



ARISS/ AMSAT at Ottawa Fest

Lots of interest was shown for the ARISS/AMSAT display at the OARC Amateur Fest in Carp, just West of Ottawa, on Sept 12, 2009.

This time, we had the AMSAT banner up, and the ARISS display with CSA, AMSAT and ARISS handouts, which got picked up quickly by the many visitors to our booth.

Darin, VE3OIJ, our new team member on the ARISS-International Project Selection and Use Committee was along to help me handle the crowds. In the picture you can see three ARISS-I representatives. At the far left, myself, VE3VIG, in the center, behind the AMSAT banner is Darin, and seated is Ken Pulfer, VE3PU who is on the Public Relations Committee.

We responded to many inquiries about the ARISS program which resulted, through emails in the following weeks, in several follow-ups from schools regarding the application for an ISS contact. Visitors also came from outside of the Ottawa area.



Photo courtesy of Bob Baillargeon, VE3MPG

We informed visitors about the state of our fleet of satellites providing activity today, and the upcoming program for better satellites in the future, namely modular construction and software defined transceivers.

Part of our display was dedicated to a set up of basic equipment to work the Low Earth Orbit (LEO) satellites with minimum expenditure.

This exhibit was the object of a lot of interest as visitors inquired about the procurement of similar units and plans to build their own simple, portable satellite station. We even recruited some candidates for our satellite communications course.

A special visitor to our display was from the Cornwall UK region. Keith, G0WYS, is the secretary of

the Poldhu Amateur Radio Club. Poldhu is the location from which Marconi transmitted his first signal across the Atlantic to Signal Hill, Newfoundland on Dec 12, 1901.

Their club is located inside the Marconi Museum and Keith was wondering how to interest the public in the works of Marconi and Franklin, his assistant. I suggested that they set up an ARISS contact right at the Museum.

Then, later on, with their satellite equipment, we could make regular contacts via the satellites whose footprint would cover both our areas.

That certainly would be an interesting demonstration to compare with the early works of Marconi.

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The club's web site is hosted by
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www.ovmrc.on.ca

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147.300 MHz(+)

444.200 MHz(+)

Amateur Radio Exhibit

VE3JW

Web site:

<http://ve3jw.tripod.com>

Canada Science & Technology
Museum

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Keith visited our VE3JW exhibit station in Ottawa and we tested the HF path to Poldhu while their club was assembling for a reunion. Good signals both ways were reported, but around 3pm our time, the 20m band started to fade.

Nevertheless, HF would be another way we could coordinate our satellite contacts for their visitors in the earlier part of the day.

Our next outing will be on October 24, at the Montreal Fest, in nearby Longueuil, not far from the Canadian Space Agency. We expect to meet with another interesting group of people and spread the good word on ARISS and AMSAT.

Maurice-Andre Vigneault, VE3VIG
AMSAT Canada Delegate to
ARISS-International
ARISS-I Educational Outreach/
School Selection Committee

SCOUTS AND SPACE

Extraordinary first for an ARISS contact

Great moment for the ARISS team and amazing time for the more than 250 scouts assembled in the Ron Maslin Playhouse, just West of Ottawa, on October 3rd, 2009.

We started early to call out to the International Space Station that had just appeared at the horizon. We did not get an immediate answer so we kept on calling several more times. We could feel the tension



Photo courtesy of Larry Wilcox, VE3WEH



Keith GOWYS
in contact with Poldhu

Photo courtesy of Keith Matthew, GOWYS

and suspense rising after every call.

“This is NAISS...” resounded through the amplified speakers of the theatre, crisp, loud and clear as Canadian astronaut Robert Thirsk greeted everyone. We could feel a sigh of relief as the first scout was getting set to ask a first question. The quality of the audio remained excellent during the complete eight-minute pass.

At the third question, we thought that we would run out of time as Bob passed the microphone to Guy Laliberte, first Canadian “Space Tourist”, who expanded on a question. But things went so well that we ran out of questions and Steve and Lori had time for a quick chat with Bob and sending greetings to all other astronauts on board the ISS.



Robert Thirsk, VA3CSA

Photo courtesy of CSA

The ARISS Operations Team were at the site on the evening prior to the contact, setting up antennas on the roof, and radios, video and audio gear on the stage, inside. They finished the set-up in the morning. At around 1pm, the theatre was filling up with scouts in uniform, leaders, parents and guests, waiting for the 2pm contact.

At about a half hour to contact time, introductions were made and our audio-visual specialist, Claude Lacasse, presented an excellent show starting with Bob Thirsk on the large screen telling about his coming space endeavour of six months, followed by his send-off from Baikonur, docking with the ISS, a tour of the different modules comprising the ISS, and a demonstration of life aboard the Space Station.

Scout Leaders Malcolm Volmer and Karl Wagner were successful in gathering scouts from Eastern Ontario, some from Kingston and Cornwall, and some from Western Quebec, for this very special event which included two Canadians on board the ISS: Bob Thirsk from Calgary on his second trip in space and flight participant Guy Laliberte, Cirque du Soleil founder from Quebec City.

Here is the AMSAT News an-

nouncement about the contact:

“ARISS Contact with Boy Scouts of Canada”

On Saturday, October 3, Scouts of Canada in Ottawa, Ontario experienced an Amateur Radio on the International Space Station (ARISS) contact. Three hundred scouts and parents were present as Robert Thirsk VA3CSA answered questions about life and work in space. Thirsk turned over a few questions to Mr. Guy Laliberte, Cirque du Soleil president and spaceflight participant. Audio was fed into the EchoLink AMSAT and JK1ZRW servers. The ARISS contact was held in conjunction with the Scout Science Badge Award system.” End of AMSAT News announcement.

The Scouts organization had been working hard to obtain this contact, applying in Feb 2008, communi-



Attendance

Photo by Claude Lacasse

cating with all scouts groups in a large area, lecturing on the ISS, space travel, satellites and Amateur Radio. Not an easy task for such a spread-out group. Nevertheless, they managed to well prepare themselves as can be shown by the questions that they came up with.

Amongst the media present, here is how The Review, of VanKleek Hill, reported the event:

“Andrew Paterson, who works with the Voyager council of Scouts Canada said Laliberté’s presence was unexpected. “It was a moment in history. Never has anyone in these kinds of events been able to speak to two different people, let alone a private citizen in space. It was completely unprecedented,” said Paterson. “It was a historic event. What better to inspire the young people to pursue the fields of science?”

Mentor and Operations Team Lead-



Guy Laliberte

Photo from Wikipedia

er Steve McFarlane, VE3TBD, was supported by his usual crews of Steve VA3MGY, Geoff VE3KID, Radio Ops crew, Greg VA3ITB, and additional volunteer from the OVMRC, Sandy VE3HAZ, Antenna crew. Lori McFarlane was the presenter and the microphone control for the scouts. The main and backup radios were two IC-7000 transceivers graciously provided by the ICOM Company.



In the picture, on the left, Sandy, Steve, Geoff, Greg Standing, AMSAT Delegate, VE3VIG

Photo by by C. Lacasse

A very successful contact that went very smoothly due to the knowledge and expertise of the capable crew. Thanks to all those who have participated in the event and thanks to the Ron Maslin Playhouse for having made room for us in their very busy schedule.

Maurice-Andre Vigneault, VE3VIG
AMSAT Canada Delegate
ARISS International Working Group
ARISS School Selection Committee



Lori and Steve McFarlane, VE3TBD, Presenter and Mentor, and Scouts Clay and Cole MacWhirter of VanKleek Hill, ON after completing the ARISS contact.

Photo by The Review

QUESTIONS BY STUDENTS

Participants will ask as many of the following questions as time allows:

1. Can plants grow in space?
2. Now that you are an astronaut and fly into space, does everything else in your regular life seem easier to you?
3. Which do you like better, being in space or on earth?
4. Can you see storms on earth like the lightning?
5. What's it like being in space and weightless?
6. What is your job on the space station?
7. We have learned how space affects the human body. What's the biggest change you've noticed in yourself since you have been in space?
8. We have a space exploration badge. As part of the badge, can you describe what peaceful activities the space station can be used for?
9. What do you eat on the space station?
10. What is the hardest part of being an astronaut?
11. What advice would you give to a young person aspiring to become an aerospace engineer and/or astronaut?
12. Were you involved in Scouting and how many astronauts were Scouts?
13. When will it ever be possible for kids to go into space?
14. What does it feel like when you take off?
15. What is it like in orbit?
16. What kind of fun do you have up there?
17. How do you sleep in space without floating around?

18. When you're not working do you play chess or cards, and if so, how do you keep everything from floating around?

ARISS ON THE ROAD

ARISS was present at the Quebec City Hamfest in nearby St-Romuald.

On August 1, your AMSAT Canadian Delegate to the ARISS International Working Group set up a display and satellite communication demonstration station at the well-attended fleamarket. RAC Delegate to the ARISS-I WG, Daniel Lamoureux, VE2KA, came from Montreal to participate in the Hamfest.



As you can see in the picture, above is the ARISS display underlining the participation of AMSAT, NASA, CSA, RAC and RAQI, which is the French component of the Canadian Amateur Radio community. Most of the signs are in French and a folding pamphlet

was freely handed out explaining ARISS and AMSAT. The CSA also provided handouts, stickers and decals that were quickly snapped up. We are awaiting the AMSAT banner for our next outing.

On the right of the picture, is a display to demonstrate that you need not spend a fortune to work satellites. A camera tripod, an ARROW II antenna, a dual-band radio to counterbalance the antenna, and an ACER mini notebook showing the ORBITRON (freeware) program for satellite tracking completed the station. This set up drew a lot of interest and we pointed out the more sophisticated tracking program such as SatPC32 and NOVA, both available through AMSAT.

We even had a much simpler set up to work the ISS, the Easy Sat, and other FM satellites. A dual-band handheld, an extendible whip with gain, in this case the ANLI AL-800, and a PDA harbouring the "PocketSat" software was a good demonstration of how to get in to satellites at the very base level.

Interested visitors kept us busy and we did not see the time fly by. Our next stop, the Ottawa Hamfest in nearby Carp, Ontario, on September 12. We hope to have an enhanced display and more handouts that include the translation of the ARISS/AMSAT pamphlet. We will follow the fleamarket circuit as long as we are supplied with promotional material to let the word out on the ARISS program.

Maurice-André Vigneault, VE3VIG
AMSAT Canadian Delegate
ARISS International Working Group

**RAC Bulletin 2009-032E -
Military radiolocation system to operate on 70 cm.**
2009-10-07

Military radiolocation system to operate on 70 cm.

As described in Schedule I of RBR-4, amateur usage of the 430-450 MHz (70 cm) band is on a no-protection, non-interference basis. Amateurs may not cause interference to nor be protected from interference from stations licensed in other services operating in that band. The same is true in the United States, and amateur operations on this band in a number of areas of the United States have power limits imposed on them in order to avoid interference to radiolocation services operated by the US military.

Industry Canada has informed RAC that it has authorized the Department of National Defence to use a digital system called

Enhanced Position Location Reporting System (EPLRS) on these frequencies. The EPLRS system consists of mobile, fixed, transportable and airborne stations that use 5 MHz-wide spread spectrum channels to provide strategic telemetry information for military platforms. This authorization is on a no-protection, non-interference basis, which means that no new restrictions will be imposed on Canadian amateur operations in this band as a result.

Industry Canada has informed RAC that there is a slight potential for interference to amateur radio systems, typically in the form of a minor audible clicking noise. If Canadian amateurs encounter such interference, they are requested to report it to RAC at <regulatory@rac.ca>. The information reported should include the geographical location, date, time, frequency and mode being used by the amateur station, and a description of the interference.

Questions or concerns regarding the planned implementation of EPLRS may be sent to <regulatory@rac.ca>.

Richard Ferch, VE3KI
Vice President, Regulatory Affairs -
Radio Amateurs of Canada

**RAC Bulletin 2009-029E
- RAC HFBPC has a new name.**

2009-09-14

It is now official, a while ago, the RAC Board of Directors has approved a motion to change the HF Band Planning Committee name to LF/MF/HFBPC. This new name better reflects the range of frequencies that the committee is responsible for.

Jim Fisher, VE1JF, the Committee Chair indicates that the work the committee members are doing will not change much as they were already including those bands in their ongoing reviews.

73,

Daniel A. Lamoureux, VE2KA
Vice-President International Affairs
- Radio Amateurs of Canada

**OCTOBER MEETING
22nd, 7:30 PM.**

Guest speaker is Richard Brisson (Collector) with a presentation entitled "Cryptographic and Clandestine Tradecraft".



Amateur Radio on the International Space Station

ARISS is a volunteer program which inspires students, worldwide, to pursue careers in science, technology, engineering and math through amateur radio communications opportunities with the International Space Station (ISS) on-orbit crew.

Students learn about life on board the ISS and explore Earth from space through science and math activities.

ARISS is an international working group, consisting of delegations from 9 countries including several countries in Europe as well as Japan, Russia, Canada, and the USA.

ARISS is run by volunteers from the national amateur radio organizations and the international AMSAT (Radio Amateur Satellite Corporation) organizations from each country.

Since ARISS is international in scope, the team coordinates locally with their respective space agency e.g. ESA, NASA, JAXA, CSA, and the Russian Space Agency.

NASA schedules all ARISS contacts, which requires at least 12 months for completion. This allows students time to research and write their own questions.

For a direct contact with the ISS, usually, antennas are mounted on the roof of the school and radios installed in the gym. This allows the whole school to participate, as well as parents and guests. Medias are quite interested by this type of event.

A contact can also be done via telebridge with the help of a station located in the footprint of the ISS.

Teachers and schools in your area should be made aware of the ARISS program. You will find more details and the application form for an ARISS contact, students/astronauts, at:

<http://www.rac.ca/ariss/>



The Radio Amateur Satellite Corporation (AMSAT) plans, builds, and manages the launches and operations of our orbiting satellites.

The Corporation has several affiliates around the world. To name just a few: AMSAT-DL, AMSAT-UK, JAMSAT and, of course, AMSAT-NA. Many other countries have their own AMSAT unit and they all work together to see to the development and the advancement of our satellites.

2009 marks the 40th anniversary of the Corporation, which was founded eight years after the launch of our first satellite, OSCAR-1, in 1961,

We have covered quite a path, while remaining at the cutting edge of space communications. OSCAR-40 was the largest and most complex of our satellites.

We are now heading towards even more efficient satellites operating with the help of Software Defined Radios and modular construction techniques.

NASA has put their trust in our space ability by ordering a satellite to be placed in orbit around the planet Mars.

World AMSAT organizations participate in this task and the satellite is being put together at

the AMSAT-DL laboratories in Germany.

In order to continue this great thrust in space, and to insure our place in space communications, the Corporation needs your help.

Join AMSAT and participate in the evolution of space communication in this new program which the U.S. has named “Moon, Mars and beyond”, and benefit from the privileges of your membership.

To find out more, visit:
<http://www.amsat.org>

Your AMSAT Canada Delegate
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Satellite Communications Course
available free at VE3JW