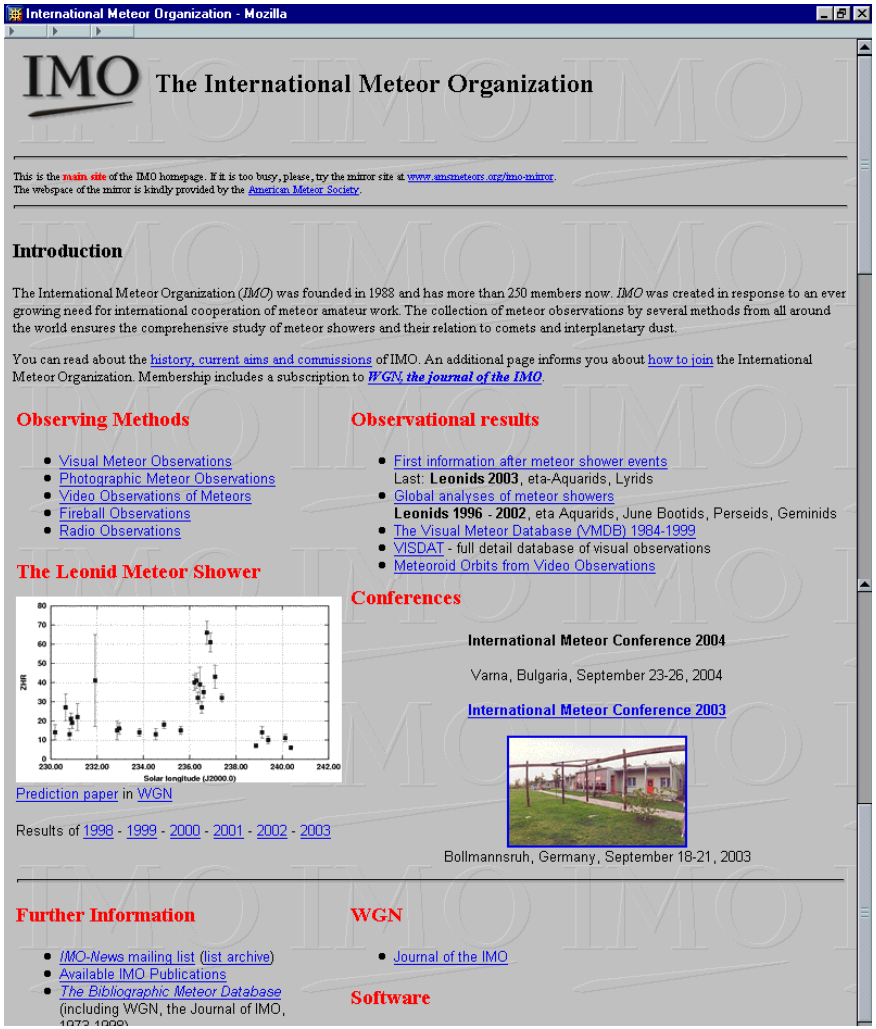
Web Page of the Month



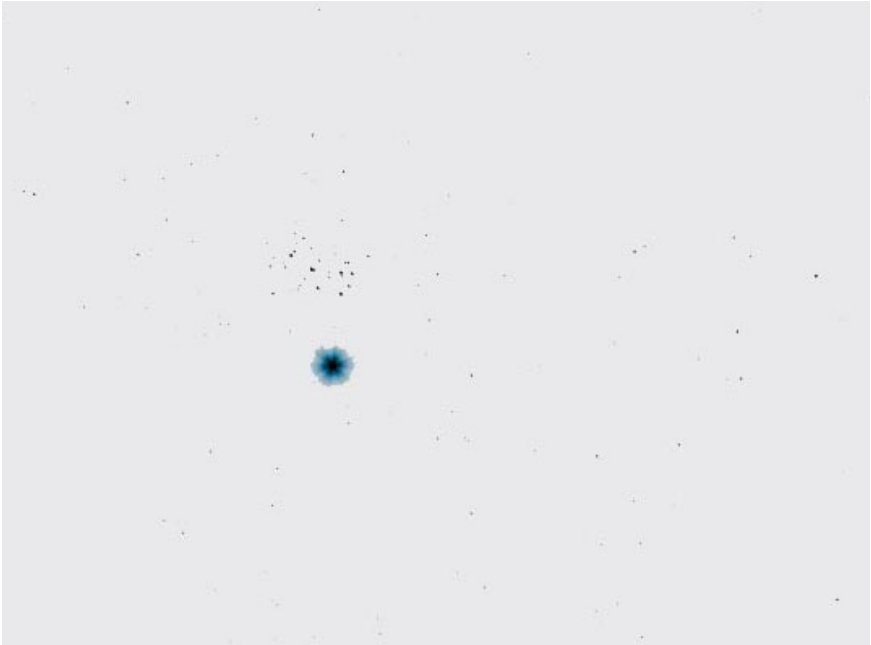
Get serious … or just learn more.

The International Meteor Organization has *the* definitive web site on meteor observing and information. Who knows, you may get hooked!

http://www.imo.net/

ROYAL ASTRONOMICAL SOCIETY OF CANADA • VICTORIA CENTRE

SkyNews



http://victoria.rasc.ca/

This Month at the Centre of the Universe

Meet Jacqueline Porter

Jim Hesser will introduce Jacqueline Porter, the new Manager of the Centre of the Universe. Jacqueline will talk about the Centre's programs and vision.

The Latest Science from Gemini by Jean-René Roy

Jean-René Roy is the Associate Director for Gemini North. He is also the Head of Science. He received his BSc in Physics from Université de Montreal in 1969 and his PhD in Astronomy from the University of Western Ontario in 1973. Between 1973 and 1977 he worked as a Postdoctoral Fellow at Caltech, at the Space Research Laboratory of the University of Utrecht and at the Herzberg Institute of Astrophysics. From 1997 until 2000, he was on the staff of the Physics Department of Université Laval in Quebec City, where he led the Astrophysics Research group for several years. His research interests include chemical build-up and mixing of the interstellar medium, the role of bars in the evolution of disk galaxies and the formation of massive stars in sub-critical regimes such as the extreme outer periphery of disk galaxies.

Address Change? Information Incorrect?

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ROYAL ASTRONOMICAL SOCIETY OF CANADA • VICTORIA CENTRE

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Ed Maxfield, Frank Ogonoski,
Blaire Pellatt, Colin Scarfe,
Rich Willis

New Members Liason:
Sandy Barta

This Month

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!

April 21

Back by Popular Demand

Every 3rd Wednesday
Astro Imaging at
Bill Almond's

354 Benhomer Drive
478-6718

April 23

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

May 12

May Meeting

7:30 pm
Room 060, Elliott Building, UVic

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'

Night Sky Continued from page 6

what that distance is.

An Astronomical Unit is the distance from our planet to the Sun. Multiply this distance by 8 to get an idea of just how long light takes to travel from planet to your eyes.

May 23 to May 29

And, then there's Comet LINEAR… On May 1, it was on the ecliptic near Pices' circlet, then it traveled down to hover near Sirius between the 22nd and 24th. Now it's moving away from us to fade away in June's Hydra. Your head must be spinning from trying to take it all in.

May 30 to June 5

While you're admiring all the Solar System objects, don't forget to take time to look at the constellations these objects float through.

President's Message

Now that April is here, it's time to make sure that your telescopes are ready for spring and summer observing. Weekend public observing at the Centre of the Universe is back, and this month we are meeting on top of Little Saanich Mountain to get to know the new Centre of the Universe staff and renew acquaintances with the other staff members.

Despite the usual mixed bag of weather that we had this past winter, I hope that few of our telescopes collected dust over that time, because the winter constellations contain many treasures. I know that many of us took part in the successful March 9 observing event at South Park School in James Bay.

Jupiter and Saturn put on dazzling shows over the winter, culminating in the March 28 triple shadow transit on Jupiter. That night in Fairfield the clouds covered Jupiter just moments after Ganymede's shadow joined Io's and Callisto's shadows on the disc of Jupiter. In that time and in the few moments afforded me by sucker holes in the clouds, I could find two but not three moons in my little ETX. Time for a stronger eyepiece, more aperture and fewer clouds!

Now we are focusing on Astronomy Day, which takes place Saturday April 24 at the Royal BC Museum from 10 a.m. to 4 p.m. This is our biggest public outreach event of the year, and we want to make sure that this year's event builds on the successful Astronomy Days we have had in recent years.

Astronomy Day is a lot of work, but it's work that leaves one with a feeling of accomplishment. Our reward is opening the eyes of many people to the wonders of the universe. I'm sure that in the crowds we see on Astronomy Day are future members of our centre and even a couple of future astronomers and perhaps space explorers.

Sid Sidhu, who is organizing this event with his trademark flair, is already mak-

(Continued on page 4)

The deadline for the next issue of Skynews is

April 25 2004

Get your Skynews early and in colour. Tell Lauri, our Treasurer, that you get Skynews on line and we won't mail you a copy.

President's Message Continued

ing sure that we enjoy the usual great Astronomy Day weather. The other important ingredient in our success is you. Please make sure that you volunteer to help out with this important day. You'll be glad you did.

We are also moving ahead on discussions about a permanent observing site for the Victoria Centre. Please make sure to let Dave Bennett and his committee know what you would like to have in an observing site. Dave's new email address is site@victoria.rasc.ca. Other committee members are Bruno Quenneville, David Lee, Sandy Barta and myself.

Chris Gainor

George Ball—on the Move!

George Ball donated his observatory to Victoria Centre recently, and it was our job to move the dome and all the equipment. Thanks to the dedication of our able foreman and Vice President Bruno Quenneville and his crew of RASC volunteers, this was accomplished. Despite choosing to move this equipment on the morning of April Fool's Day, everything went without incident!

A special thanks goes to Advantage Cranes (250) 920-9691 for providing the crane, owner/operator Steve Tidder, trailer and equipment to make this move go smoothly.

The observatory and equipment will be stored until the Centre decides what to do with this valuable gift. We are actively looking for an observing site, which may or may not house all or part of George's donation.

Cheers, Joe

Joe documented the observatory move—see the picture story on page: 11 & 12

Frank Ogonoski

Sid Sidhu

Bruno Quenneville

Chris Gainor

Upcoming Meeting

May and June and beyond

SteveCortin, RASC member, has prepared a visual presentation on Cosmology and Astronomy for the May 12th meeting.

Chris Gainor will talk on Mars at the June 9th meeting.

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.

Cover: Venus and the Pleiades

Bill's done it again — he has more images on Spaceweather.com. Check out the archives for April 5, 2004 and scroll down. Clicking on "Bill" will bring up the wide-view image below showing Venus, Mercury and the Pleiades. Clicking on "Weir" will bring up the image shown on this month's cover. Bill took these images on April 1, 2004 from Metchosin.

On the Move! Continued

How does it look?

Off balance. More work needed

So, how do we balance this thing?

Second lift a better balance

Clear of the back yard

Under the wires and over the hedge

Almost there ...

Safely on the truck

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	Lecture: History of Exploring Mars
2:00 - 2:45	Lecture: Formation of Stars and Planetary Systems
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**

The Night Sky

April 23 to May 1

I hope that you've been keeping track of this year's spectacular planetary showing. You've been doing true observing—the kind that goes back to humanity's roots. The skies aren't quite as dark and scary (well, people DO still think of the dark as scary and try to hide from it) but the sight of a handful of bright stars moving against a predictable tableau of never-changing stars probably helped bolster human-kind's intellectual and social growth. Keep up the good work!

The Moon waltzes past Venus, Mars (both on the 23rd), Saturn (the 25th) and then Jupiter (the 29th) in April's last week. Your pencil must be smoking from all the sketching you're doing.

May 2 to May 8

The planets just keep on getting better and better. Venus outshines everything in the night sky (except for the full Moon) and reaches her most dazzling on the 2nd. Take a look at her through a telescope—even a small scope will show her ever-so-thin figure. Very fashionable.

The Eta Aquarid meteor shower peaks on the 4th, but the Moon is full on the same night. Why don't you try observing the shower with your radio 'telescope'. Find a FM station that's just below your horizon, sit back in the comfort of your house (radio observatory) and count the meteors. April's 'Web Page of the Month' features an excellent starter to advanced resource to help you.

May 9 to May 15

Get out and try to spot Comet NEAT. As I write this, I'm not sure what you'll be able to see, but you should at least be able to find the comet in binoculars. Start looking for it early in the month near Sirius. By the 10th it will be very close to Procyon and continues up through the Beehive cluster on the 14th and 15th. Anybody up to the technical challenge of a Moon-comet image on the 16th?

By August, the fading comet swings through the Big Dipper.

May 16 to May 22

You've got Comet NEAT in your sights. Now cruise the plane of the Solar System—Mars and Saturn are just off to the West in Gemini. On the 14th, 15th and 16th, you could use Mars and Saturn as 'pointers' to find the comet. On the 21st and 22nd, the Moon's thin crescent hovers near these two planets. Mars is just over 2.2 Astronomical Units (330 million kilometres) away. Saturn is much further away at about 9.6 Astronomical Units away. Scan eastward to Jupiter and you're seeing the planet at a mere 5 Astronomical Units away. You could drop Saturn and his rings between your spot on Earth and the Moon. You tell me

(Continued on page 14)

Report from the C.U. Continued

showers throughout the year, the Lyrids offer a nice show in which we may see 10 to 20 "shooting stars" per hour. To view the Lyrids, head outside late on the 21st (or early on the 22nd) to a dark, open site. Lie on the ground with your feet pointed towards the East. Most of the meteors will be radiating from Lyra, a constellation that contains the bright star Vega. For more information, please visit: http://skyandtelescope.com/observing/objects/meteors/article_558_1.asp

Clear skies and happy stargazing!
Cassie

George Ball—on the Move!

More pictures and stories on our web site.

All text and photos by Joe Carr

Bruno putting the final touches on the bracing inside the dome

The first lift

Advantage Cranes, Steve Tidder

Lift a little higher ...

(Continued on page 12)

Report from the C.U. Continued

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

April 2	Moon near Jupiter)
April 4	Daylight Savings Time begins (most of Canada)
April 5	Full Moon
April 11	Last Quarter
April 19	New Moon; Partial eclipse of sun (not visible in North America)
April 21	Lyrid Meteor Showers (best after midnight
April 23	Moon near Venus and Mars just after dusk
April 24	Moon near Saturn
April 27	First Quarter
April 29	Moon near Jupiter

Planets and spring constellations are still filling our skies. Our days are getting longer and longer with the onset of spring and daylight savings time. See the web site of our sister institute, the NRC Institute for National Measurement Standards for more information about daylight savings time and if/when it takes effect where you live:
http://inms-ienm.nrc-cnrc.gc.ca/time_services/daylight_savings_e.html

Go outside around 9:30 p.m. once the sun has completely set for stargazing. In the west, the constellations we have been enjoying all winter are just above the horizon. Look for the v-shaped head of Taurus the bull next to Orion, the large hourglass grouping of stars. Mixed in with these winter constellations are some planets including Venus, Mars and Saturn. Venus is the brightest "star" you will see in the west and will be fairly close to the horizon. Just up from Venus, you will see a small red "star". This is Mars. Above Mars, the yellow "star" is the planet Saturn. The other bright yellow "star" high in the south is Jupiter. Throughout April, the moon will sit next to each of these planets. By using the above list, the moon may show you where exactly the planets are!

Look to the east to find Leo, the lion. A large backwards "question mark" is the head of the lion. Just to the left of Leo, you will find the Big Dipper standing on its handle high in the northeast. Use the curve of the handle to "arc to Arcturus" a beautiful orange star in the east. Arcturus sits in the constellation Boötes, the herdsman. From Arcturus, you can "spike down to Spica", a brilliant blue star in the constellation Virgo. Also, look for the "E" of Cassiopeia just off the horizon in the northwest.

Throughout the year we are treated to many meteor showers when the Earth passes through different trails of comet dust. Most people are familiar with the Perseid meteor showers in August and the Leonid meteor showers in November, but April has its own light show. Although not as prolific as some of the

(Continued on page 11)

NASA's Space Place

Sciencecraft

Probes that can distinguish between "interesting" things and "boring" things are vital for deep space exploration, say JPL scientists.

Along with his colleagues in NASA's Space Technology 6 Project (ST6), JPL's Steven Chien is working to develop an artificial intelligence technology that does just that. They call it the Autonomous Sciencecraft Experiment, and it's one of many next-generation satellite technologies emerging from NASA's New Millennium Program.

As humanity expands its exploration of the outer solar system (or even neighboring solar systems!) the probes we send suffer from two unavoidable handicaps.
First, commands radioed by mission scientists on Earth take a long time to reach the probe: six hours for the planned New Horizons mission to Pluto, for example.
Second, the great distance also means that data beamed back by the probe trickles to Earth at a lower bandwidth—often much less than an old 28.8 kbps modem. Waiting for hundreds or thousands of multi-megabyte scientific images to download could take weeks. And often many of those images will be "boring", that is, they won't contain anything new or important for scientists to puzzle over. That's certainly not the most efficient way of using a multi-million dollar probe.

Even worse, what if one of those images showed something extremely "interesting"—a rare event like a volcanic eruption or an unexpected feature like glaciers of methane ice? By the time scientists see the images, hours or days would have passed, and it may be too late to tell the probe to take a closer look.

But how can a probe's computer brain possibly decide what's "interesting" to scientists and what's not?

"What you really want is a probe that can identify changes or unique features and focus on those things on its own, rather than just taking images indiscriminately," says Arthur Chmielewski, one of Chien's colleagues at JPL.

Indeed, that's what Chien's software does. It looks for things that change. A mission to Jupiter's icy moon Europa, for instance, might zero in on newly-formed cracks in the ice. Using artificial intelligence to set priorities, the probe could

(Continued on page 8)

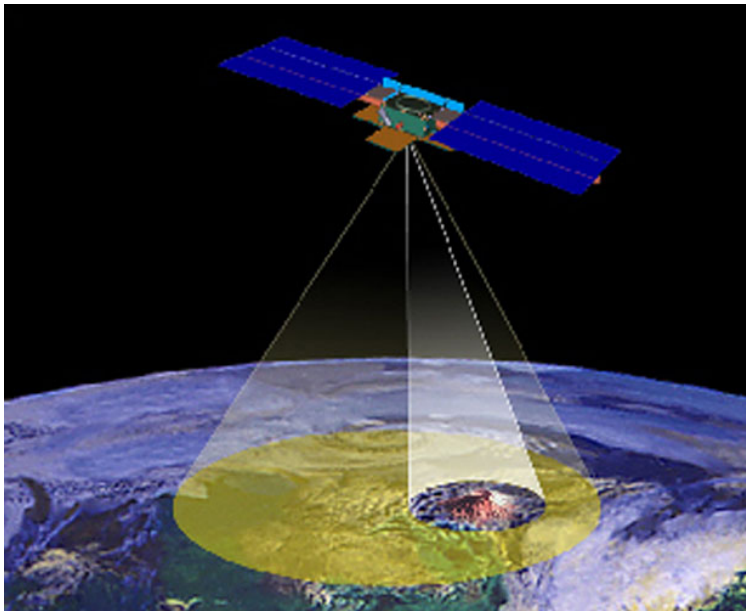
The Space Place Continued

capture a complete movie of growing fractures rather than a single haphazard snapshot.

Until scientists can actually travel to deep space and explore distant worlds in person, they'll need spacecraft "out there" that can do some of the thinking for them. Sciencecraft is leading the way.

Learn more about Sciencecraft at: nmp.nasa.gov/st6

By Patrick L. Barry and Tony Phillips



The Autonomous Sciencecraft technology that will be tested as part of NASA's Space Technology 6 mission will use artificial intelligence to select and transmit only the scientifically significant images

Kids can make a "Star Finder" for this month and learn about another of the ST6 technologies at: spaceplace.nasa.gov/st6starfinder/st6starfinder.htm

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!

I hope you all are enjoying this fabulous start to April! The weather has been warm and clear - perfect for astronomy.

The Centre of the Universe is now open daily from 10 am to 6 pm and on Saturdays until 11 pm for evening programming. This is the 86th year in which Saturday nights have been dedicated to the public on the historic 1.8 m Plaskett telescope which was once the largest research telescopes in the world. Please join us between 7 and 11 pm for guided tours of the telescope, small telescope observation, planetarium shows and talks in our auditorium. Some weeks, we will have guest lecturers from the Herzberg Institute of Astrophysics and other world class research facilities around the world!
For more information on the Plaskett Telescope, please visit:
http://www.hia-iha.nrc-cnrc.gc.ca/public/18_e.html

Astronomy Courses at the Centre of the Universe

Our seasonal courses are designed to give you a basic introduction to astronomy, with emphasis on the constellations, planets and deep sky objects visible in season. Designed to be both recreational and educational, our courses will be taught by Centre staff with help from members of the Herzberg Institute of Astrophysics and the Royal Astronomical Society of Canada. Courses will include multimedia instruction, guest speakers, and telescope observation.

Spring Skies

Cost: $89, $79 for season's pass holders

Dates: Tuesdays, 27 April, 4 May, and 11 May 2004, from 7 to 10 p.m.

Spring Skies places more emphasis on some of the spectacular deep-sky objects visible in season (galaxies, nebulae, star clusters, etc) and will also offer a user-friendly introduction to some of the big questions: the origins and future of the universe, the Big Bang, our place in this Universe and the possibility of life elsewhere.

Note: Our seasonal courses are intended to be complementary but may be taken independently; one is not a prerequisite for another. There will be some overlap of content between them.

Please call: (250) 363-8262 to reserve your spot, or to get more information. Courses are limited to 30 participants, so enroll early!

(Continued on page 10)