AMSAT® The Radio Amateur Satellite Corporation

NEWS RELEASE

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Ham Radio Satellite To Be Released from ISS

Will Aid Student Learning in Classrooms Worldwide

SILVER SPRING, MARYLAND (AMSAT News Service)…After much effort and planning, a new satellite will soon receive a gentle push from a member of the International Space Station (ISS) crew that will send it into low earth orbit. The spacecraft, known as ARISSat-1, will add another dimension to science classrooms worldwide in addition to space communications for the amateur (ham) radio community.

The project is a cooperative effort between AMSAT, ARISS (Amateur Radio on the International Space Station,) RSC-Energia (The Russian Space Agency) and NASA. The design, development and construction of the satellite was done entirely by AMSAT volunteers. Original plans called for the satellite to be hosted inside an old Russian spacesuit. But when the suit became unavailable, the radio equipment was modified and re-fitted to a newly designed space frame. The new satellite was named ARISSat-1.

ARISSat-1 will carry many education-based features encouraging student interaction. For example, during the development of the satellite, students from around the world were invited to submit images and letters documenting their participation in science activities and projects. These submissions have since been processed and stored on a memory chip that has been attached to ARISSat-1 and which will fly along with the craft as it orbits the Earth. These student projects and photos can all be viewed at www.ariss-eu.org .

With a basic FM scanner or a VHF ham radio and a simple antenna, teachers and their students will be able to receive recorded messages, voice telemetry and television pictures from the satellite. The recorded messages include greetings sent in by students from all over the world. Each of the greetings includes a secret word and there will be a contest to see who can collect and identify all of them. The voice telemetry allows students be able to keep daily records of the basic health of the satellite including the temperature and battery voltage. This data can be used for a myriad of student classroom projects and activities. With it's four television cameras, ARISSat-1 will periodically snap photos as it orbits the earth. These photos will be sent using a Slow Scan TV (SSTV) format that can be decoded and displayed using free software available on the Internet.

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ARISSat-1 is also carrying a science experiment built by students at the Kursk State Technical University in Kursk, Russia. This experiment will measure the actual pressure of the earth's atmosphere in orbit. It will take measurements once a day for a complete orbit. The experiment data along with extensive telemetry information from the satellite itself, can be received using an SSB-capable scanner or ham radio receiver and free software available from AMSAT.

Students with access to an Single Sideband (SSB) ham radio receiver can also monitor the Morse code (CW) beacon. This beacon will transmit a variety of messages in Morse code including telemetry information. As an effort to encourage students to learn the code, ARISSat-1 will host a Morse code contest. In between messages, the satellite will periodically transmit the call letters of notable pioneers in ham radio space communications. There are lots of call signs so it will be a challenge to collect them all.

Finally, ARISSat-1 is equipped with a ham radio transponder for use by licensed ham radio operators. This can be used to demonstrate how ham operators on Earth can use a satellite to talk to hams in other parts of the world.

After it is deployed from the International Space Station, ARISSat-1 is expected to be operational in orbit for a period of up to six months. More information on the mission of ARISSat-1 can be found at:

ARISSat-1 Web site:	**www.arissat1.org**
AMSAT Web site:	**www.amsat.org**
ARISS Web site:	**www.ariss.org**
ARISS Facebook Page:	**Amateur Radio on the ISS (ARISS)**
ARISS Twitter site:	**@ARISS_status**

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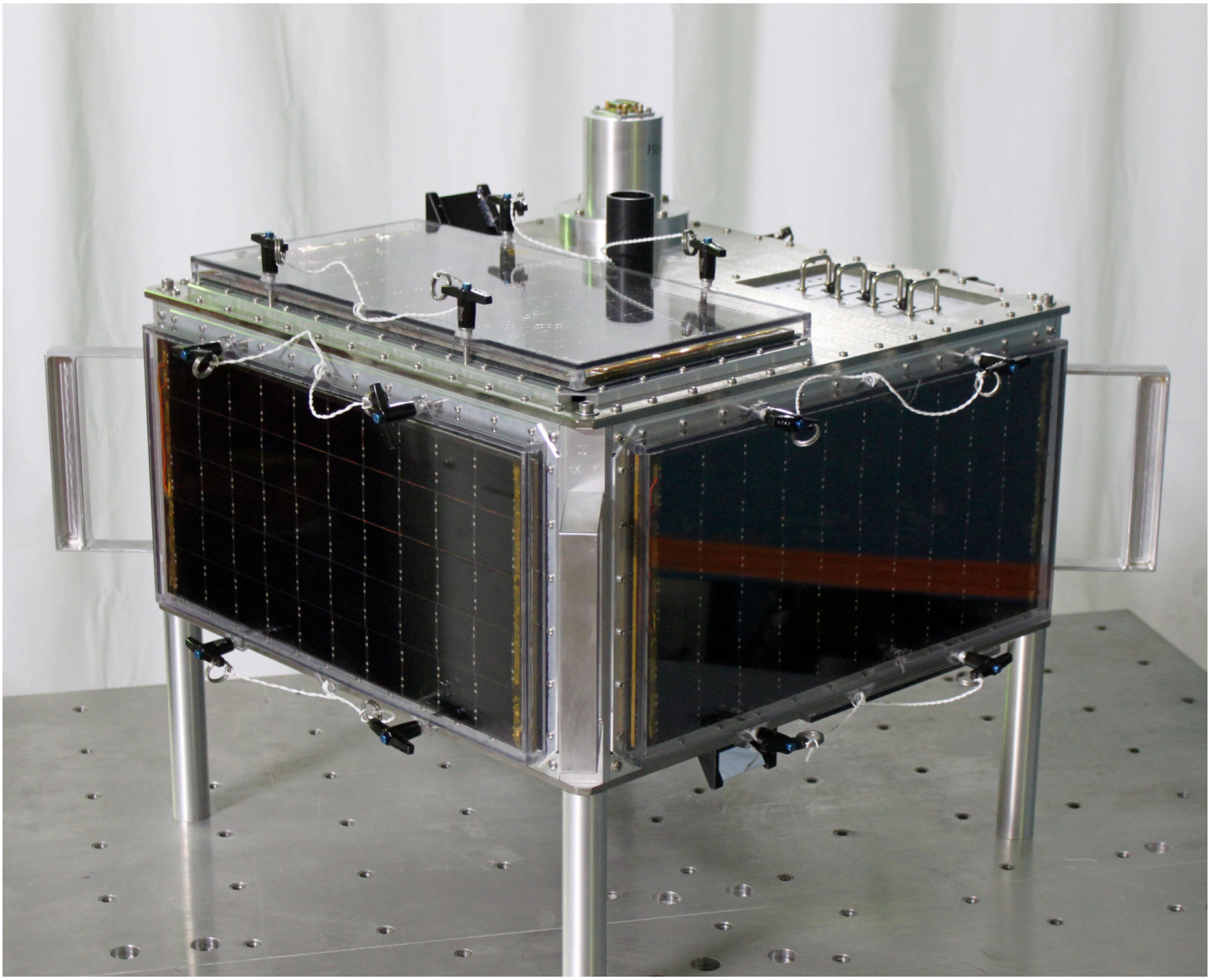
The Radio Amateur Satellite Corporation (AMSAT) is a non-profit, volunteer organization which designs, builds and operates experimental amateur radio satellites and promotes space education. We work in partnership with government, industry, educational institutions and fellow amateur radio societies. We encourage technical and scientific innovation, and promote the training and development of skilled satellite and ground system designers and operators. Our vision is to deploy satellite systems with the goal of providing wide area and continuous coverage for amateur radio operators worldwide. AMSAT is also an active participant in human space missions and supports satellites developed in cooperation with the educational community and other amateur satellite groups.

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 on-orbit crew. Students learn about life on board the ISS and explore Earth from space through science and math activities. ARISS provides opportunities for the school community (students, teachers, families and local residents) to become more aware of the substantial benefits of human space flight and the exploration and discovery that occur on space flight journeys along with learning about technology and amateur radio.



The ARISSat-1 Satellite assembled and ready for deployment from the International Space Station (Photo by David Jordan for AMSAT-NA)

More captioned photos are available on request.