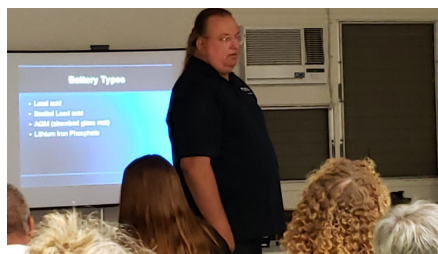


Big Island Amateur Radio Club Newsletter

August 2019

Next BIARC
meeting is at 2
p.m. Saturday,
Aug. 10, at Keaau
Community
Center.



**Jim Huntley, WH6FQI,
presents the July 13
program: "Ham Can."**

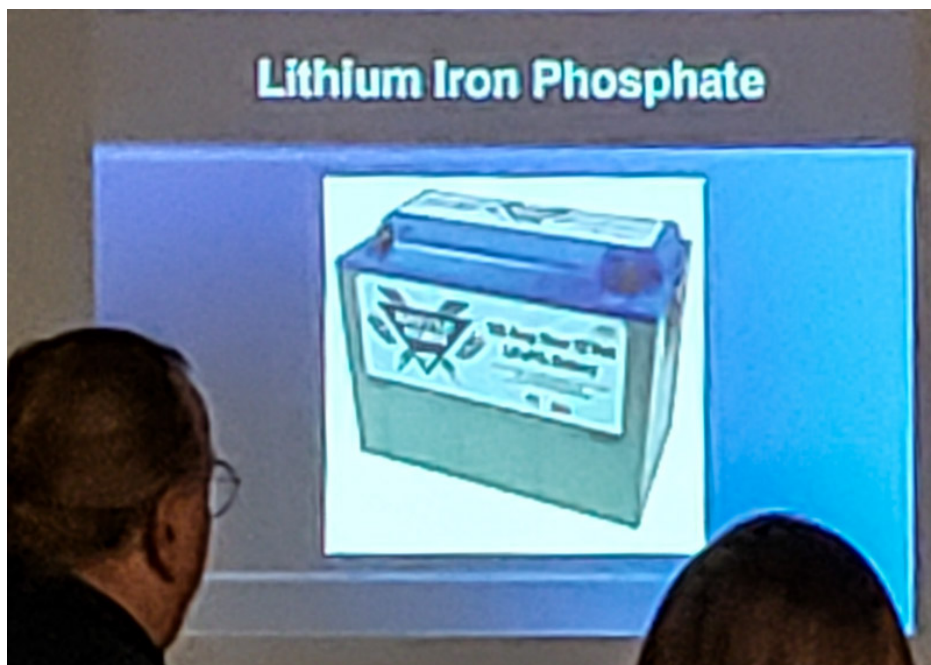
Tips for planning, packing personal backup 'Ham Can' for emergencies

President William Polhemus, NH6ET, convened the July 13 membership meeting shortly after 2 p.m. at the Keaau Community Center.

First up: a round of brief self-introductions, helping members to get to know one another better.

Roy Kunishige, WH6FYK, is helping Don Stribling, KH6DX, now on the mainland, find new homes for some of his high-tech ham equipment. Interested? Text Roy at 960-6417.

William reiterated the



**In using and researching battery types, Jim votes for
the lithium iron phosphate model as the best choice.**

good news that all of the issues we worried about regarding our Kulani repeater have been resolved.

"I'm really happy about all of that," he said. The club will be able to use the site for years to come, and the BIARC Repeater Committee is busy making

plans to upgrade the system.

William also gave an update on the current controversy prompted by a push in France to dedicate part of 2 meters to aviation. This proposal would only affect hams in Europe, with "no current threat to the 2-meter band in the U.S."

Such jockeying for position and control of the air waves illustrates one good reason to

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**Photos by
Linda
Quarberg,
WH6LQ**



BIARC members meet July 13 at the Keaau Community Center.

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be a member of ARRL, the American Radio Relay League, our advocate always on such fronts. And he recommends we donate to the Spectrum Defense Fund.

William said the BIARC Field Day in Hilo was terrific, and he thanked Roy and Tony Kitchen, WH6DVI, for spearheading the event.

A lot of people had a lot of fun at Field Day, he noted, adding that he is now hooked on FT8, needing only one more state to get his Worked All States certificate.

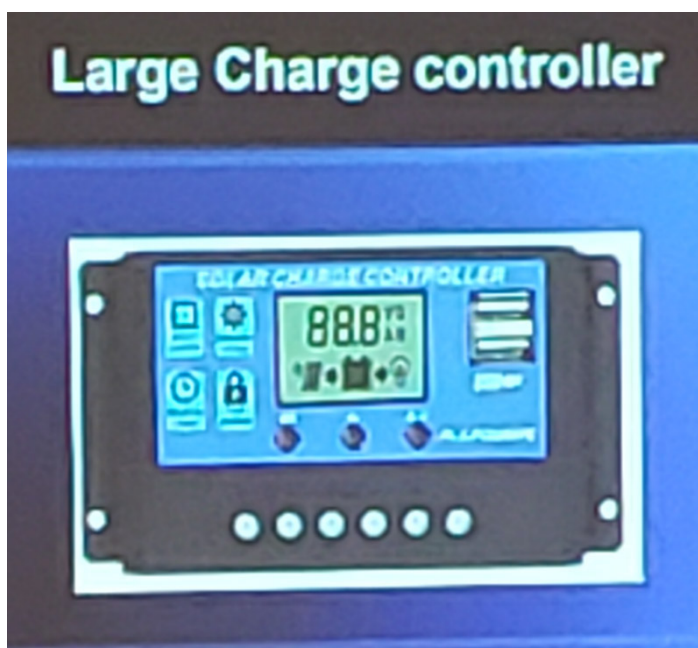
He announced that Roy has agreed to head the BIARC Operational Activities Committee.

William said there might be seats still available for the upcoming AUXCOMM conference in Kona. The event will be divided into two 10-hour days. Interested? Let him know.

He updated info on BIARC standing committees: Gary Schwiter, WH6EPS, will continue to serve on the Repeater

Committee (although technically filled, the committee still has room for others interested in helping); Operational Activities Committee has one vacant seat.

The program for the August meeting will be coordinated by Mel Uchida, KH6EKD, and will be a "tape-measure antenna-



An important element in a 'Ham Can.'

build" party. Mel passed around a signup sheet, so proper number of components can be ordered. Cost will be \$15 (\$10 for current

club member). Les Hittner, K0BAD, donated recycled venetian blind slats for the kits. The antennas will come in handy for September's annual

Grid Madness event.

BIARC has been asked to provide a new Skywarn coordinator for the Big Island, as the current coordinator is leaving the island. Interested? Contact William.

John Bush, KH6DLK, reported that a slow-speed CW net is in the planning stages. It

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Minutes of July meeting

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"should be a win-win situation," if it gets off the ground. Beginners could get the basics with Bob Gomez, KB6EGA, on his ground-level Thursday



June 8 pic of Pascal Nelson and Don Stribling by Gary Miller.

Ham gear needs new shacks

Roy Kunishige, WH6FYK, is helping Don Stribling, KH6DX, now on the mainland, find new homes for some of his high-tech ham equipment. Interested? Text Roy at 960-6417.

be big or small, depending on what your needs are. Of primary concern is having a source of power to charge all of your devices.

He focused on the various components which could be used and the ins and outs, attributes and/or drawbacks of different choices. Jim talked about battery types. For several reasons, he has determined the lithium iron phosphate battery is the best choice.

Jim chairs the BIARC Program Committee. He invites folks with program ideas to contact him or William.

During the meeting, BIARC's Volunteer Examiners conducted testing for FCC Amateur Radio licensing and upgrades in the adjacent room. The outcome: one new Technician and one

night training net. Those with some knowledge then can sign in to the slow-speed net (at a time and location yet-to-be-considered) and have fun sending and receiving messages in code.

Jim Huntley, WH6FQI, presented a program on "Ham Can," why you might want one and what to put in it.

Jim displayed and discussed his own Ham Can. Such a specialized tool box can



At the August BIARC meeting, Mel Uchida will coordinate a "tape-measure antenna-build" party.

In September, Tim Bryan will premiere his documentary on Oscar Resto's mission last year to the 50th state. Oscar, KP4RF, (above, with a Red Cross worker) was key in the vital ham response to Puerto Rico's devastating hurricane Maria.

upgrade to General.

September's meeting will feature the premiere of Tim Bryan's (KH6TOB) video on Puerto Rican ARRL section manager Oscar Resto's mission last year to the 50th state. Oscar was key in the vital ham response to Puerto Rico's devastating hurricane Maria.

Respectfully submitted,
Leigh Critchlow, WH6LC

The President's Paragraphs

Steps

That was one small step for (a) man, one giant leap for amateur radio operators.

On July 21 we celebrated the 50th anniversary of the Apollo 11 space flight, which first landed humans on the moon. This month I have heard many stories about amateur radio operators' contributions to the various programs which led to this incredible feat. Indeed amateur radio operators on our island, including at least one member of our club, were directly involved in these efforts.

In some cases, the love for radiosport led people to pursue the careers in which they supported the mission. In others, their love for the technology brought them to our hobby. Radio amateurs influencing technology and technology influencing radio amateurs; a trend which continues to this day.

Amateur radio operators actually beat Neil Armstrong to space by over five years. OSCAR 1, the first amateur radio satellite, was launched on December 12, 1961. Yup, five and a half years before the moon landing, amateur radio operators were launching operating spacecraft. This type of leading edge activity continues to be common among amateur operators.

Amateur radio has served as a gateway to the STEM careers so often talked about. These STEM opportunities are becoming increasingly important in our current world. I encourage each and every member to introduce the young people around them to amateur radio.



NH6ET

Doing so may profoundly influence their future.

In my single-digit years I was introduced to radio by an electrical engineer a few roads over. That first mic click ballooned into my STEM career.

You can do that for a young one near you.

In July a different kind of gateway opened for the amateur radio operators on the Big Island. The Hawaii County Civil Defense Agency sponsored a FEMA training seminar for Auxiliary Communicators -- known as AUXCOMM.

"Auxiliary Communicators" is how amateur radio operators serving in a disaster are known in the parlance of the Incident Command System. The skills conveyed in this class are many of the skills that will be expected by agencies who partner with the amateur radio community.

For Civil Defense to have brought the opportunity of this training to us is an honor. And, the club did not disappoint. Our membership dominated the roster. Those who attended were given the opportunity to display their competency. They did not disappoint.

By bringing this training to us, Civil Defense is signaling an acknowledgement of the value that the Amateur Radio Service brings to the table. This was a fantastic step toward building the types of partnerships that will enable our service to the community should the need arise.

There will be many more steps to take. But, just like the moon landing, the first step is the one everyone remembers. I thank Neil Armstrong and the Hawaii County Civil Defense Agency for theirs.

73,
William, NH6ET

Hawaii Space Flight Laboratory: S-Band and UHF Project

July 24, 2019 at 8:31 PM

From BIARC: To BIARC Listserve

The Hawaii Space Flight Laboratory wants to use some amateur radio frequencies in 2020 for communication with their Neutron 1 cube satellite.

They are asking the BIARC and other amateur radio clubs for letters of support from club boards, which they would use to support their application for a license from the FCC.

Please see the email below from KK4RNF for details. If you have thoughts about this, feel free to reply to this message (**on BIARC Listserve**).

**Tony Kitchen
WH6DVI**

Chair, BIARC Public Service Communication Committee

From: Craig Opie (opieca@hsfl.hawaii.edu)

Aloha,

My name is Craig Opie (KK4RNF) and I am involved with a project at the University of Hawaii.

We build small satellites for research purposes and send them to space. We are conducting an EMC evaluation of the 2400 to 2450 MHz Amateur frequency band. Our intention is to utilize this band for an upcoming small satellite mission slated for launch in Q1 2020. The frequencies we would need to use is a center frequency at 2.430 GHz with a bandwidth of 20 MHz.

We require approximately 10 minutes per day for data transfer and our satellite is going to be in orbit with the ISS. We will be coordinating with the amateur community here in Hawaii to let them know expected times the Satellite will be passing overhead well in advance.

We are expecting an EIRP of approximately 6 dBW from the spacecraft and approximately -160.6 dBW isotropic signal at the groundstation. Additionally, we have a redundancy communication method using UHF downlink at a center frequency of 435.0 MHz and bandwidth of 10 MHz and a VHF uplink at 146.0 MHz. We do not plan to use this as a communication method unless we have problems preventing our use of the S-Band.

What I am asking of your organization is to verify that we will not be interfering with normal HAM operations using these frequencies and bandwidths. I have drafted letters that anyone in on the board of directors for your club can sign and return, so that we can provide this to the FCC and IARU to gain a license for the satellites current communications configuration. This is a last minute change and without the approved license we will not be able to fly our satellite. I know this is not your problem, it is ours, but I hope that we can work together on this to accomplish a mission that is of great importance to the nation and progress of science. If you have questions, please feel free to call me (407)916-9576 or my colleague Isaac Rodrigues (808)462-8443.

**Very respectfully,
73, Craig Opie, KK4RNF**

Hawaii QSO Party

Aloha ARRL Members,

Alan (AD6E/KH6TU) passes on a reminder about the Hawaii QSO Party, some small rule changes and improved Internet links and log submission.

Great improvements by Alan and his HQP Team.

Kimo (KH7U) confirms the Koolau Amateur Radio Club will be operating KH6J from the KH6YY super station on Oahu and Lloyd (KH6LC) says his super station in Keaau is going to have a crew keeping the ionosphere warm.

For all Hawaiian hams:

Please save the dates:
Aug 24-25 for the Hawaiian QSO Party.

The HQP will run from 0400Z 24 August to 0359Z 26 August. Translated, that's 6 pm HST Friday through 5:59 pm Sunday. Work as many stations on as many bands and modes as you can.

Complete rules:
<http://www.hawaiiqsoparty.org/Rules/HQP/HQPRules-2019-A.html>

Report your score to
<https://www.3830scores.com/>

Please send in your log, no matter how big or how small, here:
<http://www.b4h.net/hqp/hqpsubmitlog.php>

Non-Cabrillo logs of any format may be emailed to me directly although

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Mark your calendars: Grid Madness 2019 set for Sunday, Sept. 15

Stan Froseth, AH6KO, event manager, announces that Hawaiian Islands Grid Madness 2019 -- the sixth annual running of the fun statewide event -- is set for Sunday, Sept. 15.

The popular VHF/UHF simplex event will run from 1300 to 1700 HST.

Everyone is invited, so put it on your calendar, says Stan. For complete info, go online to gridmadness.blogspot.com.

"Grid Madness is for all hams in the State of Hawaii. This event is designed for FUN, and to test your equipment, coverage and operating skills using simplex FM on 2 meters and 70 cm," says Stan. "Contact as many stations as you can in as many Grid Squares as you can, using SIMPLEX ONLY."

Grid Madness offers a great "Get on the air" operation for new hams and good emergency communications practice for responder groups.

"It's a fun activity for everyone -- see who you can contact locally or across the water."

New for 2019:

-- Madness Mitigation -- Additional designated channels on 2m and 70cm, with suggested use of calling frequencies.

For comments and questions, send a note to Stan at AH6KO@arrl.net.

Tech License course schedule

Doug Wilson's annual county-wide free Technician License course schedule wraps up in October. The six-week courses include five training sessions, with licensing exams given on the final week. The last session of the year begins Oct. 17 at the Keaau Community Center. The classes are free, with the normal \$15 testing fee to ARRL, whose VEs (volunteer examiners) conduct the testing for the Federal Communications Commission. As always, current licensees wanting to upgrade also may take tests for advanced licenses at that time. To register for the classes, or for more info, contact Doug, KH7DQ, at douscelle@aol.com.

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Cabrillo is much preferred.

The only change from last year is a new definition of the district boundaries which are based on zip codes. A map can be found here: http://www.mapability.com/ei8ic/maps/hawaii_qso_party_regions.php If you don't know exactly which area you're in, please let me know or just take your best guess based on the map.

Also, the KS and OH QSO parties will be running at the same time. There's no problem working those folks and logging them with the county names they give you assuming your logging program allows you to do that.

Or just log them by the state name KS or OH and ignore their sent county names. However, if you log their county names, you can also send a copy of your log to those QSO Party organizers.

Again, all digital modes are considered "digital" so there are three modes to use: CW, Phone, Digital.

Hopefully, the WX will cooperate and we'll have some excellent conditions.

*With Aloha,
Alan AD6E / KH6TU HQP Chairman*

*ARRL Pacific Section
Section Manager: Joseph Speroni,
AH0A
ah0a@arrl.org*

10-10 International Aloha Chapter

Local hams active on 10-meters encourage amateur radio licensees at all levels to join in the fun. [More info on the world of Ten-Ten is available on Facebook and at <https://www.ten-ten.org>]

Historic amateur radio contact via moon-orbiting satellite reported

A contact between radio amateurs in Germany and China took place on July 1 via the moon-orbiting LO-94 satellite, DSLWP-B, launched in May 2018.

The two-way exchange between Reinhard Kuehn, DK5LA, in Sorup, Germany, and Harbin Institute of Technology club station BY2HIT (operated by Wei Mingchuan, BG2BHC), in Harbin, China, occurred between 0551 and 0728 UTC, according to reports. The GMSK-to-JT4G repeater onboard DSLWP-B was used to make the contact, the first ever via a lunar-orbiting repeater.

"Using the GMSK-to-JT4G repeater is not easy, in terms of the signal power needed for the uplink," commented radio amateur and engineer Daniel Estévez, EA4GPZ, whose blog includes images of the lunar surface downloaded via DSLWP-B.

"There were plans to make a QSO between BY2HIT and Reinhard since many months ago, but previous attempts didn't work out. My congratulations to the people at both sides of the QSO, who have achieved it a month before DSLWP-B crashes against the lunar surface."

As Estévez explained it, the GMSK-to-JT4G repeater works by sending commands to the satellite that embed a 13-character message, using the same frequency and a similar protocol to the one that commands the camera and other satellite functions. He said sending a message in this fashion takes a little longer than 1 minute.

An open telecommand protocol allows radio amateurs to take and download images, and DSLWP-B transmitted images of the moon and Earth during the recent solar eclipse. DSLWP-B was launched as a secondary

payload with the Quequiao relay satellite as part of the Chang'e 4 mission to the far side of the moon. DSLWP stands for "Discovering the Sky at Longest wavelengths Pathfinder," and was designed to test low-frequency radio astronomy and space-based interferometry. The repeater uplink is on 2 meters and the downlink is on 70 centimeters.

FAA Reauthorization Act of 2018 changes recreational drone flying requirements

The FAA Reauthorization Act of 2018 includes changes to recreational drone flying in the US. Radio amateurs have used drones to inspect antenna systems and terrain and to carry support lines aloft, as well as for other purposes. The FAA considers those who fly their drones for fun as recreational users. The FAA Reauthorization Act of 2018 describes how, when, and where owners may fly drones for recreational purposes. These broad guidelines should apply to most Amateur Radio users of drones. For more information, read Advisory Circular 91-57B .

ARRL announces 'Happy 150!' Hiram Percy Maxim Birthday Celebration

This year marks the 150th anniversary of the birth of ARRL's first president and cofounder Hiram Percy Maxim (HPM), W1AW, born on September 2, 1869. ARRL will hold an operating event to celebrate HPM's legacy, getting under way at 0000 UTC on August 31, and continuing until 2359 UTC on September 8. The event is open to all radio amateurs.

The goal is straightforward: Contact as many participating stations as possible.

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W1AW and all ARRL members will append "/150" to their call signs during this event (DX operators who are ARRL members may identify as < call sign >/150, if permitted by their country of license.) Participating stations will exchange signal report and ARRL/RAC Section. DX stations will send signal report and "DX." Those taking part may use all Amateur Radio bands, excluding 60, 30, 17, and 12 meters.

Permitted modes: CW, phone (any voice modes), and digital. Submit Cabrillo log or ADI files. ARRL will calculate all final scores based on participants' uploads to the ARRL event web app (link not yet active).

The 84 available multipliers only count once. These include the 83 ARRL/RAC Sections (RAC Sections include the Canadian Northern Territories, encompassing VE8, VY1, and VY0) and DX. The W1AW operating schedule during this period may be adjusted as necessary to accommodate on-air celebration operating activities. Contacts with W1AW/150 will earn 3 points each. Contacts with any ARRL member will earn 2 points each. These stations will also identify as < call sign > /150. Contacts with nonmembers will earn 1 point each.

Participants can earn 150 bonus points by:

- Contacting W1AW/150 on each band and mode.
- Uploading entries (ARRL members only).
- Using social media to publicize this event and/or participation before, during, and/or after the event.
- Operating with 5 W PEP output or less throughout the event.
- Making at least 20 contacts while operating portable.
- Completing at least 150 contacts.

Online certificates will be awarded, and are available via download only. Updates and results will be publicized. There are no power or operator categories. Participating ARRL members who use Logbook of The World (LoTW) are encouraged to create a separate LoTW certificate for uploading <call sign> /150 contacts. Members then should upload logs for this event using their /150

certificates. Submissions must be via the online web app. No email or paper submissions will be accepted.

IARU president offers assurances regarding French 144 - 146 MHz allocation proposal

International Amateur Radio Union (IARU) President Tim Ellam, VE6SH/G4HUA, said his organization empathizes with the concerns of radio amateurs worldwide regarding a French proposal to allocate 144-146 MHz to the Aeronautical Service on a primary basis, essentially sharing it with Amateur Radio. The band is currently allocated to Amateur Radio on a primary basis around the world. Ellam recently offered assurances that the IARU is on top of the matter, which is still a regional issue, and is already working to keep the band in the hands of radio amateurs.

While the issue could end up on the agenda of World Radiocommunication Conference 2023 (WRC-23), a lot would have to happen first.

"There is a lot of misinformation circulating as to what the proposal is seeking and how IARU is responding to it," Ellam told ARRL. "While the proposal is a concern, petitions and the like, while well intended, are going to have very limited value and, in fact, may harm the steps being taken in the regulatory environment."

The French proposal, submitted in June to a pre-WRC-19 European Conference of Telecommunications and Postal Administrations (CEPT) meeting, included 144 - 146 MHz within a range of frequencies to be studied for future airborne, non-safety applications in the Aeronautical Service. Germany opposed the move, and IARU "objected strongly," Ellam said.

"Nonetheless, the proposal was carried forward to the next meeting of the CEPT Conference Preparatory Group in late August."

IARU anticipates that other countries attending the August meeting will oppose the inclusion of 144 - 146 MHz as a frequency range to be considered

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for the WRC-23 agenda, Ellam said. Since the June meeting, IARU Region 1 (Europe, Africa, and the Middle East) has asked its member-societies to contact their national administrations (i.e., governments) to explain the importance of the 144-146 MHz primary allocation, Ellam said.

"IARU is also taking other actions to make its views known to those involved in the proposal," he said. "If accepted as a WRC-23 Agenda Item, this proposal would require 4 years of studies by administrations," Ellam stressed. "Considering the challenges of sharing spectrum with aeronautical systems, it seems inevitable that the conclusion of such studies would be that sharing with a widely used part of the amateur spectrum presents too many problems to be viable." Ellam encouraged individual radio amateurs who want to help to become members of their IARU member-society. "If anything," Ellam concluded, "this recent news should serve as a timely reminder that defense of the amateur spectrum does not just happen. Your member-societies and the IARU constantly work at defending the amateur allocations."

ARISS-International meets in Montreal: Representatives of nine nations were on hand as Amateur Radio on the International Space Station (ARISS) held its 2019 "face-to-face" meeting of international delegates at the Canadian Space Agency in Montreal in June.

ARISS-Canada was the host for the gathering. A high point of the conference came when JVC Kenwood Software Manager Shin Aota, JL1IBD, presented two Kenwood TM-D710GA transceivers to ARISS-Russia delegate Sergey Samburov, RV3DR. One of the radios will replace aging

equipment on the International Space Station, while the other will remain on Earth as a spare for training cosmonauts. For more than a year, these radios have undergone rigorous NASA

qualification testing followed by final software configuration and verification.

"With today's transfer of the radios to ARISS-Russia, we are one step closer to an enhanced Amateur Radio system on board the ISS, supporting various operations such as SSTV, voice communication, APRS, and a variety of experiments," ARISS-International said.

Applications for the 2020 ARRL Foundation Scholarship Program will be accepted between Sept. 1 and Dec. 31. Applicants must be FCC-licensed radio amateurs. Some scholarships have such specific requirements as intended area of study, residence within a particular ARRL Division, Section or state, and license class. Get details on ARRL Foundation Scholarship Program page.

Educator Fred Cady, KE7X, SK: Educator, author and avid contester Fred Cady, KE7X, of Bozeman, Montana, died on May 16. An ARRL Life Member, he had just turned 77.

Cady was a professor emeritus of electrical and computer engineering at Montana State University. He coauthored "The Successful Ham Radio Operator's Handbook" with Vic DiCiccio, VE3YT. He also wrote several manuals on how to use Elecraft equipment.

First licensed in 1959, Cady earned a PhD in electrical engineering from the University of Canterbury in New Zealand, and was a senior member of the Institute of Electrical and Electronics Engineers (IEEE). He taught for more than 40 years and published five textbooks on microcomputers.

