

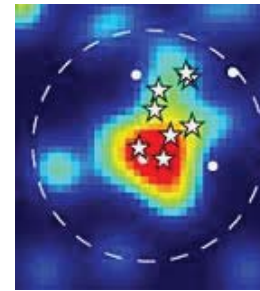
skynews



this month

Dr. Alan McConnachie **Dwarf Galaxies**

April 9, 2008, 7:30 PM, Elliott Lecture Theatre, Rm 060, UVic



Olympian Galaxy near Andromeda

Galaxies are thought to be formed through violent, dynamic processes, in which small galaxies form first and merge together to form larger galaxies. As such, dwarf galaxies occupy a unique niche in galaxy formation models, as the objects which were first to form. I will review our understanding of galaxy formation, with particular attention paid to the role of the dwarf galaxies. I will show how detailed observations of some of the smallest galaxies in the nearby Universe are contributing to our understanding of the formation of our home, the Milky Way galaxy.

Bio: Alan McConnachie received his Ph.D. in Astrophysics from the Institute of Astronomy at the University of Cambridge in 2005, for his thesis entitled "Satellites and Substructure in the Local Group". Since then, he has been a Postdoctoral Research Fellow at the University of Victoria, where he holds a prestigious Research Fellowship from the Royal Commission for the Exhibition of 1851. This is one of six competitive fellowship awarded yearly to citizens of the Commonwealth for self-directed research in any field of Science and/or Engineering. They were established in 1894 and previous recipients include 12 Nobel Prize winners, including Paul Dirac and James Chadwick. Alan's main research interests concern galaxy formation; in particular, he uses the resolved stellar populations of nearby galaxies as fossil probes to understand cosmological galaxy formation, evolution and the role of dark matter in these processes.



*on the cover***New Space Station Robot Asks to be Called "Dextre the Magnificent"****by Expedition 16 Crew, NASA**

Canadian designed and fabricated, Dextre was deployed last month to help build and service the ISS. As seen in the above picture, Dextre is truly a technological marvel, wielding long arms capable of handling both small tools and large modules with precision dexterity.

Upcoming Events

Monthly Victoria Centre Meeting - April 9, 7:30 PM, Elliott Lecture Theatre, Rm 060, UVic. Dr. Alan McConnachie, Postdoctoral Fellow in Astrophysics in the Department of Physics and Astronomy at the University of Victoria will speak on Dwarf Galaxies.

Sunday Sun Day - April 20, 12 noon to 2 pm, Gonzales Observatory. As part of his day job Scott Mair is hosting a drop-in solar observing event to celebrate the timekeeping history of the observatory. Any RASCals that would like to drop by with their telescopes would be very welcome.

Astronomy Day - May 10 at the Centre of the Universe. Exhibits on display from 10 am - 4 pm. Public observing from 7 pm - 11 pm.

Monthly Victoria Centre Meeting - May 14, 7:30 pm, Elliott Lecture Theatre, Rm 060, UVic. Speaker to be confirmed.

Monthly Victoria Centre Meeting - June 11, 7:30 pm, Elliott Lecture Theatre, Rm 060, UVic. Member's Night.

Celebrating Solstice - June 21, 11am - 2 pm, Beaver Beach - co-sponsored by CRD Parks and Victoria Centre.

Island Star Party - July 4-5, Hosted by our friends Cowichan Valley Star Finders; location is the Victoria Fish and Game Association, Malahat, BC.

RASCals Star Party - August 20-31, (tentative date) Hosted by Victoria Centre; location is the Victoria Fish and Game Association, Malahat, BC,

*President's Report***President's Message
April, 2008****Observatory Project**

Bruno and his volunteers are finishing the building phase of the project. The power panel is installed and is live, however some wiring still needs to be done. The automatic roof opener has been purchased, but not yet installed. We are very close to moving into our new observatory! Informal discussions regarding the best telescope to purchase are underway, however no decisions will be made until we hear about the status of our grant application from the BC Gaming Commission. Obviously a "yes" or "no" from BCGC will make a big difference to our budget for the coming year. The Paramount ME and computer systems are being worked on by the newly-struck Technical Committee. We continue to be under budget and on time for the Observatory Project, Thanks to our dedicated group of volunteers.

**Events**

The highlight of March has to be the success of the Night Sky Viewing in Fairfield held March 17th 2008, 6:30 pm to 10:00 at the Garry Oak Room, Sir James Douglas School and in the playgrounds nearby. We staged this public event in cooperation with the Fairfield Community Association. There were inside activities: telescope and binocular equipment demonstrations, audiovisual presentations relating to the night sky, as well as night sky telescope viewing outside. The weather didn't look promising in the late afternoon, but it cleared in time for this event! About 100 members of the public took this opportunity to enjoy the wonders of the night sky with telescopes provided by our members.

It won't be long before the star parties are upon us, so check out my President's Message for last month to read a handy listing, or refer to the Upcoming Events listing to be found in this edition of Skynews.

Simon Newcomb Award

"The Simon Newcomb Award is intended to encourage members of the Royal Astronomical Society of Canada to write on the topic of astronomy

for the Society or the general public, and to recognize the best published works through an annual award.”

I am very pleased to announce that Gary Seronik will be presented with the RASC Simon Newcomb Award at the upcoming General Meeting being held in Toronto in a few month’s time. Gary is a member of Victoria Centre and lives here, although his writing contributions to Sky & Telescope® magazine probably make his name better known to most of us. I would like to quote a few excerpts from the citation he will receive:

“Gary Seronik has authored numerous articles and books about astronomy since he began writing for Sky & Telescope® magazine in 1996. Gary has been a member of RASC since 1993, and is currently a member of Victoria Centre. An experienced observer and telescope maker, Gary joined the staff of S&T full-time as an associate editor in 1998. Astronomy has been a life-long passion for Gary — he began subscribing to S&T in 1973 when he was only 12 years old!

His knowledge of optics and equipment has served him well as editor of the magazine’s Amateur Telescope Making department and as a frequent contributor to S&T Test Reports. Gary has also encouraged many amateur astronomers to write articles for publication. Victoria Centre members have had the benefit of his mentoring to improve their writing skills, and he has largely been responsible for giving them the confidence to publish their work. Gary has taken time out of his busy schedule to participate in many star parties.



Any issue of Sky & Telescope® magazine or his books contain many examples of Gary’s excellent style of writing, which popularizes amateur astronomy to an exceedingly large readership. Gary never fails to present amateur astronomy as an exciting and rewarding pastime and vocation, and he encourages others to do the same.”

Congratulations Gary, from all members of Victoria Centre.

Tracking Wildlife from Space

by Patrick Barry

It’s 10 o’clock, and do you know where your Oriental Honey Buzzard is?

Tracking the whereabouts of birds and other migrating wildlife across thousands of miles of land, air, and sea is no easy feat. Yet to protect the habitats of endangered species, scientists need to know where these roving animals go during their seasonal travels.

Rather than chasing these animals around the globe, a growing number of scientists are leveraging the bird’s-eye view of orbiting satellites to easily monitor animals’ movements anywhere in the world.

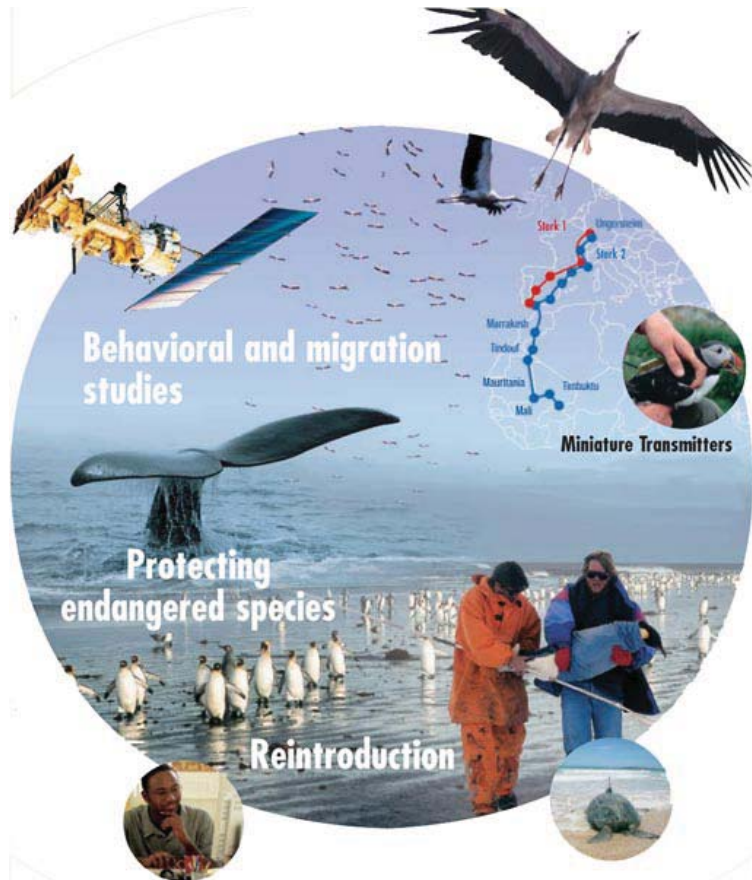
The system piggybacks on weather satellites called Polar Operational Environmental Satellites, which are operated by the National Oceanic and Atmospheric Administration (NOAA), as well as a European satellite called MetOp. Sensors aboard these satellites pick up signals beamed from portable transmitters on the Earth’s surface, 850 kilometers below. NOAA began the project—called Argos—in cooperation with NASA and the French space agency (CNES) in 1974. At that time, scientists placed these transmitters primarily on buoys and balloons to study the oceans and atmosphere. As electronics shrank and new satellites’ sensors became more sensitive, the transmitters became small and light enough by the 1990s that scientists could mount them safely on animals. Yes, even on birds like the Oriental Honey Buzzard.

“Scientists just never had the capability of doing this before,” says Christopher O’Connors, Program Manager for Argos at NOAA.

Today, transmitters weigh as little as 1/20th of a pound and require a fraction of a watt of power. The satellites can detect these feeble signals in part because the transmitters broadcast at frequencies between 401 and 403 MHz, a part of the spectrum reserved for environmental uses. That way there’s very little interference from other sources of radio noise.

“Argos is being used more and more for animal tracking,” O’Connors says. More than 17,000 transmitters are currently being tracked by Argos, and almost 4,000 of them are on wildlife. “The animal research has been the most interesting area in terms of innovative science.”

For example, researchers in Japan used Argos to track endangered



Grey-faced Buzzards and Oriental Honey Buzzards for thousands of kilometers along the birds' migrations through Japan and Southeast Asia. Scientists have also mapped the movements of loggerhead sea turtles off the west coast of Africa. Other studies have documented migrations of wood storks, Malaysian elephants, porcupine caribou, right whales, and walrus, to name a few.

Argos data is available online at www.argos-system.org, so every evening, scientists can check the whereabouts of all their herds, schools, and flocks. Kids can learn about some of these endangered species and play a memory game with them at spaceplace.nasa.gov/en/kids/poes_tracking.

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

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Observatory project

March 8, 2008 - steel pier in place

Work on the Observatory continued today with the arrival of our new powder coated steel pier. As reported earlier, the pier was custom made by Camosun College (Interurban Campus) staff and welding class. RASC member Mr. Geoff Jones took on this task and the results speak for themselves... a great 180 lb. fabrication that will serve the observatory for decades to come. Special thanks also to Rob Chalmers owner/ manager of Victoria Powder Coating for the final finishing of the pier, textured flat-black. In mid afternoon, Charles Banville and Bruno returned to site to begin the installation of the power and data conduit systems with the hope of completing the concrete infill this Sunday.



Again our dedicated members, Charles Banville, Michel Michaud, Bruno Quenneville, John McDonald and Geoff Jones were contributors today in helping us reach this long anticipated major milestone in the project's development.



Ham Radio for Amateur Astronomers at "Astronomy Cafe"

by Malcolm Scrimger

It was Monday March 10th 2008 and I had setup my portable Yaseu FT-897 to demonstrate Ham Radio to the "Astronomy Cafe" group. I wanted to make some ham radio contacts to show the group about radio and how the IRLP system (Internet Radio Linking Project) can reach other radio operators worldwide. IRLP is a VOIP (Voice over Internet) system that connects amateur radios over the Internet that can allow licensed ham radio operators in any country to communicate with simple small radios such as a VHF portable hand held radio. I chatted with various amateurs on the Western Reflector 9250 for about half an hour to 45 minutes. An IRLP reflector can be described as its name it reflects all VOIP data to nodes that have connected to it and can be simply thought of as an international ham radio party line.

I chatted with various amateur radio operators on the Western Reflector 9250 for about half an hour to 45 minutes. KL1KE Gode in Alaska, was the first to reply to my call and I explained to him that I was demonstrating ham radio to our local astronomy club. After that N5ZUA, Steve in Texas came on and said hello, AC0HW Richard in Colorado with many other amateurs that evening were pleased to talk with me. A gave



Chuck Filtness, Ed Maxfield with Malcolm's ham set-up at Astronomy Cafe

Chuck, keenly listening nearby the microphone and encouraged him to talk. He chatted with Richard for about five minutes as he seemed to be quite interested in astronomy.

“Astronomy Cafe” is a weekly Astronomy observing group get-together at the Fairfield Community Hall in Victoria B.C. This year on May 10th is Astronomy Day for the RASC and I am planning to setup a schedule for all radio enthusiasts that wish to chat about Astronomy on the Vancouver Reflector 9000 for the day hoping that other amateur astronomers from various other RASC Centres to join in on that day.

Next year is the International Year of Astronomy and the Westcoast Amateur Radio Association will be applying for a special event call sign to commemorate the International Year of Astronomy which is the 400th year that Galileo looked through an optical instrument at the stars. We hope that all Amateur Radio operators will be interested in using it starting in the New Year of 2009 through to the end of February. WARA is also looking to setup another Special Event call sign VE7IYOA for the duration of June to coincide with Field Day 2009.

observers group

RASC Victoria Centre and the NRC have signed a License to Use Land Agreement which gives members of Victoria Centre expanded access to NRC property on Observatory Hill.

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. More information on this program see: <http://victoria.rasc.ca>

observing highlight

Moon Mars Conjunction

On the night of April 11 (Dusk to 2 AM), the crescent moon slides just above Mars, with closest approach less than 12 arc minutes.

RASC victoria council

this month

monday nights

President/Website Editor/Email Lists

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New Member Liaison

Bruno Quenville
newmembers@victoria.rasc.ca

Astronomy Cafe

Fairfield Community Centre,
1330 Fairfield, Victoria
7:30-11pm
Call John at 250.480.0928 for directions and information. New comers are especially welcome. Come and enjoy!

**ASTRONOMY
CAFÉ**



second wednesday of the month

Monthly Meeting

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

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.