

---

---

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

---

W3SGJ

August 2001

---

144.710/145.310 MHZ - 100 HZ PL

447.975/442.975 MHZ - 100 HZ PL

---

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

PRESIDENT.....N3OJN Stan Riffle  
1.V.PRES.....KB3EAQ Debbie Mehutcs  
2.V.PRES.....N3GZZ Joe Streit  
SECRETARY...N3SVM Bob Reid  
TREASURER...N3ALS Wes Morar

## TRUSTEES/DIRECTORS

N3OJN.....Stan Riffle  
KB3EAQ.....Debbie Mehutcs  
N3GZZ.....Joe Streit  
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 & TCF.....6:00 PM DAILY...3.983  
ROOSTERS NET.....6:00 AM DAILY...3.990  
E-CARS.....8:00 AM DAILY...7.255  
COUNTY HUNTERS.....10:00 AM DAILY..14.336  
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...28.360  
WPA TRAFFIC.....9:00 PM DAILY..146.88  
QCWA NET.....8:30 AM SUNDAY.147.03

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

[www.geocities.com/the\\_bvara](http://www.geocities.com/the_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.

---

---

## Inside This Issue

---

- 1 Club News
  - 2 AO-40 gets new orbit
  - 3 Boy Scouts talk to ISS
  - 4 New Band – 60 Meters?
  - 5 And More...
-

**CLUB MEETING/CORNROAST**

The August B.V.A.R.A. meeting will be held at our annual Corn Roast on Thursday August 16<sup>th</sup> 6:00 PM. Location will be at Brady's Run Park, Shelter #10. Try to arrive early to help us "shuck" the corn, and don't forget a covered dish.

Corn "shucking" will start around 5:00 PM and our abbreviated meeting will be held immediately after dinner. Plan on enjoying evening of good food and good fellowship with us.

**BAKE SALE**

The B.V.A.R.A. will hold a bake sale at Ames Plaza located on RT. 288 in Ellwood City on Saturday August 4<sup>th</sup> from 9:00 AM until (?). The sale is headed up by Phyllis N3KUG and Debbie KB3EAQ. If you have any baked goods or donations for the sale please reach Phyllis at 724-846-6472 or Debbie at 724-758-4074. Any assistance would be much appreciated. Our last sale was quite successful. We'd very much like to exceed that this time. If you don't have anything to donate please come out and purchase something. Thank you

**HAMS NIGHT OUT**

Due to popular demand the "Ham's Night Out" dinners will resume in September. Several locations have been suggested and we hope to narrow that list down at the upcoming Corn Roast. Your input is requested.

**WEBSITE NEWS**

Dave KA3SMF tells us that the Club website is constantly updated. Recent additions include pictures taken at this years field day. If you have web access be sure to look us up on the net at [www.geocities.com/the\\_bvara](http://www.geocities.com/the_bvara). If you have any questions about the site or suggestions please contact Dave or email the club at [bvara22@hotmail.com](mailto:bvara22@hotmail.com).

**B.V.A.R.A. SPONSORED TEST SESSION**

The Beaver Valley Amateur Radio Association will sponsor an ARRL VE examination on Saturday August 4th, 2001 at the Community College of Beaver County's Aviation Science building located at 125 Cessna Drive, (Chippewa Twp.) Beaver Falls, PA.

Testing will start promptly at 10:00 AM so please plan on arriving at least 15 - 30 minutes prior. Walk-ins are welcome. Talk-ins will be on the 145.310 (W3SGJ) repeater. Use minus offset and 100 hz pl tone. Also you can see our exact location via APRS on 144.39 Mhz. Look for W3SGJ.

All candidates wishing to take a test should bring the following:

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

1. Two (2) forms of identification.
2. A pencil and a blue or black pen.
3. Your original AND a photocopy of your current license (if any).
4. Your original AND a photocopy of any C.S.C.E's (if any).
5. The test fee of \$10.00.

All classes of amateur radio license tests will be administered. CW tests will **NO LONGER** be multiple choice.

All Technician Plus operators licensed as such prior to March 21, 1987 should bring a copy and the original proof of this credit.

Candidates are welcome and encouraged to join us for breakfast at the Chippewa Brighton Hot Dog Shoppe at 8:00 AM. For more information contact Tony KE3ED at the following:

Packet: ke3ed @ k3oiw.#wpa.pa.usa.na  
 Repeater: 145.310 (W3SGJ) minus offset & 100 hz pl tone.  
 E-mail: ke3ed@bellatlantic.net  
 Phone: (724) 774-4173

**==>AMATEUR LF SIGNAL SPANS THE PACIFIC!**

A signal transmitted on 184 kHz from ZL6QH--the Wellington, New Zealand, Amateur Radio Club's Quartz Hill station--has spanned the Pacific. The transmission, part of a series of announced transpacific tests, was received on June 30 by Steve McDonald, VE7SL, of British Columbia, Canada.

"A claim is made for the confirmed reception of ZL6QH by VE7SL, on 184.4 kHz, over a path of 11,709 km," said Bob Vernall ZL2CA, who organized the ranspacific tests. "This is a one-way confirmation, as VE7SL does not have ransmitting capability." Vernall said that on June 30, seven New Zealand tations--including ZL6QH--and one Australian transmitted test signals in he 160-190 kHz band for the transpacific tests. Amateurs in New Zealand have access to that band.

Reception of weak LF signals typically is done using spectrographic software. McDonald used Argo software to capture the ZL6QH signal and very likely that of ZL4OL, although no claim was being made for the latter. The reception occurred right around the time of sunrise in British Columbia.

ZL6QH was transmitting dual-frequency CW with two-minute elements, one frequency representing dits, the other dahs. The ZL6QH station was running approximately 100 W into a longwire antenna.

Amateurs spanned the Atlantic in both directions earlier this year on 136 kHz. Efforts to make it across the Pacific on LF have been under way during the winter season in the Southern Hemisphere.

The ARRL has petitioned the FCC to authorize Amateur Radio allocations at 136 kHz and in the 160-190 kHz band. The petition is pending.

### ==>ASTRONAUT GREETES PARENTS DURING NEW MEXICO ARISS QSO

Astronaut Susan Helms, KC7NHZ, briefly greeted her parents via Amateur Radio June 27 before answering questions posed by youngsters visiting the New Mexico Museum of Natural History and Science in Albuquerque. The contact was arranged at Helms' request by the Amateur Radio on the International Space Station--or ARISS--program.

"Hi, Mom, hi Dad!" Helms said to her parents, before turning to the youngsters' questions. Patrick and Doris Helms live in Albuquerque and serve as volunteers at the museum.

It took several calls to raise Helms at the NAISS mike aboard the ISS. Once contact was established, however, she reported being able to hear the Earth station's calls for two or three minutes before NAISS was heard on the ground. Jerry Schmitt, KK5YY, who set up the Earth station, said part of the museum building was in the signal path. Joe Huffman, KG5GM--also a museum volunteer--was at the mike of the Earth station to establish the initial contact.

Seven third, fourth and fifth-graders--all enrolled in the museum's Space and Astronomy Day Camp--stood by with their questions in hand. Given the tardy start and a mid-QSO change in frequency, not all youngsters had a chance to ask their questions, however. Elementary pupils from a nearby school also were on hand as visitors.

Helms told the youngsters that music sounds the same in space and that the view from the ISS is "a spectacular sight," with the blue Earth and white cloud cover surrounded by a layer of air--although space, by contrast, is "absolutely dark, absolutely black," she said. The astronauts are able to spot large physical features on Earth, she said. "You can see the Grand Canyon and the Great Wall of China with no problem."

Schmitt, an engineer with Los Alamos National Labs, answered youngsters' questions following the contact. Jim Baremore, K5QQ, Brian Milesosky, N5ZGT, and Paul Henckel, KA5H, assisted in the contact.

Helms also took the mike as RS0ISS on July 4 to speak with students at the St Petersburg, Russia, Junior Technical Centre, RZ1AWO. This marked the first European school contact arranged under ARISS. "It was really successful,"

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

said earthbound chief operator Boris Kirshenblat, UA1AAF. Two young hams were among the students asking questions.

For more information on the ARISS program, visit the ARISS Web site, <<http://ariss.nasa.gov>>.

### ==>AO-40 ACHIEVES A NEW ORBIT

AO-40 now is in a new orbit. Recent efforts to raise the satellite's orbit at perigee--its point closest to Earth--were somewhat more successful than originally anticipated. Ground controllers had planned to lift the perigee from 280 km to around 500 km. Successive firings of cold arcjet ammonia fuel resulted in an orbit that's 851 km at perigee, however.

"Indeed, the good news is that AO-40 is now in a safe and stable orbit!" said AMSAT-DL President Peter Guelzow, DB2OS, on behalf of the AO-40 team. "The bad news: All 53 kg of ammonia probably has been used up." This means further orbital adjustments--at least using the arcjet--are unlikely. Guelzow said ammonia stopped flowing after orbit 302, "and the pressure indicators in the telemetry show no more pressure in the motor and in the ammonia tanks, while the perigee clearly is higher than anticipated." AO-40's height at apogee--58,971 km--was unchanged by the orbital adjustment.

Guelzow said stored telemetry was being downloaded and analyzed. Shut down prior to the start of the orbital adjustment, AO-40's transponders remain off the air. They will stay off as ground controllers adjust the satellite's attitude using on-board magnetorquing.

AMSAT-NA President Robin Haighton, VE3FRH, has said it's hoped that a slightly higher perigee for AO-40 will eliminate the effects of what he described as "a mysterious force" that alters the satellite's attitude when it comes through perigee. One theory, he said, is that atmospheric expansion caused by the current sunspot cycle peak was influencing the satellite's orbit in some way. The higher perigee should eliminate any atmospheric impact.

For more information on AO-40, visit the AMSAT-DL Web site, <<http://www.amsat-dl.org>> or the AMSAT-NA Web site, <<http://www.amsat.org>>.--thanks to AMSAT News Service

### ==>"MISTER GUITAR," CHET ATKINS, W4CGP, SK

Guitar picker, music legend and Amateur Radio operator Chester B. "Chet" Atkins, W4CGP, of Nashville, Tennessee, died June 30. He was 77. Atkins reportedly died of cancer complications. Known as "Mister Guitar," Atkins--from East Tennessee--began his musical career in the 1930s playing fiddle. He earned his reputation as a guitarist, however, and went on to become the most-recorded solo instrumental musician in history.

Formerly WA4CZD, Atkins, a General licensee, in 1998 obtained the vanity call sign W4CGP--"certified guitar picker." He was an ARRL member. He won 14 Grammy awards during his career and was elevated to the Country Music Hall of Fame in 1973. He was presented with a Lifetime Achievement Award in 1993 by the National Academy of Recording Arts and Sciences in part to recognize his guitar-picking technique as well as his wide influence on music. He had more than 100 albums to his credit.

In addition to his own success as a performer, Atkins helped launch the careers of other notable performers. He is given primary credit for developing the uptown "Nashville Sound" that helped country music to compete with pop music.

In his later years of performing, he sometimes paired up with musicians from the pop and jazz worlds and was a frequent guest on the radio program "A Prairie Home Companion."

A funeral service for Chet Atkins was held July 3 in Nashville's Ryman Auditorium, which formerly served as the home of The Grand Ole Opry where Atkins performed for many years.

More information on Chet Atkins is on the Chet Atkins, Mister Guitar Web site  
<<http://www.misterguitar.com/index.html>>.

#### ==>AO-40 NOW IN LONG-TERM, "SAFE" ORBIT

AO-40's new orbit should be good for at least the next 20 years, according to AMSAT-DL President Peter Guelzow, DB2OS, who heads the satellite's ground team. Following maneuvers to shift the satellite's orbit, AO-40's perigee now is "oscillating in a safe range between 810 and 1260 km," Guelzow said this week.

AO-40's height at apogee--58,971 km--was unchanged by the orbital adjustment. The satellite's transponders remain off for now as ground controllers reorient the spacecraft. Still in question is whether ground controllers will be able to deploy the satellite's solar panels.

Ground controllers were able to change AO-40's orbit through successive "cold" firings of the onboard arcjet motor--using only ammonia gas but not energizing the arcjet. Initial plans called for raising the perigee to around 500 km. The move raised AO-40 some 300 km higher than predicted, however and apparently depleted the spacecraft's ammonia supply--something that was not expected to happen. This makes it likely that AO-40 will remain in its current orbit for the rest of its time in space.

Stacey Mills, W4SM, of the ground team said it's "quite possible" that an ammonia leak accounted for the loss of fuel. "If we did have a slow leak, it is very fortunate we did not wait any longer to use the remaining fuel," he said. Mills said

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

that AO-40's old orbital configuration, while stable, was too close for comfort at perigee.

"I sincerely hope that nothing else malfunctions for a long, long time, but this is, after all, rocket science," Mills said. "Nothing is guaranteed."

Ground controllers plan to check AO-40's momentum wheels prior to making any decision to deploy the spacecraft's solar panels. Mills said the momentum wheels are needed to provide three-axis control of the spacecraft, "and there is no need to deploy the panels if we are not going to three-axis," he said.

Guelzow said he would "be surprised" if the momentum wheels work okay after what he called "the possible destruction in the inner core of the spacecraft" resulting from an onboard malfunction last December involving the 400-newton propulsion system. "If everything goes well, we will proof-test the three-axis control for a long time before we will deploy the solar panels--if at all."

For more information on AO-40, visit the AMSAT-DL Web site, <http://www.amsat-dl.org/> or the AMSAT-NA Web site, <http://www.amsat.org>.

#### ==>FLASH FLOODS BRING OUT THE BEST IN HAMS

Hams in West Virginia, Virginia and Kentucky mobilized this week after flash flooding hit the Appalachian region. Amateur Radio Emergency Service teams were activated after thunderstorms dumped several inches of rain in southern West Virginia and in bordering regions of Kentucky and Virginia July 7 and 8. While West Virginia was most affected, amateurs in all three states have cooperated in supporting the relief effort, which is expected to continue for several more days.

A state of emergency was declared in Boone, Fayette, Raleigh, Summers, Mercer, Wyoming, McDowell and Doddridge, counties. The heavy rains caused mudslides in valley towns located in the mountainous region. At least one flood-related death was reported.

West Virginia Section Emergency Coordinator Mac McMillian, W8XF, said the affected region is largely comprised of rural coalfield counties, some bordering Kentucky and Virginia. He estimated that 60 hams have participated in the disaster response and relief effort.

West Virginia ARRL Section Manager Olie Rinehart, WD8V, said as many as 1000 homes were washed away. Rinehart said many of the affected residents have moved in with relatives, but 100 or so took advantage of Red Cross shelters. Amateurs have been supporting three Red Cross chapters in the current crisis. Telephone service was affected as switching stations were inundated by the floodwaters. "In a

lot of places, you can call out but you can't call in from outside the area," Rinehart said.

Rinehart said water treatment plants along affected rivers were knocked out and some 5000 residents remain without drinking water. Another 2500 still have no electrical power, he said. The National Guard has been mobilized to assist in the cleanup and also has been hauling in water for affected residents.

In addition to assisting local emergency management officials and relief agencies, hams have been handling health-and-welfare traffic for the National Guard. McMillian said hams in five communities were using HF and VHF to handle traffic between National Guard workers and their families back home.

Across the Tug River in Kentucky, Lawrence County EC Fred Jones, WA4SWF, said hams on both sides of the border worked together to pass health-and-welfare traffic. "The damage that was done here is nothing like I had ever seen before," he said. "In a time like this, you have to work fast to get things done."

#### **==>MASSACHUSETTS KIDS QUIZ ASTRONAUT SUSAN HELMS VIA HAM RADIO**

A group of elementary schoolers in Bourne, Massachusetts, had a chance this week to chat via Amateur Radio with Susan Helms, KC7NHZ, aboard the International Space Station. The July 12 contact was arranged as part of the Amateur Radio on the International Space Station--or ARISS--program, sponsored by ARRL, NASA and AMSAT.

Wielding the NA1SS microphone aboard the ISS, Helms fielded 16 questions from the fourth-grade students of Jan Butler at James F. Peebles Elementary School. Butler said her students--who now are off for the summer--had studied various space-related concepts and terminology.

Helms told the youngsters that, today, there are more opportunities than ever for both men and women to become a part of the space program. "At this age, for you, it's very exciting to think about all the things you're going to get to do as you get older," Helms said. "There are going to be many many more astronauts, and you could be one of them."

Students frequently have asked the astronauts what they liked most about being in space, and this school contact was no exception. But another Peebles pupil turned the classic question around, asking Helms what she liked the least about being in space.

"The answer is, I can't bring everybody with me, and that's really sad, because it's a really neat place to be," Helms said of her current home in space. "I'd like to show it to everybody." She also said that being aboard the ISS--without the TV, a telephone or the Internet--made for a very peaceful

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

and pleasant environment. "I'm a little worried about coming back to Earth and hearing all the noise," Helms conceded.

In reply to another question, Helms described the very beginning of a space flight as feeling like riding a roller coaster, "and you're going over the crest of a hill and you're falling down the hill with the roller coaster, and it never stops." She said astronauts get used to the sensation in time.

After the 10-minute contact, Butler said her students were overjoyed. "I wish you could see the faces," she told Tim Bosma, W6ISS, and Roy Neal, K6DUE. Bosma handled the Amateur Radio end of the contact from the Santa Rosa Junior College Amateur Radio Club's W6SRJ in California. Neal moderated the contact for the teleconference hookup. Audio was relayed via a WorldCom audio teleconferencing bridge.

Among the next ARISS contacts is a schedule with K2BSA at the National Scout Jamboree that gets under way later this month. Some 40,000 Scouts and Scout leaders are expected to attend the Jamboree in Fort A.P. Hill Virginia.

#### **==>FCC PROBES DISCREPANCIES AT ARRL VEC EXAM SESSION**

The FCC is auditing a May 10 ARRL VEC Amateur Radio examination session after viewing documents that FCC Special Counsel for Amateur Radio Enforcement Riley Hollingsworth said "reflect several alarming discrepancies in testing procedures." The session was held in Trumbull, Connecticut. The ARRL VEC referred the test documents to the FCC as part of its responsibilities as a Volunteer Examiner Coordinator.

Ten volunteer examiners listed on the Test Session Report as having participated in the Trumbull session have been suspended at least for the duration of the FCC inquiry. The suspensions are standard procedure in such cases, ARRL VEC Manager Bart Jahnke, W9JJ, said.

In a June 28 letter addressed to the 10 VEs, Hollingsworth focused on discrepancies in documents submitted on behalf of one applicant, Elvis Mendez, KB1GPY, a Technician licensee from Revere, Massachusetts, who attempted to upgrade to Extra at the May 10 session. "It appears that Mendez, either before or during the examination, may have had access to the answer key used by VEs for grading Morse code examinations," Hollingsworth wrote. "In the alternative, his answer sheet may have been completed prior to the examination."

Hollingsworth also noted "a significant number of erasures" on the answer sheet, to VE grading marks and to the score of Mendez' Extra class written exam. "When correctly graded, Mendez score was 36 out of 50 rather than 40 out of 50 to which you certified," Hollingsworth said.

Mendez' Extra exam has been invalidated as a result of the discrepancies, Hollingsworth said. The FCC also has requested that the ARRL VEC maintain the VE suspensions until it completes its probe.

The FCC letter was sent to Kevin W. Cellini, N1GKM; Allen H. Silberstein, N1RWE; Andres A. Rosado, KB1FKJ; Peter J. Keyes, N1GOJ; Arthur L. Cartier III, N1VGT; Glenn J. Krieger, N1HAW; Freddy Martin, KB1FKI; Robert E. Moreland, KA1ZMF; Donald W. Stowe, N1VNM; and Kenneth A. Frissora, N1JKA. All are Extra class licensees.

Among other things, Hollingsworth has asked the VEs to explain their role in the May 10 exam session, if any had communication with Elvis Mendez before, during or after the exam session, if they graded Mendez' Morse or written exam, if their signatures on the Test Session Report were authentic and if Mendez' name was on the roster when they signed it. Hollingsworth also asked each VE to explain the discrepancies he outlined in his letter. Replies were due in 20 days.

#### ==>COMMENTS DUE AUGUST 1 ON ARRL 2.3 GHz PETITION

The FCC has put the ARRL's petition seeking a primary amateur allocation at 2300 to 2305 MHz on public notice. It's been assigned a rulemaking number, RM-10165. Comments are due by August 1. The League's petition, filed in May, also requested that no commercial operations be introduced in the band. The Amateur Service now is secondary at 2300-2305 MHz. There is no primary occupant.

Comments also are due August 1 on a competing petition from AeroAstro Inc--now designated RM-10166--that seeks a new Miscellaneous Wireless Communication Service (MWCS) on the band and co-primary status with the Amateur Service. AeroAstro has called on the FCC to grant its request "subject to technical rules calculated to minimize harmful interference between the two services and to protect NASA's Deep Space Network," which operates below 2300 MHz.

Acknowledging the AeroAstro petition in its initial filing, the ARRL said it would impose "severe operating constraints on the Amateur Service" if the FCC were to grant it. The ARRL plans to file comments on the AeroAstro petition as well as on its own.

Last year, the ARRL opposed a petition seeking to include 2300-2305 MHz in a list of potential bands sought by Microtrax for a personal location and monitoring service.

This spring's ARRL petition marked the second time the League has sought primary status on the band. The ARRL first asked the FCC in 1996 to upgrade the allocation there to primary, but the Commission never acted on the request.

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

The ARRL has said that the segment 2300-2305 MHz is "of extreme importance to the Amateur Service, especially for weak-signal communications and propagation research." The Amateur Service has primary allocations in this part of the spectrum at 2390-2400 MHz and 2402-2417 MHz. The ARRL last year sought to have the segment 2400-2402 MHz elevated from secondary to primary, but the FCC has yet not acted on that request either. The AO-40 satellite has been successfully using that band for downlink telemetry and transponder operation. Amateur Radio weak-signal work is centered near 2304 MHz.

In earlier proceedings, the ARRL has asked the FCC to create a primary amateur allocation in the 2300 to 2305 MHz segment and to maintain the secondary ham allocation in the 2305 to 2310-MHz band. The ARRL has called sharing of the 2305 to 2310 MHz segment with other services "distinctly problematic."

The ARRL has said that its latest petition would be "consistent with the protection requirements for government and NASA operations immediately below 2300 MHz and the MWCS operation above 2305 MHz."

Interested parties may comment on the proposal electronically using the FCC's Electronic Comment Filing Service (ECFS) page, <<http://www.fcc.gov/e-file/ecfs.html>>.

#### ==>COMMENTS DUE AUGUST 15 ON EXTRA CLASS EXAM SYLLABUS

The Question Pool Committee of the National Conference of Volunteer Examiner Coordinators has released a draft syllabus for the Amateur Extra class examination (Element 4) question pool. Comments on the draft syllabus are due August 15. The revised question pool will go into effect next July 1.

The draft syllabus is available for downloading on the ARRL VEC's Working Syllabus--Element 4 Extra Class Question Pool Revision 2001 page, <<http://www.arrl.org/arrlvec/el4-2001.html>>. It covers topics included within the various subelements in the Amateur Extra class examination and the number of questions allocated on a given examination for each subelement. There are 50 questions on an Amateur Extra examination.

Subelements include FCC rules, operating procedures, radio wave propagation, Amateur Radio practices, electrical principles, circuit components, practical circuits, signals and emissions, and antennas and feed lines.

Comments on the draft syllabus go to Scotty Neustadter, W4WW, [w4ww@arrl.net](mailto:w4ww@arrl.net); Bart Jahnke, W9JJ, [vec@arrl.org](mailto:vec@arrl.org), and Fred Maia, W5YI, [fmaia@prodigy.net](mailto:fmaia@prodigy.net). Neustadter chairs the Question Pool Committee; Jahnke is the manager of the ARRL VEC, and Maia operates the W5YI VEC.

The National Conference of Volunteer Examiner Coordinators will hold its annual VEC conference July 27 and 28 in Gettysburg, Pennsylvania. Current Amateur Radio examination question pools are available on the ARRL VEC's Amateur Exam Question Pools Web page, <<http://www.arrl.org/arrlvec/pools.html>>.

### ==>HAM-SAILOR SITTING OUT HURRICANE SEASON IN TRINIDAD

Round-the-world ham-sailor David Clark, KB6TAM, arrived June 25 in Trinidad and now is settling in there for the duration of the Atlantic hurricane season. He plans to complete his trip this fall, scheduling his arrival in Fort Lauderdale, Florida, to coincide with his wife Lynda's birthday, November 18.

Clark, 77, hopes to become the oldest person to sail solo around the globe. He says he'll use his time in Trinidad to rest, work on his book and "play some music for the people he meets in Trinidad," said Lynda Clark. David Clark has occasionally subsidized his journey's expenses by taking on clarinet gigs at his various ports of call.

Clark's ham rig failed before he got to Trinidad, but he expects to repair it there with the help of some local hams. During his long journey, Clark has maintained regular radio schedules with hams that made phone patches to wife in California.

In a recent dispatch to family, friends and supporters, Clark said he plans to start the final 1500-mile leg to Fort Lauderdale in October. Clark survived a disaster in early February that sank his original sailboat, the Mollie Milar. Mickey, his canine first mate, was lost during the rescue effort. Clark secured a new boat--which he named Mickey--in South Africa and resumed his around-the-world quest in April.

Clark called his high-seas adventure "truly been one of the most exciting times of my life...but also one of the most difficult and certainly, at times, the most lonely." He admitted that there have been times when he was tempted to quit, but others when "it was really quite pleasant, and I knew I was in the right place."

For more information Clark's journey, visit <http://www.dclark.com> and <http://www.captainclark.com>-- Archie McKay, K4GA

### ==>AO-40 TRANSPONDERS BACK ON THE AIR!

AO-40's transponders are back on the air, following an orbital shift that put the Amateur Radio satellite into an orbit that AMSAT says should be good for many years to come. Transponders have 435 MHz and 1.2 GHz uplinks and a 2.4 GHz "S band" downlink.

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

The transponders have been off since late May, when preparations began to shift AO-40's orbit at perigee. That operation was completed earlier this month, and ground controllers have been readjusting the spacecraft's attitude since then.

Ground controller Stacey Mills, W4SM, said the transponders would operate from orbital positions MA 10 through MA 99. Uplink frequencies (without taking Doppler into account) are 435.495-435.780 MHz and 1269.211-1269.496 MHz, and the downlink passband is 2401.210-2401.495 MHz. The transponders are inverting, so a downward change in uplink frequency results in an upward frequency shift in the downlink.

Mills emphasized that earthbound ops should not use any more uplink power than necessary. He also noted that the transponders could be switched off to accommodate additional testing.

AMSAT Awards Manager Bruce Paige, KK5DO, in Houston, was among the first stations to get on AO-40 after the transponders were reactivated. "It sounds awesome," Paige said. "I am transmitting with 25 watts up, and it sounds great!" In addition to some domestic contacts, he and his daughter, Mahana, W5BTS, worked EA8/DJ9PC in the Canary Islands.

Michael Mims, K4IZN, in Alabama says he's on AO-40 with a discarded TV satellite dish and a "bean can" feed horn. His downconverter is a modified Drake 2880 with no preamplifier. "This is going to be a good bird!" he declared.

Although AO-40's attitude still is not optimal at this point, ground controllers had to suspend operations to adjust it after an onboard sensor lost its view of the sun. Without data from the sun sensor, ground controllers cannot be certain of the satellite's attitude.

Mills said now that the ground team has "a very good fix" on the spacecraft, they'll do nothing to change its attitude for several weeks, while the solar angle decreases. Once the sensor regains its view of the sun, efforts to adjust the spacecraft's attitude will resume, so that AO-40's antennas are pointing toward Earth.

Mills said ground controllers will use the interim period to see if they can re-calculate the so-called "mystery effect" that had been impacting AO-40 at perigee under its former orbit.

### ==>NOVICE SPECTRUM SURVEY DRAWS HEAVY RESPONSE

As of this week, more than 1700 ARRL members have expressed their opinions on possible ways to optimize use of the present Novice and Technician Plus allocations on 80, 40, 15 and 10 meters. Survey results ultimately might form the basis of an ARRL petition for rule making before the FCC,

and members still have an opportunity to participate. A copy of the Novice Spectrum Study survey remains available to members on the ARRL Web site, <<http://www.arrl.org/members-only/NoviceSurvey.html>>. Members may complete and submit the survey only once.

Appointed by President Jim Haynie, W5JBP, the Novice Spectrum Study Committee is chaired by ARRL International Affairs Vice President Rod Stafford, W6ROD. The panel wants to determine what changes, if any, might be needed now that the FCC no longer issues new Novice licenses. The membership survey is part of the Board's mandate to the committee. A final report is due at the annual meeting next January.

In addition to the survey responses tallied, several dozen more comments were filed by members and nonmembers alike via e-mail to <[novicesurvey@arrl.org](mailto:novicesurvey@arrl.org)>. "The written comments for the most part have been thoughtful and reasoned and are highly appreciated by the committee," said Dave Patton, NT1N, who's Headquarters staff liaison for the panel.

Patton urged those who have not yet done so to fill out a survey. "Please make sure to read the entire text of the survey to help understand some of the assumptions made by the committee regarding what questions to ask and what band segments and modes to offer as predefined options."

Generally speaking, the committee's predefined options propose retaining Extra class CW subbands on the affected bands, setting aside expanded CW reserves for all license classes except Technicians who have not passed Element 1, and dividing the remaining spectrum into expanded phone segments for General, Advanced and Extra class operators.

Many have offered separate opinions on the process. "Although I operate and prefer CW over phone, I welcome the expansion of the phone bands for Extra class operations, especially on 75 meters," one member wrote. "And I am glad to see that Extra class CW bands remain in place." Other comments recommended no change or expansion in privileges for Novice or Technician Plus operators on the affected bands--an option that the survey provides. Not all commenters were happy. "By handing Novices significant amounts of additional bandwidth 'free of charge' you remove one of the key motivators to upgrading, namely access to additional bandwidth!" one said about the predefined choices.

No license class would lose privileges under any of the proposed refarming schemes. The Committee has suggested that Novice/Tech Plus CW band restrictions on 80, 40, 15 and 10 meters be changed to match those of the General class CW/RTTY/data band segments, with the caveat that Novice/Tech Plus operators only run CW on 80, 40, and 15 at up to 200 W. Novices already may operate RTTY and data on 10 meters. Novice refarming also would restore full privileges to higher-class operators in the 80, 40, and 15-meter Novice bands, where all license classes are limited to 200 W output.

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

### ==>IN-FLIGHT SPECIAL EVENT SET FROM RESTORED PAN AM STRATOCCLIPPER

A restored Pan American Airways Boeing B-307 Stratoclipper with ham radio aboard will take off next week from Seattle. A group of retirees from Pan Am and Boeing, and some current Boeing workers--hams among them--restored the antique aircraft to flight status. Chuck Driskell, W7ZIR, will conduct an in-flight special event operation on HF as the plane heads for the Experimental Aircraft Association Fly-In in Oshkosh, Wisconsin.

The plane--Flying Cloud, NC 19903--now is being prepared for the multi-hop flight to Oshkosh starting July 23 and arriving in Oshkosh the next day. The return flight is scheduled to take off July 30 or 31. Driskell is expected to be on the air during the return trip as well.

Driskell expects to operate CW on or about 3.545, 3.680, 7.040, 7.050 and 7.060 MHz, and AM on or about 3.875, 3.885, 7.285 and 7.290 MHz. The aircraft's 75-W transmitter feeds a fixed antenna mounted on a mast above the radio position and extending back to the aircraft's tail.

One of only two known remaining pre-jet Pan American Airways planes, the restored B-307 is in virtually the same condition as when delivered to PAA in 1939. The B-307's inaugural post-restoration rollout at Boeing-Seattle on June 23 was a big success and attracted a crowd of onlookers that included TV reporters and aviation-magazine writers.

During last month's shakedown flight, Ralph Conly, N6VT, made a nostalgic in-flight QSO with Craig Stewart, K7SKP, using the plane's original Pamsco communications equipment. Conly had last used the same radios in the fall of 1941. The crew operated the plane's original radio gear on 80 and 40 meters while in flight, using CW and AM.

Former Pan Am flight engineer Bob Stubbs started refurbishing the plane more than 12 years ago. Later, Boeing took over the project and decided to restore the plane to flying condition. "It is due to Bob's early work that we have her today," said Conly.

The plane is owned by the Smithsonian Institution and will eventually be displayed at the new museum facility at Dulles Airport in Virginia. For more information, contact Ralph Conly, <[etconly@aol.com](mailto:etconly@aol.com)>.

### ==>AMATEUR RADIO GETTING GOOD VISIBILITY AT 2001 NATIONAL JAMBOREE

Amateur Radio will have a high profile during the Boy Scouts of America 2001 National Jamboree that opens July 23, at Fort A.P. Hill in Northern Virginia, and continues through August 1. An estimated 40,000 Scouts and leaders are expected to turn out, and some 45 Amateur Radio operators at

K2BSA/4 will be among those on hand to greet them. ARRL Headquarters staff member Larry Wolfgang, WR1B, will attend this year's Jamboree.

This marks the 15th National Jamboree, which dates back to 1937. During this year's event, K2BSA hopes to complete a ham radio contact with the crew of the International Space Station as part of the Amateur Radio on the International Space Station--or ARISS--project.

At this year's Jamboree, K2BSA will have four HF operating positions for general operation on 80, 40, 20, 15, and 10 meters, plus a VHF station with a 2-meter multimode rig. Licensed Scouts will be encouraged to operate, with staff members standing by to help as needed, or to serve as control operators for unlicensed Scouts. Most K2BSA operation will be on voice, but there will be some CW operation, especially in the evenings or during the night. K2BSA/4 will operate on or near the established world Scout frequencies: 3.940, 7.290, 14.290, 21.360, 28.360 and 28.990 MHz on SSB and 3.590, 7.030, 14.070, 21.140, and 28.190 MHz on CW. Operation on satellites, digital modes and SSTV also is anticipated.

A special commemorative K2BSA QSL card has been designed. To receive a QSL card for your contact, send a self-addressed, stamped envelope with your card to K2BSA Amateur Radio Association, 303 Westover Dr, Euless, TX 76039.

Hams at the Jamboree will be teaching Radio merit badge and Technician license classes. ARRL/VEC coordinated exams will be given. Wolfgang plans to help with Radio merit badge classes and handle other duties at the Jamboree.

Wolfgang encourages all to look for K2BSA/4 on the bands and spend some time talking with Scouts at the Jamboree. "If you ask them what they've been doing, be ready for some enthusiastic responses about all kinds of outdoor adventures!" he said. "The fun never stops at a Jamboree!"

For additional information, visit the K2BSA Ham Radio Web site, <<http://www.bpmlegal.com/k2bsa.html>>.

### ==>ARRL PETITIONS FOR NEW 60-METER AMATEUR BAND

A petition filed this week by the ARRL could result in a new high-frequency band for US amateurs. The ARRL has asked the FCC to allocate 5.250 to 5.400 MHz to the Amateur Service on a domestic (US-only), secondary basis.

The League told the FCC that the new 60-meter band would aid emergency communication activities by filling a "propagation gap" between 80 and 40 meters. "There are times on certain paths when a frequency in the 80-meter band is too low, and a frequency in the 40-meter band is too high for reliable ionospheric propagation," the ARRL said in its petition. The ARRL said the propagation gap can hamper

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

communication between the US and the Caribbean during severe weather emergencies.

The ARRL Board of Directors approved the proposal at its July 20-21 meeting. The FCC has not yet invited public comments on the petition. Even if the petition finds favor with the FCC, it's likely to be several years before the new band actually becomes available.

As proposed by the ARRL, amateurs General class and higher would be permitted to operate phone, CW, data, image and RTTY on the new band running maximum authorized power. No mode-specific subbands were proposed.

The ARRL said a new 150-kHz allocation at 5 MHz also could relieve substantial overcrowding that periodically occurs on 80 and 40. If the new band is approved, hams would have to avoid interfering with--and accept interference from--current occupants of the spectrum, as they already do on 30 meters. The band 5.250 to 5.450 MHz now is allocated to Fixed and Mobile services on a co-primary basis in all three ITU regions.

The ARRL's petition cites the success of the League's WA2XSY experimental operation in the 60-meter band, carried out since 1999, which confirmed its communication reliability.

"An amateur allocation in this band would improve the Amateur Service's already exemplary record of providing emergency communications during natural disasters when even modern communications systems typically fail," the ARRL concluded.

A copy of the ARRL petition is available on the ARRL Web site, <<http://www.arrrl.org/announce/regulatory/5MHz>>.

### ==>SUSAN HELMS, KC7NHZ, WEARING FIELD DAY PIN PROUDLY ABOARD ISS

International Space Station Expedition 2 crew member Susan Helms, KC7NHZ, is proudly wearing her ARRL Field Day 2001 pin in space. The pin was ferried up to the ISS on the recently completed shuttle Atlantis mission and presented to Helms by crew member Jim Reilly.

Helms not only has been an outstanding participant in the Amateur Radio on the International Space Station school contacts, she also took it upon herself to run the first Field Day operation from space.

"We were so impressed with Susan's abilities on the air that we wanted to give her a little recognition for her efforts," said ARISS International Board Chairman Frank Bauer, KA3HDO.

The pin came with a formal letter of presentation that cited Helms' "pioneering efforts as a Field Day contestant." Carolyn Conley, KD5JSO, of NASA reports Helms was "thrilled" to

get the Field Day pin and glad to learn that her participation was appreciated.

Using the ISS US Amateur Radio call sign NA1SS, Helms joined in the annual ARRL Field Day fray June 23-24, working several dozen stations. ARRL Contest Branch Manager Dan Henderson, N1ND, has said that NA1SS contacts will count for Field Day credit, but they will not count for satellite bonus points.

### ==>SCOUTS TALK TO INTERNATIONAL SPACE STATION FROM NATIONAL JAMBOREE

They were happy campers indeed July 25 at the Boy Scout National Jamboree at Virginia's Fort A.P. Hill. That's because several of them got to speak directly with astronaut Susan Helms, KC7NHZ, operating NA1SS aboard the International Space Station. The approximately eight-minute 2-meter contact was arranged as part of the Amateur Radio on the International Space Station program. Various K2BSA youth staff members took turns handling the radio gear for the contact.

An audience of about 200 Scouts and Scout leaders was on hand at K2BSA for the early morning contact. About a dozen Scouts elicited answers from Helms to their questions about life aboard the ISS, such as whether weightlessness affects eating or sleeping.

"It doesn't affect it at all up here as far as we're concerned," Helms replied. "We still eat like pigs and sleep like babies." The answer elicited a hearty laugh from the earthbound Scouts.

Among other things, Helms told the Scouts that the newly installed airlock will allow crew members to do space walks directly from the ISS as required and not have to wait for a shuttle mission.

She also answered a question from a Florida Scout about the effects of microgravity on blood flow. Helms said that on Earth, the heart is used to fighting against gravity to pump blood to the brain. "But, without the effects of gravity up here, the heart doesn't have to work so hard." The blood is distributed "a little bit differently than it is on Earth because it doesn't have to counteract the effect of gravity," she explained.

Helms said microgravity also affects your sense of direction. "It's very easy to become confused if you close your eyes, move around, then open your eyes again, you can be upside down or right side up," she said. The astronauts orient using visual cues, she explained.

Helms said life aboard the ISS requires crew members able to "adapt to unusual environments and also work well with other people, and not everybody has that skill." She said her particular jobs aboard the ISS have involved operating the

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

robotics and serving as computer network administrator for the ISS.

Following the contact, ARISS Operations Chairman Will Marchant, KC6ROL, who was among those observing, delivered the first International Space Station QSL card to the K2BSA staff.

The QSO with NA1SS marked the second time K2BSA has managed to complete a contact with a space station from the National Jamboree, which is attended by an estimated 40,000 Scouts. In 1997, Scouts spoke with the crew of the Russian Mir space station. The Jamboree wraps up August 1.

ARISS is a cooperative venture of ARRL, NASA and AMSAT. For more information, visit the ARISS Web site <<http://ariss.gsfc.nasa.gov>>.

### ==>AMATEUR RADIO HELPS SAVE FOUR LIVES

Just four weeks after exercising their emergency communications skills during ARRL Field Day, members of the Northern Southeast Amateur Radio Emergency Services and Juneau Amateur Radio Club in Alaska put those skills to use to help to save a fellow ham operator and several companions.

On July 22, Mark Griffith, KL0MO, was rafting down the Herbert Glacier River with three friends when their raft was severely damaged. The group was stranded on a small island in the middle of the raging river, swollen by heavy rainfall.

Early that evening, Griffith used the KL7PF repeater phone patch to call 911, and search-and-rescue personnel were alerted. Meanwhile, Bob Dewey, WL7QC, overheard Griffith's transmission and set out for the trailhead to meet with the rescue personnel. He was able to contact Griffith on simplex, providing direct contact with rescue personnel.

Rain hindered the rescue, and the river now covered the trail. The Juneau Mountain Rescue team had to cut its way through dense undergrowth to get to the stranded rafters. The weather prevented the use of a helicopter, and the river was too fast--and had too much debris--to use a rescue boat.

The four huddled for the night beneath the remains of their raft. Although Griffith's battery was depleted, it retained enough power to receive Dewey's communications.

A member of the SEADOGS search-and-rescue dog team located the rafters at around 1 AM, and they were airlifted off the island around 7 AM by the US Coast Guard. The four rafters suffered only mild hypothermia.

"Ham radio really saved their lives," said incident commander Bruce Bowler. "It was a great help in finding out exactly where they were and what condition they were in. We

were able to get updates throughout the night on how they were doing."--Nick Meacher, N3WWE

==>**IN BRIEF:**

\* **New York cell phone law does not apply to Amateur Radio:** The widely reported New York bill banning the use of hand-held cell phone while driving should have no affect on Amateur Radio mobile operation, according to ARRL General Counsel Chris Imlay, W3KD. "There is no ambiguity in the bill," he said. The bill, A.9280, was signed into law recently by Gov George Pataki, a former amateur. It requires cell phone users to use hands-free devices when calling. The measure specifies "mobile telephone" use, and defines a "mobile telephone" as a device used by subscribers to a wireless telephone service. That, in turn, is defined to specify a commercial two-way wireless telecommunications service that accesses the public switched telephone network. The bill also specifies "using" as holding the mobile telephone "to, or in the immediate proximity of, the user's ear." The new law will be phased in starting November 1. It calls for fines of up to \$100. The measure also calls upon the New York Commissioner of Motor Vehicles to study the effects of the use of mobile telephones "and similar equipment" in conjunction with the operation of a motor vehicle and report back to the legislature in four years. The full text of the measure is available on the New York legislature's Web site <<http://assembly.state.ny.us/leg/?bn=A09280&sh=t>>. A similar measure requiring hands-free cellular telephones recently passed the Rhode Island legislature.

\* **Ten-Tec solicits comments on pending transceiver:** Ten-Tec is looking for comments and suggestions from the amateur community on its proposed Model 516 "IF-DSP" low-power (variable from 1-5 W) HF transceiver--a general coverage, software-defined radio. The rig is expected to be on the street by next January at a price under \$600. It will offer CW, SSB and FM and AM and 38 DSP filters from 200 Hz to 8 kHz. Because of its software-defined design, Ten-Tec will be able to incorporate changes much later in its production schedule than typically is possible with discrete-component design. Ten-Tec says almost all functions and features are stored in flash ROM. To add new features, users will download the latest software version from the Ten-Tec Web site. Ten-Tec invites suggestions for features to be incorporated in the new radio via e-mail, [sales@tentec.com](mailto:sales@tentec.com). Details on the transceiver are available on the Ten-Tec Web site, <<http://www.tentec.com/TT516.htm>>.

\* **July is IOTA Month:** DXers who participate in the IOTA (Islands On The Air) program, sponsored by the Radio Society of Great Britain (RSGB), know that July is IOTA Month. This is quite possibly the best month to work a new one, because so many people in the Northern Hemisphere go on IOTA DXpeditions at this time of year, especially during the RSGB IOTA Contest the last full weekend of the month. If you are just starting out in this DX award program you can easily work your first 100 IOTA counters and some of the

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

more serious operators can work well over 200. This year's contest will be held on the weekend of July 28-29. For more information on IOTA, visit the RSGB's Islands on the Air Web site, <<http://www.rsgbiota.org/>>.

\* **Tower fall claims the life of Texas amateur:** A fall from an Amateur Radio tower July 8 claimed the life of ARRL member Bob Smart, W5TBV, of Georgetown, Texas. Smart reportedly fell from his 75-foot tower while adjusting his beam antenna. His wife, Ellice, N5RRO, who had been assisting him from inside the house, came outside to find him on the ground. His climbing belt reportedly was not attached to the tower.--thanks to Phil Duff, NA4M

\* **Missing August QST "Section News" pages available on the Web:** A portion of the "Section News" column inadvertently was omitted from the August 2001QST, now being distributed. The missing pages are available on the ARRL Web site <<http://www.arrl.org/news/stories/2001/07/13/5/missing-sections.html>>. The missing material also will be published as part of the September "Section News." The affected sections include Illinois, Indiana and Wisconsin in the Central Division; Minnesota, North Dakota and South Dakota in the Dakota Division; Arkansas, Louisiana, Mississippi and Tennessee in the Delta Division; and Kentucky and Michigan in the Great Lakes Division. The ARRL Headquarters staff has taken steps to prevent this from happening again. We apologize for any inconvenience to our members.

\* **Hams erect a repeater for the National Weather Service:** Eldon Kearl, KB7OGM, and John Lloyd, K7JL, of Sandy, Utah teamed up to provide a NOAA-Weather radio station, transmitting from a hilltop overlooking the southern end of Bear Lake. In the course of building and maintaining Amateur Radio repeaters in northern Utah, Kearl and Lloyd saw the need for a stronger NWS signal into the Bear Lake Area. Because of mountain interference, many locations in the area were not able to receive the weather radio signal from Logan Peak. "Amateurs provided the site, a UHF receiver, installation, and will provide power maintenance for the transmitter site," said David Toronto, Warning Coordination Meteorologist for the National Weather Service. NWS provided the UHF link transmitter, UHF transmitter, maintenance, weather radio frequency, and a continuous signal to the transmitter from the Salt Lake City office, he said. For additional information, contact Dave Toronto <[dave.toronto@noaa.gov](mailto:dave.toronto@noaa.gov)>.—David Toronto/NWS

Material from The ARRL Letter may be republished or reproduced in whole or in part in any form without additional permission. Credit must be given to The ARRL Letter and The American Radio Relay League.