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# B.V.A.R.A. QRM

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W3SGJ

March 2002

144.710/145.310 MHZ - 100 HZ PL

447.975/442.975 MHZ - 100 HZ PL

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## B.V.A.R.A. OFFICERS

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1.V.PRES.....N3GZZ Joe Streit  
2.V.PRES.....N3OJN Stan Riffle  
SECRETARY...N3SVM Bob Reid  
TREASURER...N3ALS Wes Morar

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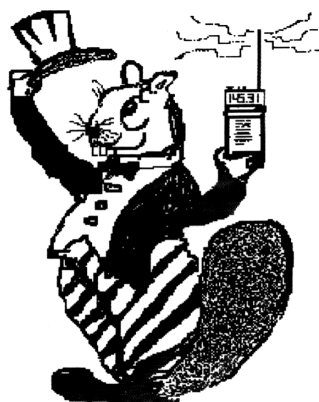
KB3EAQ.....Debbie Mehutcs  
N3GZZ.....Joe Streit  
N3OJN.....Stan Riffle  
N3ALS.....Wes Morar  
N3SVM.....Bob Reid  
WA3GFM...Al Belardia  
KA3SMF.....Dave Heim  
KE3ED.....Tony Petruccelli/Station Trustee

## NEWSLETTER EDITOR

N3NBJ.....Janet Petruccelli

## NEWSLETTER DISTRIBUTION

KB3EAQ....Debbie Mehutcs



## THE NET LIST

WPA CW NET.....7:00 PM DAILY.....3.585  
TRADERS NET.....7:00 PM MON & FRI 3.898  
HOSS TRADERS.....8:00 PM WEDNESDAY.3.910  
CALLOUS BOTTOMS...11:00 PM DAILY...3.912.5  
WPA PHONE & TFC NET...6:00 PM DAILY...3.983  
PA TRAFFIC TRAINING NET..6:30 PM...3.610  
E-CARS.....8:00 AM DAILY...7.255  
EAN NET.....2:30 PM DAILY..7.243  
RIP VANWINKLE.....7:00 AM DAILY..145.31  
B.V.A.R.A. 2 METER.....8:30 PM WED....145.31  
B.V.A.R.A. 10 METER...9:30 PM WED...28.370  
WPA TRAFFIC.....8:00 PM DAILY..146.88  
QCWA NET.....8:30 AM SUNDAY.147.03

VISIT THE B.V.A.R.A.'s WEBSITE AT:

[www.qsl.net/bvara](http://www.qsl.net/bvara)

If you have a submission for the B.V.A.R.A. QRM you may submit it to Janet N3NBJ by any of the following means.. E-mail: [ke3ed@arrl.net](mailto:ke3ed@arrl.net), Packet: [ke3ed@k3oiw.#wpa.pa.usa.na](mailto:ke3ed@k3oiw.#wpa.pa.usa.na), or typed in text format on floppy disk. Thank you.

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**CLUB MEETING**

The March B.V.A.R.A. monthly meeting will be held on Thursday the 14<sup>th</sup>, 7:30 PM at the Beaver Valley Emergency Operations Center, 250 East End Avenue, Beaver, PA. The planned guest speaker this month will be Paul Oliastro N3ZZI who is the ARRL DEC for Rapid Response in this section. Plan on bringing a friend.

**NWS SKYWARN TRAINING SESSION**

The Beaver Valley Amateur Radio Association will sponsor a Skywarn training session presented by Rich Kane from the National Weather Service on April 11<sup>th</sup>. This is an excellent opportunity to learn more about severe weather and what to do when it occurs. The National Weather Service uses Amateur Radio to collect weather data from spotters in the field when severe weather strikes. This training session will coincide with our April monthly meeting so plan on attending. The time, however, will be at 6:30 PM to cover all the necessary information. See you there.

**THANKS TO N3YEA**

Thanks to Jeff Leech N3YEA for visiting our February meeting and giving an impromptu discussion on his position as ARRL DEC for Western Pennsylvania. Jeff promises that he will be back for a more formal presentation and discussion of his responsibilities in the section. I know we'll all look forward to it.

**PRESIDENTS CORNER**

I want to extend my thanks to all who came to the February B.V.A.R.A. meeting. Especially to Jeff N3YEA for visiting our club meeting.

I am still working on the club T-shirts and will have some examples at our meeting in March. I have several designs under consideration and choice of colors. We intend to keep costs as low as possible.

Also planned is a bake sale in the month of April. Tentative plans are to set up at Ames Department store in Franklin Twp again. We have been quite successful in the past and hope to have another good showing.

Until then, see you at the next meeting!

Debbie KB3EAQ  
President

**FOR SALE**

The following equipment is being sold by Chris W3OUF and its proceeds will be donated to the Beaver Valley Amateur

**B.V.A.R.A. QRM**

Radio Association. If you are interested in any of this vintage equipment please contact Chris.

**VIKING RANGER TRANSMITTER**

75 Watt CW  
65 Watt Phone

7 bands: 160, 80, 40, 20, 15, 11, 10

Includes: Crystal Mic, Coax Ant Relay, some spare tubes & Manual

**HALLICRAFTERS SKY CHAMPION S-20R RECEIVER**

550 KC - 1769 KC

1.74 MC - 5.4 MC

5.3 MC - 15.8 MC

15.4 MC - 44 MC

Includes some spare tubes and Manual.

Interested parties should you contact Chris at 724-266-2866. Remember, proceeds benefit the B.V.A.R.A.

**ARISS PACKET SYSTEM TO BE UPGRADED SOON**

Normal packet activity with a real call sign should resume soon on the International Space Station. Amateur Radio on the International Space Station (ARISS) Board Chairman Frank Bauer, KA3HDO, says a new packet module sent up to the ISS last August will be installed by February 25.

Since Amateur Radio gear was installed on the ISS in 2000, the packet system--crippled with a dead RAM (random access memory) backup battery--has been operating in digipeat mode using the NOCALL call sign and other ROM (read-only memory) defaults. Earthbound users have been able to access the system nonetheless, but the lack of a call sign has been an annoyance.

Bauer said the new module, using the call sign RS0ISS, will employ a specially developed ROM programmed with standard ISS defaults, a new battery and an extended memory--up to one megabyte. The TNC also has eight-bit capability to support Russian Cyrillic typesets, and a one-minute timeout disconnect from the PMS if no pertinent packets are heard.

Although the mailbox function will be activated, hams are discouraged from using it. "Currently there is no computer hooked up to the packet module," Bauer explained. "In addition, the crew will be much too busy to respond to messages posted there."

ARISS packet radio frequencies will remain the same. The uplink is 145.99 MHz, the downlink is 145.80 MHz.

### **==>PRESIDENT BUSH ADDRESSES FLORIDA ARES NET**

President George W. Bush spoke January 31 via Amateur Radio to members of the Northern Florida Amateur Radio Emergency Service Net (NFAN). The president was in Florida to spotlight five volunteer groups for their value to the new Office of Homeland Security--among them the Volusia County Amateur Radio Emergency Service (ARES).

"I want to thank all the volunteers who help make sure that Florida is prepared for any kind of emergency," the president said in part, after checking in around 9:15 AM to a regular session of the 75-meter ARES net. "I want to thank you all for helping your communities be prepared."

Northern Florida ARRL Section Manager Rudy Hubbard, WA4PUP, said Bush spoke from a portable station set up at a Daytona Beach-area fire station. At the request of ARES Volusia County Emergency Coordinator Joette Barnett, KG4HPN, John Schmidt, AF4PU, and Clifford Fraser, KE4HIY, arranged to have the station ready as a demonstration of Amateur Radio's role in emergency preparedness and in the hope that Bush would be willing to address the 75-meter net. Hearing the president check into the net was a pleasant surprise, Hubbard said.

ARRL President Jim Haynie, W5JBP, said he was "extremely gratified" that President Bush recognized the valuable service Amateur Radio operators provide in times of emergencies. "I know that all hams in the United States stand ready to do their part in America's Homeland Security Program," Haynie commented. Haynie has said that defining Amateur Radio's role in homeland security would top his list of initiatives for his second term.

Hubbard said a copy of proposed expanded Amateur Radio antenna (PRB-1) legislation was given to the President and to the president's brother, Florida Gov Jeb Bush, for possible introduction in next year's Florida legislative session. "We Amateur Radio operators will volunteer however we're needed, and maybe it will be seen that we can greatly help the nation if we have the antennas we need," Hubbard commented. The proposed bill would seek to extend Florida's PRB-1 law to include private deed covenants, conditions and restrictions.

Bush's stop in Florida was part of a swing through the southeastern US, which also included stops in North Carolina and Georgia. The Daytona Beach event marked a rare appearance on ham radio by a sitting president. Former President Gerald Ford spoke via a ham radio satellite hookup in 1986.

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### **==>ARRL GOING TO THE MAT ON 70-CM BAND THREAT**

ARRL officials met recently with FCC staff members as part of the League's effort to stave off a band threat on 70 cm. ARRL General Counsel Chris Imlay, W3KD, and Technical Relations Manager Paul Rinaldo, W4RI, delivered an ex parte presentation to FCC Office of Engineering and Technology staffers on January 14. At issue was SAVI Technology's plan--already tentatively agreed to by the FCC--to deploy unlicensed transient RF identification devices between 425 and 435 MHz at much higher field strengths and duty cycles than Part 15 rules now permit for such devices. RFID tags are used to track and inventory parcel shipments.

"We told them that this was the worst possible choice of bands for these RFIDs," Imlay said. "Besides, there's no technical justification for that choice of frequencies." The request to use 70 cm has more to do with economics than technology, he said, because SAVI needs to bring down the cost of RFIDs in order to make a profit.

Imlay added that the ARRL would "do whatever it takes" to stave off the threat, including further direct appeals to FCC staff. The ARRL plans to file "strongly worded" comments on the SAVI petition by the February 12 comment deadline. Reply comments are due by March 12, 2002. Imlay said he was assured that SAVI's request "was not a done deal."

The FCC acted on the SAVI request last October in an FCC Notice of Proposed Rule Making and Order (ET Docket 01-278). The ARRL argued in comments filed last March that the field strengths and duty cycles SAVI proposed for its RFID tags as Part 15 "periodic radiators" were unreasonable and "would undoubtedly seriously disrupt amateur communications in one of the most popular of the Amateur Service allocations," particularly for weak-signal enthusiasts.

The League also believes the FCC lacks the statutory authority to permit the RFID tags under its Part 15 rules in the configuration SAVI has requested. The ARRL argues that under the Communications Act of 1934, such devices with substantial interference potential must be licensed. The ARRL also has suggested that SAVI pick one of the Industrial, Scientific and Medical (ISM) bands instead of 425-435 MHz.

The ARRL's January 14 ex parte presentation was complemented by an interference study prepared by ARRL Lab Supervisor Ed Hare, W1RFI, and ARRL Senior Engineer Zack Lau, W1VT. A copy of the interference study and more information is available on the ARRL Web site "Band Threats" page <<http://www.arrl.org/announce/regulatory/rm-1005/SaviExParte.pdf>>.

### **==>ARRL MEMBERS' DONATION TO HELP PRESERVE AMATEUR RADIO HISTORY**

A generous donation from an Amateur Radio couple from Dallas will support the ARRL's efforts to preserve ham radio's history. ARRL Chief Development Officer Mary Hobart announced the contribution from Barry Merrill, W5GN, and Judith Spencer Merrill, KA5PQD, this week. The Merrills are ARRL life members.

"ARRL is proud to acknowledge the Merrills' exceptional generosity in support of the Preservation of Artifacts Fund," Hobart said. "Their donation is dedicated to the conservation of the valuable books, papers and artifacts that define the history of Amateur Radio."

The Merrills' desire to contribute was prompted in part by recent exploratory efforts--primarily by ARRL Pacific Division Director Jim Maxwell, W6CF, and his wife, Trudy, KC6NAX--to assess and inventory papers, pamphlets, correspondence and photographs now stored in an attic room at ARRL Headquarters.

The Merrills said the recent discovery of very early correspondence and documents by the founders and early leaders of Amateur Radio "comprise a unique history that will be lost forever without archival preservation." They expressed the hope that the documentary materials one day might be made accessible to the public, at least in digital form.

The ARRL Historical Committee, chaired by New England Director Tom Frenaye, K1KI, says the Maxwells' efforts helped increase sensitivity to the historical importance and value of some of the items on display or in daily use at Headquarters. For their part, the Maxwells say the uncatalogued material in the attic was the tip of the iceberg of a possible historical treasure trove.

In his report to the Historical Committee, Maxwell emphasized the importance of moving the documents and photographs into a more friendly environment. The Historical Committee wants to be able to inventory and store as many of the documents and photographs as possible over the next few months.

Hobart invited other League members to join the Merrills in helping to conserve Amateur Radio's documentary history. "The conservation project supported so generously by Barry and Judy Merrill will take months, if not years," she said. "If you would like to join them in building the historical record of ARRL, we would be pleased to hear from you."

Contact Chief Development Officer Mary Hobart, mhobart@arrl.org; 860-594-0397, or send contributions to the Preservation of Artifacts Fund, c/o Chief Development Officer Mary M. Hobart, ARRL, 225 Main St, Newington CT 06111.

**==>ARRL FIELD DAY, AFFILIATED CLUB COMPETITION CHANGES ANNOUNCED**

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The ARRL has adopted rule changes affecting Field Day and the ARRL Affiliated Club Competition program. The primary Field Day change--effective with this year's event June 22-23--phases out the Novice-Technician station and replaces it with a new station category, the "Get-On-The-Air"--or GOTA--station.

A GOTA station is intended for operation by Novice and Technician operators or by generally inexperienced or inactive amateurs as well as by as-yet-unlicensed or "under-licensed" operators working under the privileges of a licensed control operator (third-party traffic rules apply--see the International Third Party Traffic page on the ARRL Web site <<http://www.arrl.org/FandES/field/regulations/io/3rdparty.html>>). Under the revised rules, any Class A Field Day entry operating at least two transmitters may include a GOTA station, which will not count as an additional transmitter for the purpose of entry category.

The GOTA station may operate on any Field Day band and mode, but only one GOTA transmitter may be in use at any given time. The GOTA station may complete up to 400 QSOs to be counted toward the group's total Field Day score. A Field Day group can claim 100 bonus points if its GOTA station successfully completes 400 QSOs. The GOTA station does not affect the additional VHF/UHF station provided under Field Day rule 4.1.2.

Field Day 2002 will mark the first in which stations throughout the Americas have been invited to participate. As approved at the July 2001 ARRL Board of Directors' meeting, all International Amateur Radio Union Region 2 countries--North and South America--may take part in Field Day starting this June.

Complete Field Day rules and information packet will be available on the ARRL Web Contest Forms and Rules page <<http://www.arrl.org/contests/forms>> in early February. Field Day 2002 pins and T-shirt may be ordered now via the ARRL Web catalog <<http://www.arrl.org/catalog/?category=&words=Field+Day+Pin>>.

Changes to the ARRL Affiliated Club Competition program also were included in the report of the Membership Services Committee (MSC), presented to the ARRL Board of Directors at its January meeting. In accordance with the advice of the ARRL Contest Advisory Committee, five specific affiliated club competition changes will go into effect November 1. Under the revised rules:

- \* The requirement that a member must attend at least two club meetings a year in order to be allowed to submit a score for a club in the unlimited and medium categories has been altered. The new rules will allow participation by "a member in good standing, as defined by the club."

- \* Medium and unlimited clubs now may define their club service area either as a 175-mile radius circle or as an entire

ARRL section. This change will allow clubs from larger states that encompass entire ARRL sections to compete with each other.

\* The percentage of operators who must be members of a club in order for the club to claim a score from a multioperator station has been reduced from 66% to 50%.

\* A station owner no longer must be a member of a club in order for a guest operator at the station to claim the score for that club.

\* Canadian clubs that are full Radio Amateurs of Canada affiliates now may participate in the ARRL Affiliated Clubs Competition.

These changes affect ARRL contests that include a club competition—January VHF Sweepstakes, the ARRL International DX Contest, the September VHF Party, the ARRL November Sweepstakes, the ARRL 160-Meter Contest and the ARRL 10-Meter Contest.

Complete rules for all ARRL-sponsored operating events are available on the ARRL Web site <<http://www.arrl.org/contests/announcements/>>. For more information, contact ARRL Contest Branch Manager Dan Henderson, N1ND, [n1nd@arrl.org](mailto:n1nd@arrl.org).

## **==>RFI COMPLAINTS, CITY COUNCIL INVOLVEMENT FRUSTRATE MICHIGAN AMATEUR**

Rob Underwood, W8YRB, says RFI complaints have him at his wit's end. The Wyoming, Michigan, ARRL member says his efforts to resolve some neighbors' complaints of stubborn interference are at an impasse. To add to his frustration, the Wyoming City Council now has asked the FCC to step in, and the situation has erupted into a media spectacle that, he says, hasn't done much for ham radio's image.

The FCC's position with respect to RFI to consumer devices is that the consumer device--telephone, stereo, TV or other appliance--most often is to blame, and that consumers need to deal with appliance manufacturers.

Underwood says he's gone the extra mile to resolve interference complaints, but one neighbor a half block away has become especially intractable, pinning blame for interference to her telephone and touch lamp squarely on him. The woman ultimately complained to the city council, which met January 21 and unanimously agreed to contact the FCC.

Underwood said city council members "threw their hands in the air, and most of them said it was my station that needed to be 'filtered' and didn't want to hear what my solutions were." Twenty one amateurs reportedly attended the council meeting on Underwood's behalf, and one Council member praised Underwood's attempts to assist and to educate everyone.

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Underwood said, however, that several other neighbors turned up at the session with new RFI complaints he hadn't heard before. He's volunteered to assist them. Underwood says media coverage has focused on the neighbors' complaints rather than on his efforts to respond to them.

The neighbor's touch lamp seems especially susceptible to RFI and even flickers when he keys his 100-W mobile transmitter while driving by her house, Underwood said. Although he installed some ferrite chokes on the lamp's power cord, the problem persisted. The neighbor has refused further offers of help.

Underwood reports that his own home is essentially free of RFI problems, with the exception of his cordless telephones when he runs his amplifier. He said he installed RF chokes on telephone equipment for his immediate neighbors who had complained of problems, and they have not reported any interference since.

Underwood has the full support of ARRL Michigan Section Manager Dick Mondro, W8FQT, who noted that the FCC Detroit Field Office was also aware of the problem and has been cooperating in resolving the issue.

ARRL provides information and resources to deal with RFI problems on the ARRL Web site's RFI pages <<http://www.arrl.org/tis/info/rfigen.html>>.

## **==>NEW RECORDS SET AT 241 GHZ AND 322 GHZ**

Contacts made in mid-December "on the ultra-highs" by microwave enthusiast Brian Justin, WA1ZMS, set new North American records on two bands that amateurs don't encounter routinely--241 and 322 GHz.

On December 15, Justin, operating W2SZ/4 in Virginia, made contact with Gordon Howell, WA4RTS/4, on the 322-GHz band "over a whopping distance of 0.05 km (about 164 feet)," he said. Both stations were located in FM07ji.

"I know it's not much as far as DX is concerned, but it's on par with DB6NT's 411-GHz DX record and is a North American first for the 300-GHz band, excluding light," he added.

About an hour later another QSO was made between W2SZ/4 and WA4RTS/4 on 241 GHz over a distance of 1.1 km (approximately 3609 feet). "This is a North American first for the band and a new NA record at the same time," Justin said.

Both contacts were made using modulated CW and wideband FM receivers. The power output on 322 GHz was estimated to be just a few microwatts, while the power on 241 GHz was measured at 0.75 mW. The stations were constructed of 80.6-GHz free running Gunn oscillators driving GaAs diode triplers. Both setups used homebrew six-inch parabolic dishes with hyperbolic sub-reflectors.

Justin said the next step is to phase-lock the Gunn oscillators to crystal oscillators in the future to permit using narrowband modulation, "thus resulting in better DX." WA1ZMS estimated that over the span of his ham radio career, he's operated at least once on every available Amateur Radio band.

## ==>ARRL UNVEILS ANTENNA MODELING COURSE

The ARRL Certification and Continuing Education Program soon will offer its first technical course--Antenna Modeling. Written by the well-known author and historian L.B. Cebik, W4RNL, and edited by ARRL Senior Assistant Technical Editor--and antenna guru--Dean Straw, N6BV, the course offers students a hands-on tutorial. Registration for Antenna Modeling (EC-004) will open Monday, February 11.

The course has been through extensive beta testing during the past several weeks, and even the experts found they'd picked up some new knowledge on the subject. "I've been modeling antennas using a computer for about 15 years, and I certainly learned a great many things in this course," Straw commented.

ARRL Certification and Continuing Education Program Coordinator Dan Miller, K3UFG, said the experts agreed that the best method to master the art and science of antenna design and analysis was to become familiar with the basic concepts of computerized antenna modeling and modeling software. "Using computer simulations--models--you will study the performance of a wide variety of antennas, without having to invest in a test range or a room full of test equipment," he said. "In this course, students will learn to master the basic techniques of constructing good models."

Several excellent and affordable antenna modeling software packages are available. The course will illustrate the elements of modeling antennas using two of the most popular packages based on the NEC-2 core--EZNEC 3.0 by Roy Lewallen, W7EL <<http://www.eznec.com/>> and NEC-Win Plus by Nittany-Scientific <<http://www.nittany-scientific.com/>>.

Beta testers offered positive feedback after completing the course. "What a gold mine of information!" said Dan Maguire, AC6LA. "I found myself looking forward to taking the next lesson just to see what new things I could learn." Former ARRL staff member Chuck Hutchinson, K8CH, also took a crack at the program. "Wow, I sure learned a lot about antenna modeling!" was his reaction.

Students will have up to 12 weeks to complete the course material. "There are 31 lessons, and you should plan to spend one to two hours per lesson," Miller advised. The inaugural class begins Tuesday, February 26 and wraps up Tuesday, May 21.

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A sample lesson based on the actual Antenna Modeling course is available on the ARRL Web site <<http://www.arrl.org/cce/sample-lesson/>>. Registration for the new Antenna Modeling course opens Monday, February 11, at 4 PM Eastern Time on the ARRL Course Registration page <<https://www.arrl.org/forms/cce/>>. The registration fee is \$80 for ARRL members and \$110 for nonmembers. Continuing Education Units (CEUs) are available for all ARRL C-CE courses.

Answers to most questions are available on the ARRL Certification and Continuing Education home page <<http://www.arrl.org/cce>> and the associated C-CE links. To learn more, contact ARRL Certification and Continuing Education Coordinator Dan Miller, K3UFG, [cce@arrl.org](mailto:cce@arrl.org).

## ==>FCC TO CHECK GETTYSBURG MAILROOM FOR ANTHRAX

The FCC says it's making arrangements to test for possible anthrax contamination at the off-site mailroom serving its Gettysburg, Pennsylvania, office. This week's announcement follows the suspension of US Postal Service deliveries to the FCC's off-site mail facility in Capitol Heights, Maryland, after "a scant amount of anthrax contamination" was detected January 29 during US Public Health Service testing. The Gettysburg testing would be "a further precaution," the FCC said.

The FCC's Gettysburg office deals with Amateur Radio licensing and enforcement matters, including vanity call sign processing. Since last fall's anthrax scare, the Gettysburg office has been providing special handling for its own incoming mail at an off-site facility.

Before arrangements were made for the offsite facility, some FCC-Gettysburg mail was sent to Washington for decontamination along with other FCC mail. Apparently waylaid in the process was mail containing paper Amateur Radio vanity call sign applications for the last couple of weeks in October, forcing the FCC to halt all vanity processing. The FCC reports it's been able to contact most vanity applicants and have them resubmit their applications. So far, the FCC has processed vanity applications received through October 22. (The FCC advises anyone who believes their paper vanity applications might have been affected and cannot locate the application on the ULS Application Search <<http://wireless.fcc.gov/uls>> should resubmit their application.)

There is no indication that the Gettysburg mailroom testing announced this week would further complicate or delay vanity call sign processing or the handling of applications filed on paper. Since last fall, the Commission has been urging everyone to file applications and documents via e-mail or fax whenever possible. Vanity electronic and paper applications have equal processing priority, however.

The Center for Disease Control this week completed follow-up testing of the anthrax trace discovered at Capitol Heights. The CDC reported to the FCC that the trace "showed a very slow platelet growth, which indicates a weak or very scant amount of anthrax consistent with cross-contamination of mail," the FCC said in a statement. As a result, the FCC said, it was making arrangements for the Capitol Heights mail processing area to be decontaminated and retested as soon as possible before permitting mail service to resume.

The FCC moved its mail reception, processing and screening center out of FCC headquarters in Washington, DC, to the Maryland facility after the initial anthrax contamination incident on Capitol Hill last fall. The FCC has been updating a "Fact Sheet" posted on its Web site.--FCC

### **==>MONTANA HIGH SCHOOLERS POSE TOUGH QUESTIONS VIA HAM RADIO**

Tough questions posed by a high school group required some thoughtful and detailed answers from astronaut Dan Bursch, KD5PNU, February 1 during a Amateur Radio on the International Space Station (ARISS) contact. Operating NA1SS, Bursch represented the ISS Expedition 4 crew during an interview with seven physics students at Butte High School in Butte, Montana. The Q-and-A session was the crew's second school contact arranged by ARISS—a cooperative effort of AMSAT, ARRL and NASA.

Student Oliver Huang wanted to know whether chemical reactions that normally precipitate on Earth do the same in microgravity, and whether bones heal the same in space as on Earth. Bursch explained that aboard the ISS, some chemical reactions work differently because the densities of various compounds cause them to mix in unexpected ways. "For example, hot air doesn't rise," he pointed out. As for broken bones, Bursch speculated that there might be a need to replicate the stress of gravity on a fracture in order to get broken bones to knit properly in microgravity.

Student Lori Stenson wanted to know how long an astronaut's oxygen supply lasted during a space walk. Bursch said it depends in part on the type of suit used, but for the Russian suits, the outside limit was about nine hours. "The actual limitation is not the oxygen but the lithium hydroxide that scrubs out the CO2," he explained. In response to another student's question, Bursch explained that the spacecraft is equipped with oxygen-scrubbing devices supplemented by fresh oxygen from Earth. "We do try to recycle as much as we can," he said.

In responding to a question from student Michelle Shannon about the detrimental effects of a lack of gravity, Bursch said he probably wouldn't notice them until he returned to Earth. The crew will spend about five and a half months in space.

Bursch and his crewmates Yuri Onufrienko, RK3DUO, and Carl Walz, KC5TIE, were passing over Australia at the time,

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and radio contact was made via Tony Hutchison, VK5ZAI. The contact marked Bursch's debut in handling questions from students via ham radio. Bursch reportedly already has done some casual hamming during his tour.

"This was absolutely fantastic!" enthused coordinating teacher Sandy Shuttey after the contact. "It's one of the best things we've ever done!" She said the event was a hands-on culmination several-months' study of space topics on the part of her students.

Since the first crew came aboard the ISS in November 2000, 40 schools and other educational institutions have made successful contacts via ham radio with ISS crew members. For more information, visit the ARISS Web site <<http://ariss.gsfc.nasa.gov>>.--Gene Chapline, K5YFL/ARISS

### **==>HAMS ASSIST AILING SAILBOAT PASSENGERS**

Amateur Radio operators have once again been instrumental in getting prompt assistance to sailboat passengers needing emergency medical attention.

On January 30, Marsha Stone, XE2/KF6TIQ, was scuba diving at 77 feet off Mexico when she encountered problems while surfacing. It's believed that she developed a pulmonary embolism as a result of the dive. She also was exhibiting possible neurological symptoms. Stone was aboard her sailboat She Wolf with three other passengers at the time, including her sister. Other amateurs sailing in the vicinity came to Stone's aid.

Members of the Intercontinental Net on 20 meters learned of the situation and offered to help. Bob Botik, K5SIV, in Austin, Texas, phone-patched Stone to her personal physician, who advised that she needed to get to facilities in Cabo San Lucas as soon as possible.

Meanwhile, aboard the sailing vessel Spirit Quest, Kathy Brownell, W6ATM, and her physician-husband Doug rendezvoused with Stone's vessel, and the couple was able to provide oxygen and comfort to the victim as well as transport to the Naval Landing Station at Socorro Island, Mexico, for an airlift.

Also rendering aid was Barb Campbell, XE2/KB0RIZ, a registered nurse aboard the sailing vessel Blue Chablis. Campbell's vessel reportedly stayed alongside Spirit Quest throughout the night to lend assistance when the victim's boat arrived at Socorro. The She Wolf and Spirit Quest maintained contact on marine VHF frequencies.

"This was a wonderful group effort of humans who had ham radio," Botik said.

Stone was transported to Cabo San Lucas the following day. Botik reported this week that he'd spoken to Stone and that her spirits were high. He said she had undergone treatment in

a hyperbaric chamber, and, as of February 5, was able to stand and walk without assistance. "She continues her recovery," he said.

On February 4 a woman identified as Miranda Middleton--an Australian national in her mid-20s--became seriously ill while aboard the sailing vessel Baggywrinkle in the Caribbean. Skipper Benjamin Shaw, KG4OAQ, got on 20 meters to seek assistance on the Intercontinental Net. Unable to copy Shaw well, Dave Franke, WA5EZW, alerted Ed Petzolt, K1LNC, in South Florida by telephone.

No stranger to dealing with maritime emergencies via ham radio, Petzolt contacted the US Coast Guard in Miami, which patched him through to its San Juan, Puerto Rico, station. The US Coast Guard in turn contacted Coast Guard officials in St Vincent and the Grenadines. Coast Guard detachments in the US and in the Grenadines came up on frequency, and Petzolt was able to relay information between the Coast Guard and Shaw's vessel as necessary.

Middleton was picked up by the St Vincent Coast Guard and was taken to Kingstown for treatment. "Score another one for ham radio!" Petzolt said. He noted that KG4BVR, W8LK and W3JMU and other stations stood by in case of problems.

Shaw said that when Middleton arrived at the hospital, she was experiencing numbness and partial paralysis. He added that she was doing much better following treatment.

Shaw expressed his gratitude to the amateurs who aided in Middleton's medical evacuation to St Vincent, and especially to Petzolt. "Miranda and I would like to extend a special thanks to Ed for his excellent help throughout the ordeal," Shaw said. "Not only did he assess and take control of the situation in a rapid and professional manner, but he also kept our spirits up as we communicated.

Shaw expressed the hope that he and Middleton could be back on their way to Trinidad "in a week or so." Shaw maintains a Web site <<http://www.baggywrinkle.com>> and uses HF to access his e-mail while under way.

#### **==>ARRL ASKS FCC TO DROP RFID RULES PROPOSED FOR 425-435 MHz**

The ARRL says the FCC "cannot legally proceed with the rules proposed for unlicensed RFID tags at 433 MHz," and it's asked the Commission to not adopt them. The League filed comments February 12 as part of its continued opposition to what it called "this ill-conceived proposal" of SAVI Technology to deploy unlicensed transient RF identification devices between 425 and 435 MHz at much higher field strengths and duty cycles than Part 15 rules now permit for such devices. The FCC appears inclined to agree with SAVI's proposal, but FCC staff members have told the ARRL that it's not a "done deal."

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"The level of interference from the devices permitted under the proposed rule is intolerable," the ARRL argued, citing its own interference study. The League reiterated its stance that the Communications Act of 1934 "is devoid of any authority to allow unlicensed devices with substantial interference potential; such devices must be licensed."

SAVI, the ARRL argues in its comments, "wants to have its cake and eat it too" by getting high power levels and lengthy duty cycles operating on a band heavily used by a licensed radio service that uses sensitive receivers "and all of the above on an unlicensed basis." Among other applications, RFID tags are used to track and inventory parcel shipments and vehicles.

The ARRL said the FCC's inclination to go along with SAVI Technology's proposal "eviscerates the periodic radiator rules, is vague and overbroad," and would permit digital RFIDs to operate "at unsuitable power levels and duty cycles." The result would be unacceptable interference that would "preclude or repeatedly disrupt amateur operation," the ARRL said.

The ARRL also said that the cost of the tags is a problem for SAVI, and the choice of frequency band is related only to the cost of components. The League said SAVI chose 433.9 MHz as an operating frequency because of the availability of relatively cheap components in Europe, where the 433.05-434.79 MHz band is available for industrial, scientific and medical uses in at least 10 countries.

The ARRL pointed out that deploying the proposed RFID tags elsewhere would make much better sense than 70 cm. "SAVI should seriously consider the frequencies around 868 or 915 MHz, which apparently stand at least some reasonable chance of global standardization," the ARRL advised.

The RFID rules proposed in response to SAVI's Petition for Rule Making last year "are flawed from their inception and should not be adopted under any circumstances," the League concluded. The ARRL has said it will "do whatever it takes" to keep the FCC from permitting the RFID tags on 70 cm. That could include further direct appeals to FCC staffers, Imlay has said.

The FCC included the Part 15 RFID proposals within a larger proceeding, ET-01-278, that's aimed primarily at reviewing and updating portions of its Part 2, 15 and 18 rules. A copy of the ARRL's comments in the proceeding is available on the ARRL Web site <<http://www.arrl.org/announce/regulatory/savi/arrl-savicmts-0.html>>. Reply comments are due by March 12, 2002.

#### **==>DIM LIGHT AT END OF TUNNEL IN VANITY HOLDUP**

Despite a rising level of annoyance among those awaiting Amateur Radio vanity call signs, the FCC remains at a



standstill in terms of resolving the current stalemate. No vanity call signs have been granted since February 1, when applications received at the FCC October 22, 23 and 24 were processed. The FCC subsequently realized that it needed further information for an October 23 application, and--at least for now--it has rescinded vanity grants for October 23 and 24.

Prior to late January, no vanity call signs had been issued since October 30. The ARRL estimates that some 1800 vanity applications now are in the FCC's processing pipeline--the majority of them filed electronically.

The current holdup stems from the fact that some mail destined for the FCC's Gettysburg, Pennsylvania, office last October was diverted to Washington, DC, with other FCC mail for anthrax decontamination. That mail, which included more than 100 vanity applications filed on paper, never got back to Gettysburg, where the FCC processes all vanity applications. Since the FCC's policy is to give equal priority to electronic and paper vanity applications, the whole process ground to a halt when the paper applications went missing.

Payment receipts were not lost, however, and using that information, FCC Wireless Telecommunications Bureau personnel in Gettysburg scrambled to contact known applicants via e-mail or telephone to have them resubmit copies of their vanity applications. That process was largely successful. Right now, it appears that only three vanity applications filed during the last couple of weeks of October remain outstanding. The FCC has been unable to reach the applicants via e-mail or telephone, however. Wireless Bureau staffers also have been dealing with similar issues involving date-sensitive applications in other radio services.

The FCC has been considering issuing a formal public notice with a cutoff date for outstanding applicants in the Amateur Vanity and in the other similarly affected FCC services to respond--a process that could take weeks. In the meantime, the ARRL has been assisting the FCC in efforts to contact the missing applicants, collect the necessary information and get it to the Commission as soon as possible. If that effort is successful, the vanity logjam could begin to break as early as next week.

Once vanity processing resumes, the FCC is not expected to process all of the remaining applications in a single batch. It's more likely that the processing would be spread out over a period of a few days.

Last week, the FCC said it was making arrangements to test for possible anthrax contamination at the off-site mailroom serving the Gettysburg office. The Gettysburg testing would be "a further precaution," the FCC said, and there was no indication that any anthrax was present at Gettysburg or that the testing would have any impact on the processing of any Amateur Service applications. Since October, the FCC has been urging all applicants to file electronically.

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### ==>MORE 5-GHZ SPECTRUM SOUGHT FOR WIRELESS NETWORKING DEVICES

The Wireless Ethernet Compatibility Alliance--WECA, an industry coalition--has petitioned the FCC for additional 5-GHz spectrum to make more room for radio local area network (RLAN) systems and other unlicensed Part 15 devices. The FCC put the WECA petition on public notice in late January, not long after it was filed. WECA seeks to extend the available spectrum to include 5.470 to 5.725 GHz. The Amateur Service now shares 5.650 to 5.925 GHz on a secondary basis with government and non-government radars and non-government fixed satellite uplinks. The ARRL plans to comment on the WECA proposal.

"Layering relatively high-power Part 15 users on 5.650-5.725 GHz would reduce the utility of the amateur allocation," said ARRL Executive Vice President David Sumner, K1ZZ. He said the amateur 5-GHz allocation already has suffered from earlier FCC actions. In 1997, the FCC allocated 5.150 to 5.350 GHz and 5.725 to 5.825 GHz for so-called Unlicensed National Information Infrastructure (U-NII) wireless local area network devices. In 1998, the Commission allocated 5.850 to 5.925 GHz for dedicated short-range communications (DSRC) systems in the Intelligent Transportation System.

WECA says the additional spectrum and proposed rule changes are needed to "accommodate the inevitable explosion of demand for broadband mobile wireless data systems." In its petition, designated as RM-10371, WECA asserted that extending the spectrum available for unlicensed Part 15 devices at 5 GHz can be accomplished easily and "without harmful interference to other primary users." The coalition proposed extending the technical rules now in place for U-NII devices at 5.25 to 5.35 GHz to cover the new frequencies.

Interested parties may comment on the petition using the FCC's Electronic Comment Filing System (ECFS) <<http://www.fcc.gov/e-file/ecfs.html>>. Click on "Search for Filed Comments" and enter "RM-10371" in the "Proceeding" field. Comments are due by the end of February.

### ==>ARRL FIELD & EDUCATIONAL SERVICES ANNOUNCES CHANGES

ARRL Field & Educational Services Manager Rosalie White, K1STO, has announced the creation of two teams to help streamline the department's varied support activities. White has named Steve Ewald, WV1X, to lead the new Field Organization/Public Service Team, and Mary Lau, N1VH, to lead the new Field & Educational Support Team. White said the new teams, announced February 8, will permit F&ES staff members with common goals to more easily share their expertise, ideas, and resources and better serve League members.

Ewald's Field Organization/Public Service Team will support the activities of field volunteers, who further ARRL objectives at the local and section level. Ewald thus becomes the primary contact person at ARRL Headquarters for Section Managers. He will continue as the League's expert on emergency communications, public service and the field organization. "Public service is one of the most important aspects of Amateur Radio and one of the main reasons why we enjoy the many frequencies we've been allocated," White said. Ewald's team includes Leona Adams and Linda Mullally, KB1HSV.

Lau's Field & Educational Support Team will work with field volunteers active in the education and recruiting of new hams, as well as provide support for ARRL-affiliated clubs and ARRL-sanctioned conventions and hamfests. F&ES also sponsors annual events, such as Jamboree On The Air, Kid's Day and School Club Roundup, and the ARRL's annual educator and technical awards. Lau's team includes Jean Wolfgang, WB3IOS, Gail Iannone, and Margie Bourgoins, KB1DCO.

White stressed that Amateur Radio education in arenas other than schools will continue to be a major focus, equal in importance to the support given to clubs, hamfests and conventions.

A Tennessee native, Ewald, 42, began his ARRL career in 1982. He currently edits the "Section News" and "Public Service" columns in QST, and is a frequent contributor to various ARRL publications. He was licensed in 1972.

Lau has been at ARRL Headquarters since 1986. She also serves as secretary of the ARRL Foundation. She's been a ham since 1985.

#### ==>IN BRIEF:

**\* Mystery satellite identified:** AMSAT News Service reports that a "mystery satellite" that had been transmitting frequency-modulated AFSK and CW on 144.100 MHz for several days was identified as MAROC-TUBSAT, an Earth-sensing spacecraft owned by the Royal Center for Remote Sensing—a Moroccan government agency. The satellite was placed into a polar orbit by a Russian launcher on December 10. When informed of the interference to amateur operations, the agency immediately shut down the 144.100-MHz transmitter. MAROC-TUBSAT also has a downlink at 436.075 MHz, which is switched on over North Africa and Europe when the control stations in Morocco and Germany are active. It has not been heard elsewhere. IARU Satellite Adviser Hans van de Groenendaal, ZS6AKV, is seeking more information from ARRAM--the Moroccan national radio society.--ANS via Ray Soifer, W2RS

**\* FCC converting ATINs to FRNs:** Acronym alert! Acronym alert! Everyone to get from street! (with apologies to the old movie, The Russians are Coming, the Russians are

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Coming!) The FCC is completing the conversion of Assigned Taxpayer Identification Numbers (ATINs) to Commission Registration System (CORES) FCC Registration Numbers (FRNs). ATINs were issued to amateur applicants--to clubs and to non-US citizens--who did not qualify for a Social Security Number, so they could register for the FCC's Universal Licensing System (ULS). The FCC issued most ATINs, but some were issued by a Volunteer Examiner Coordinator (VEC) or Club Station Call Sign Administrator (CSCSA). An FCC spokesperson said all ATINs should be converted to FRNs by mid-February. The FCC has discontinued the use of ATINs, since the CORES registration process provides an exception for club stations and non-citizens to obtain an FRN. The FRN then may be used to access the ULS, which incorporates the Amateur Service licensing database (among other services).

**\* Man injured installing antenna:** The Electrical Contractor Network <<http://electrical-contractor.net/>> reports that an Indiana man—apparently not an amateur--was critically burned when the antenna he was trying to install came in contact with an overhead power line. The account says that 21-year-old Steven Long of Brazil suffered third-degree burns over half his body in the incident, which also burned the tree to which he was attaching the antenna. When emergency workers arrived, they found the antenna draped across the power line, the tree charred from the fire and Long hanging onto a lower branch. Brazil firefighters had to wait for utility workers to cut power to the line before they could rescue Long. See the Electrical Contractor Network Web site <<http://electrical-contractor.net/ubb/Forum14/HTML/000146.html>> for additional details.--submitted by George Corron, AF4JH

**\* AMSAT-UK colloquium seeks papers:** The 17th AMSAT-UK Colloquium, set for July 26-28 at University of Surrey, Guildford, Surrey, United Kingdom, invites speakers to submit papers about Amateur Radio space and associated activities, both for the event and for the Proceedings, to be published following the event. Authors are asked to present their papers in person if possible. Offers of papers should be submitted as soon as possible; the final date for full documents to be received is mid-June 2002. Send submissions to Richard Limebear, G3RWL, [g3rwl@amsat.org](mailto:g3rwl@amsat.org), or to 60 Willow Rd, Enfield EN1 3NQ, UK. AMSAT-UK also invites suggestions for program topics. This year's Colloquium will include sessions aimed specifically at beginners to Amateur Radio satellite operating.--ANS via Richard Limebear, G3RWL

**\* Amateur Radio Emergency Communications Course registration:** February registration for the Level I ARRL Amateur Radio Emergency Communications Course (EC-001) opened February 4 and will remain open through the February 9-10 weekend. Registration for the Level II course (EC-002) will open on Monday, February 11; registration for Level III (EC-003) will open February 18. Courses must be completed in order, starting with Level I. To learn more, visit

the ARRL Certification and Continuing Education Web page <<http://www.arrl.org/cce>> and the C-CE Links found there. For more information, contact Certification and Continuing Education Coordinator Dan Miller, K3UFG, [cce@arrl.org](mailto:cce@arrl.org).

**\* Celebrate the sunspots at the 53rd International DX Convention:** Mark your calendars for the International DX Convention, April 26-28, 2002 at the Holiday Inn Visalia, California. This event attracts attendees and presenters from around the world, offering an opportunity to catch up on the latest DX events, such as Ducie Island and Logbook of the World, and perhaps catch a glimpse of new products before Dayton! With a full slate of programs plus vendors, a banquet, contest dinners, famous DX, friends and that famous convention patch, there's something for everyone. For more information, visit the International DX Convention Web site <<http://www.qsl.net/visalia2002/index.html>> or contact Don Bostrom, N6IC, <[n6ic@arrl.net](mailto:n6ic@arrl.net)>.

**\* ISS crew resumes normal activities following computer shutdown:** NASA reports that operations have returned to normal aboard the International Space Station after a computer crash. The crew's routine was interrupted the morning of February 4 when a main computer in the Zvezda Service Module unexpectedly went off-line, disrupting for a few hours the system that controls the spacecraft's orientation. The crew and flight controllers spent several hours correcting the problem. Expedition Four Commander Yuri Onufrienko, RK3DUO, and flight engineers Dan Bursch, KD5PNU, and Carl Walz, KC5TIE, have resumed their everyday activities--including working with the space station's science operations. NASA says the crew was never in any danger, but quickly powered down backup equipment and several experiments in case the power generated by the station's solar arrays began to drop. All station systems now are operating normally, and the computer is on line. Russian controllers continue to analyze the problem to determine its cause. Information on the crew's activities aboard the space station, future launch dates and times, as well as station sighting opportunities from anywhere on Earth, is available on the NASA Human Spaceflight Web site <<http://spaceflight.nasa.gov>>.

**\* Vote on QST Cover Plaque Award:** The winner of the QST Cover Plaque Award for January was Dick Stroud, W9SR, for his article "Six Meters from Your Easy Chair." Congratulations, Dick! The winner of the QST Cover Plaque award--given to the author of the best article in each issue--is determined by a vote of ARRL members. Voting takes place each month on the Cover Plaque Poll Web page, <<http://www.arrl.org/members-only/qstvot.html>>. As soon as your copy arrives, cast a ballot for your favorite article in the February 2002 issue of QST. Voting ends February 28.

**\* Correction:** A table of contents entry in The ARRL Letter, Vol 21, No 05 (Feb 1, 2002), was incorrect. W8YRB, a ham dealing the RFI complaints, lives in Michigan.

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**\* Field Day 2002 rules, packets now available:** The ARRL Field Day 2002 rules and packets now are available on the ARRL Web site <<http://www.arrl.org/contests/forms/>> as Adobe PDF files (ASCII files will be updated by next week). The ARRL has adopted rule changes affecting Field Day, including the addition of a "Get On The Air" (GOTA) station, which replaces the Novice-Technician station. Field Day 2002 will mark the first in which stations throughout the Americas have been invited to participate. All International Amateur Radio Union Region 2 countries--North and South America--may take part in Field Day, which takes place June 22-23 this year. For more information, contact ARRL Contest Branch Manager Dan Henderson, N1ND, [contest@arrl.org](mailto:contest@arrl.org).

**\* ARRL Headquarters closed for Presidents' Day holiday:** ARRL Headquarters will be closed all day Monday, February 18, for Presidents' Day. Headquarters will reopen Tuesday, February 19, at 8 AM Eastern Time.

**\* Amateur Radio Emergency Communications course registration:** Registration for the Level III Amateur Radio Emergency Communications course (EC-003) will open Monday, February 18, at 4 PM Eastern Time. Registration for the Level II ARRL Amateur Radio Emergency Communications course (EC-002) will remain open through this weekend or until all 50 seats are filled--whichever happens first. March registration for Level I will open Monday, March 4. Courses must be completed in order, starting with Level I. Thanks to tremendous interest in the Antenna Modeling course (EC-004), all available seats for the first classes have been filled. More than 100 people signed up the first day! As we add mentors to the list for this course, we will be able to offer more classes in the months ahead. To learn more, visit the ARRL Certification and Continuing Education Web page <<http://www.arrl.org/cce>> and the C-CE Links found there. For more information, contact Certification and Continuing Education Coordinator Dan Miller, K3UFG, [cce@arrl.org](mailto:cce@arrl.org).

**\* New satellites get OSCAR numbers:** AMSAT-NA's Bill Tynan, W3XO, has announced OSCAR designations for two new amateur satellites. PCsat will be known as NAV-OSCAR-44 (NO-44). PCsat is a 1200-baud APRS digipeater designed for use by amateurs using hand-held transceivers or mobiles. The spacecraft known as Sapphire has been designated NAV-OSCAR-45 (NO-45). Sapphire has 1200-baud AX.25 telemetry and a voice replay on 437.1 MHz. PCsat is a project of the Small Satellite Program within the US Naval Academy's Department of Aerospace Engineering, and Sapphire is a joint effort involving the Naval Academy's Small Satellite Program, Stanford University and Washington University at St. Louis. Both were launched October 1, 2001, from Alaska.

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