skynews is

March 28 2004

Get your Skynews early and in colour. Tell Lauri, our Treasurer, that you get Skynews on line and we

President's Message Continued

be needed, from a pad for members to set up their own telescopes, to a fully equipped observatory. And there will be even more contention over location, as the geography of Victoria, coupled with the need to balance access with dark skies, all have to be weighed.

The committee will not be a decision making body. Those decisions remain in the hands of council. But we need to know what the alternatives are, their strong and weak points, and what they will cost, and the committee will give us that information.

We on council and in the committee want to get as much input as possible from members. Contact information for council members is available in Skynews, and Dave can be reached at Dave.Bennett@gems4.gov.bc.ca .

We look forward to hearing from you about your visions that will take the Victoria Centre to the end of its first century and beyond.

Chris Gainor

George Ball

Here's a photo of Bruno in George's observatory taking inventory of the telescopes, optics, and documenting how all the hand-built systems appear to work—in preparation for "the big move".

Cheers, Joe

Upcoming Meeting

April 14□2004

The April meeting will be held at the Centre of the Universe, Dr. Jim Hesser and the Centre of the Universes' new manager, Jacqueline Porter, will present a rundown of this coming season's programs at the Centre of the Universe. Also, Chris Gainor will give us his Mars presentation.

May□June and beyond

Mr. John-Willis Ellinson and his wife Sarah, both teaching at Uvic, have offered to meet with our members. Both John and Sarah are Astronomers and their experiences in England, Chile, etc. should prove to be most interesting,

SteveCortin, RASC member, has prepared a visual presentation on Cosmology and Astronomy. More on these coming soon.

Cover: M42—Great Orion Nebula

I took this image at the February 18, 2004 Astrophotography Special Interest Group (which meets at Bill Almond's place the third Wednesday of each month). This image of the Orion Nebula shows a great deal of structure in the nebulosity, dark lanes, and the very distinct magenta and blue colours present in this prominent nebula. Bill Almond, Larry Danby, and Joe Carr had to dodge clouds that night, and only managed to take three successful images of M42, of which this image represents the best.

Joe says "This image is my best of the Orion Nebula, however the focus is only marginal, partly caused by the poor atmospheric conditions, and partly because I didn't use my Stiletto focuser."

Technical Information:

Camera:	Canon EOS 300D, 60 sec, ISO 800.
Scope:	LX-200 12" SCT, f/10, prime focus.
Image Processing:	ImagesPlus: original 3072x2048 single image 3x3 binned to 1024x682 size, moderate Digital Development. Corel PhotoPaint: image cropped to 936x681, levels adjusted to enhance nebulosity around the stars.

Joe Carr

Mount Wilson Continued

many decades, made important contributions to astronomy. The Snow Telescope was the first major solar telescope in the world and the first telescope to be installed on Mount Wilson when George Ellery Hale founded the Observatory in 1904. The 100-inch telescope was used by Edwin Hubble to discover the expansion of the Universe. The 60-inch telescope for many years explored how other stars that look like the sun also behave like the sun in its 22-year-long magnetic activity cycle. The 150-foot and 60-foot solar tower telescopes are still in daily use to study the magnetic field and atmospheric motions of the Sun. Following the early tradition of Michelson and interferometry at Mount Wilson, scientists from the University of California at Berkeley have built an interferometer for very high angular resolution studies of bright stars at infrared wavelengths, and Georgia State's Center for High Angular Resolution Astronomy (CHARA) has built the world's largest optical interferometer array at Mount Wilson.

For more information about CUREA 2004, see:
http://www.curea.org

or contact program director Dr. Paula Turner:
E-mail: turnerp@kenyon.edu
phone: (740) 427-5367

The application deadline for the 2004 program is May 1 2004

The above article was forwarded from National Office

For the experiences of one member who did this in 2002, see the Journal of the RASC, December, 2002, page 260.

Bonnie Bird, Executive Secretary
Royal Astronomical Society of Canada

In the past two years you have been extremely helpful in forwarding our summer student program announcement (see below) to RASC members, and we at Mt. Wilson would be most appreciative if you could again do so. Our recent CUREA programs have greatly benefited greatly from the attendance of Canadian students, and we're hoping to again have some this summer.

Thank you! Bob Eklund
Programs Chairman
Mount Wilson Observatory Association (MWOA)

Astronomy Day April 24, 2004

We are very fortunate to celebrate Astronomy Day again at the Royal BC Museum. Astronomy Day provides us with an opportunity to show the public who we are and what we do best. And, it is a time for us to have some fun sharing our hobby with others. The committee has organized a number of hands-on activities such as grinding and testing of telescope mirrors, assembling Dobsonian telescope mounts, astrophotography, day time plantet viewing. To make this event a success, we need volunteers at both the RBCM and at the Centre of the Universe. If you have not already done so, please call Sandy (642-0205), she would like to hear from you. Give her a call—don't wait for her call. See You There!

Cheers. Sid

DESTINATION MARS

Friday 2:00 to 5:00 pm set up

Astronomy Day Schedule

8:30 - 10:00	Set up
10:00 - 4:30	OPEN TO THE PUBLIC
	Walk Through the Solar System
10:00 - 4:00	Displays, Ecliptic Calendar, Posters
	Telescope Making Workshop
	Astro-imaging Workshop
	Amateur Astronomer's Booth
10:30 - 4:00	Ask the Professional Astronomer Booth
11:00 - 3:00	Children's Activities
11:00 - 4:00	Solar Observing: RBCM court yard
11:00 - 12:00	Making and Assembling Dobsonian Telescope Mount
11:30 - 12:15	Multimedia Presentation
12:30 - 1:15	Wizard of the Stars
1:00 - 1:45	First Lecture
2:00 - 2:45	Second Lecture
2:45 - 3:15	Wizard of the Stars
3:00 - 3:45	Making and Assembling Dobsonian Telescope Mount
3:15 - 4:00	Multimedia Presenation
7:30 - 11:00 pm	**Night Sky at the Centre of the Universe**

Jupiter

Being a video novice I feel like I've opened Pandora's Box and ventured where I probably shouldn't …

I've started using my Astrovid 2000 video head for capturing video stills—I hope to benefit from the 'shotgun' approach to image capture. Even on clear nights the atmosphere rarely cooperates and offers only glimpses of good seeing. Every second of video captures 30 frames and a few of these frames will catch those fleeting moments of still atmosphere. I can then select only the best frames—those lucky enough to catch that good seeing. And I need all the help I can get.

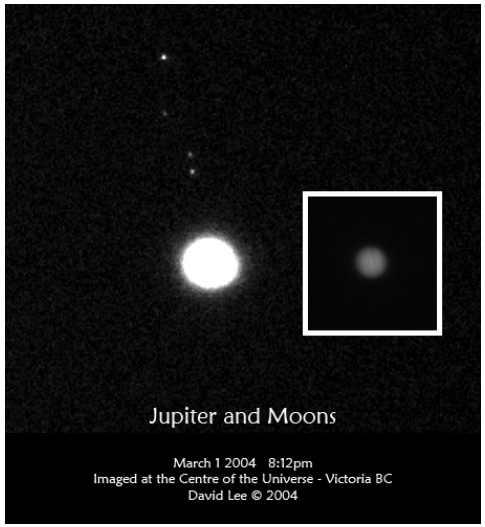
It's been an adventure wandering through the jungle of new jargon armed only with my understanding of still photography and a few attempts at home movies. With video very much entrenched in the digital world I can now use video editors with similar precision to Adobe Photoshop.

Thanks Margaret, Stasia and Jacqueline for loaning me your front porch at the Centre of the Universe on Monday night.

Technical Information:

Telescope:	Televue Pronto
Optical Accessories:	Televue 2.5x Barlow, Televue 5x Powermate
Video Camera:	Astrovid 2000
Digital Video Recorder:	Sony TRV-33

David Lee



Study and live at Mt. Wilson Observatory

CUREA 2004 TO OFFER IN-RESIDENCE EDUCATIONAL PROGRAM AT MOUNT WILSON OBSERVATORY AUGUST 8-21

The Consortium for Undergraduate Research and Education in Astronomy (CUREA) will repeat its highly successful in-residence educational program at Mount Wilson Observatory for the 15th time this summer, from August 8 through 21, 2004. The program is aimed at undergraduate physics and astronomy majors, with junior or senior standing, who are considering a career in science or science teaching.

Staff and students will pursue a short on-site course in astrophysics and observational astronomy using the historic facilities at Mount Wilson. Instruments available to the students will include the Snow Horizontal Solar Telescope, used in conjunction with a high-resolution spectrograph and a unique atomic-beam solar oscillation spectrometer; a 16-inch Meade LX200 Schmidt-Cassegrain telescope with CCD camera and SBIG stellar spectrograph; and the historic 60-inch reflector, used by Harlow Shapley to discover the size of the Milky Way Galaxy.

The CUREA program will emphasize how our present understanding of the Sun has been achieved and how it relates to the astrophysics of all stars. The emphasis will be on hands-on experience, using the horizontal solar telescope and the other instruments. Attention will be devoted to many observable solar phenomena, such as sunspots, granulation, limb darkening, important spectral lines, Zeeman splitting of solar lines, the measurement of solar rotation using the Doppler shift of a spectral line, and observation of the solar 5-minute oscillations. Nighttime observing will extend to celestial objects such as the Moon, planets, variable stars, clusters, galaxies and other deep-sky objects. Students will learn how to process CCD images and spectra from the 16" telescope. Discussions led by staff members will deal with topics in astrophysics as well as the design and use of the available telescopes and their accessories. During the second week of the program, each student will work on a special project she or he has chosen.

Additional activities will include an introduction to ongoing Mount Wilson research projects, short presentations on important contemporary and historical astronomical topics, special lectures by distinguished astronomers, tours of research facilities on the mountain, and field trips to JPL, Caltech and Palomar Observatory. The tuition fee of $1550 covers all expenses during the two weeks of the course, including room and board on the mountain. Students will reside in Mount Wilson's famous "Monastery," home of resident astronomers since the days of Hale and Hubble.

Mount Wilson Observatory is the home of a group of telescopes that have, for

(Continued on page 12)

Report from the C.U. Continued

Planets are aplenty in March as we are treated to a beautiful planetary alignment. During the second half of March, all five visible planets, Jupiter, Saturn, Mars, Venus and Mercury, plus the moon will be on display in a beautiful arch across the sky from East to West during the early evening. The last time we saw planets like this in the skies above Victoria was April 2002. As the sun sets in the West, look above the horizon to see an orange "star" glowing in the sunset. This is the planet Mercury. Just up from Mercury, you will find the incredibly bright planet Venus glowing high above the western horizon. Just behind Venus, look for a reddish "star". This is the planet Mars. Saturn will be shining high in the South and Jupiter will be just above the horizon in the Southeast. Both Saturn and Jupiter will have a yellow glow to them. Thrown into this mix is the beautiful moon, which will appear to have close encounters with the planets through the last two weeks of March. Most notably, on March 25th the moon will appear to be only ¼ of a degree away from Mars. For more information on where to look for planets, please visit http://skyandtelescope.com/observing/

Spring is finally here! The Vernal Equinox takes place on March 19th at 10:50 p.m. local time. Equinox literally means "equal night". During an equinox, the lengths of day and night are virtually the same, 12 hours. After the Spring Equinox, the sun will continue to rise higher and higher in the sky and our days will get longer and longer until we reach the summer solstice.

Another sure sign of spring is the appearance of some of our favourite spring constellations. Look to the East at 8 p.m. to find Leo, the lion. A large backwards "question mark" is the head of the well-known lion. Just to the left of Leo, you will find the Big Dipper standing on its handle in the Northeast. Use the curve of the handle to "arc to Arcturus" a beautiful orange star hanging just above the horizon. Arcturus sits in the constellation Boötes, the herdsman. In the West, look for the winter constellations. The Pleiades, an open cluster of stars, will be shining just off the horizon. This patch of new, blue stars is just above the planet Mars. Beside the Pleiades, look for the V-shaped head of Taurus, the bull. The bright yellow star on the upper left-hand part of the "V" is Aldebaran, the "eye of the bull". Beside Taurus, high in the Southwest is our hunter, Orion. Look for his hourglass shape and belt of three stars. Just off Orion, high in the South, you will find his two companions, Canis Major and Canis Minor, the big and little dogs. The very bright yellow star just off Orion's left foot is the brightest star in our sky, Sirius. Sirius is the "nose" of the big dog, Canis Major. Just off the left "armpit" of Orion, Betelgeuse, is another bright star, Procyon. Procyon is part of Orion's little dog, Canis Minor. This is the constellation many children refer to as the "hot dog" as the two bright stars that make up this constellation look more like food than animal.

Clear skies and happy stargazing!
Cassie

NASA's Space Place

Deep Space Network 2-for-1 Sale!

Call it a "buy one, get one free" sale for astronomers: Build a network of radio dishes for communicating with solar-system probes, get a world-class radio telescope with a resolution nearly as good as a telescope the size of Earth!

That's the incidental bonus that NASA's Deep Space Network (DSN) offers the astronomy community. Designed to maintain contact with distant spacecraft in spite of the Earth's rotation, the large, widely spaced dishes of the DSN are ideal for performing a form of radio astronomy called "very long baseline interferometry" (VLBI).

VLBI produces very high resolution images of the cosmos by combining the output from two or more telescopes. The result is like having a giant "virtual" telescope as large as the distance between the real dishes! Since bigger telescopes can produce higher resolution images than smaller ones, astronomers need to use dishes that are as far apart as possible.

That need dovetails nicely with the DSN's design. To maintain continuous contact with deep space missions, the DSN has tracking stations placed in California, Spain, and Australia. These locations are roughly equally spaced around the Earth, each about 120 degrees of longitude from the others-that way at least one dish can always communicate with a probe regardless of Earth's rotation. That also means, though, that the straight-line distance between any two of the stations is roughly 85 percent of Earth's diameter-or about 6,700 miles. That's almost as far apart as land-based telescopes can be.

"We often collaborate with other VLBI groups around the world, combining our dishes with theirs to produce even better images," says Michael J. Klein, manager of the DSN Science Office at NASA's Jet Propulsion Laboratory. "Since our 70-meter dish in Canberra, Australia, is the largest dish in the southern hemisphere, adding that dish in particular makes a huge difference in the quality of a VLBI observation."

Even though only about 1 percent of the DSN's schedule is typically spared from probe-tracking duty and scheduled for radio astronomy, it manages to make some important contributions to radio astronomy. For example, the DSN is currently helping image the expanding remnant of supernova 1987A, and Dr. Lincoln Greenhill of the Smithsonian Astrophysical Observatory is using the

(Continued on page 8)

The Space Place Continued

DSN dishes to explore a new way to measure the distances and velocities of galaxies.

And all this comes as a "bonus" from the dishes of the DSN.

By Patrick L. Barry

Radio Telescope.

To introduce kids to multi-wavelength astronomy, NASA's website for kids, The Space Place, has just added the interactive demo, "Cosmic Colors," at spaceplace.nasa.gov/cosmic

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

Report from the Centre of the Universe

Hello everyone and Happy Spring!

I hope you all are enjoying this last bit of winter! March is proving to be a busy month at the Centre of the Universe. Our hours are still 10 am to 5:30 pm Tuesday through Saturday. Please join us in the daytime for great programs, especially during spring break!

The Centre of the Universe is excited to announce the arrival of our new Manager, Jacqueline Porter. Jacqueline comes to us from Ontario where she was a Cultural Development Officer for the Department of Canadian Heritage. She brings an extensive marketing and interpretation background! We are all looking forward to working with her! Should you need to get a hold of Jacqueline, please do not hesitate to contact the Centre at 363.8262.

We are proud once again to be apart of "Be a Tourist in Your Own Town"! This event lets you experience many Victorian attractions at a reduced cost. For more information, please visit
http://www.tourismvictoria.com/Content/EN/436.asp?id=1436

Come meet the Solar System!

The Centre of the Universe will be open on the evening of March 20th from 7 to 11 pm this month! This is a fabulous opportunity to check out all five visible planets in the skies over Victoria! Our evening will feature talks on the Solar System and different planets, crafts and other activities for kids and small telescope observation of each of the planets! It should be an excellent chance to view our neighbours! For more information, please give us a call at 363.8262 or visit http://www.hia-iha.nrc-cnrc.gc.ca/cu/saturn_e.html

The Sky This Month: March 2004 (All times and dates local to Victoria, BC)

March 4	Jupiter at Opposition (closest distance to the Earth, 662 million km)
March 6	Full Moon
March 13	Last Quarter
March 17	St Patrick's Day
March 19	Vernal Equinox: Spring officially starts at 10:50 p.m. local time
March 22	Moon near Mercury
March 24	Moon near Venus
March 25	Moon passes ¼ degree from Mars
March 28	First Quarter
March 29	Moon near Saturn

(Continued on page 10)