RCA AMATEUR RADIO CLUB

OCTOBER, 2014 MONTHLY NEWSLETTER INDIANAPOLIS, IN

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE

TUESDAY, OCTOBER 14th, 6:30 PM AT G.T. SOUTH'S,

5711 E. 71st STREET, INDIANAPOLIS, IN

RCA ARC NEWS

SUMMARY OF THE SEPTEMBER MEETING – At the 8-Sept. meeting the results of the Indy Hamfest were again discussed. Our Club did OK as did the Hamfest itself. The 9V batteries sold well and as did the parts. We have some parts left over for next year, but we can use more stuff for next year. We also got a donation from the stuff let from Steve Mc William's, N9SM estate. Jim, K9RU, reminded us of the upcoming ARRL VHF contest and some of the rules changes which add a 3 band FM simple class. The Indy Radio Club's Hill Top Event was discussed as well as their upcoming meeting which will have a program on IRLP presented by Dave Gingrich, K9DC.

NEXT TEST AMATEUR RADIO LICENSE TEST SESSION – October 11, Saturday

Time: 12:00 PM (Walk-ins allowed)
Contact: Jim Rinehart, 317 495-1933, k9ru@arrl.net
Location: Salvation Army EDS Training Facility, 4020 Georgetown Rd., Indianapolis, IN 46254

HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

Oct 11	Hilly Hundred, Bloomington ARC, Tom, KC9IRG tmyers@bluemarble.net
Oct 18	Indianapolis Marathon, Lawrence, IN, N9FEB@comcast.net
Oct 25	Hoosier Hikers: Knobstone Run, contact Brian Elliott, n9jpx09@yahoo.com
Oct 25-26	CQ WW SSB Contest http://www.cqww.com/
Nov 1-3	ARRL CW SS http://www.arrl.org/sweepstakes
Nov 15	Ft. Wayne Hamfest & Computer Expo, http://www.fortwaynehamfest.com/

All dates, unless otherwise stated, are UTC.
http://www.arrl.org/contest-update-issues Contests updates
http://www.hornucopia.com/contestcal/ WA7BNM Contest Calendar
http://www.arrl.org/special-event-stations ARRL Special Event Stations page
http://www.arrl.org/exam_sessions/search ARRL training page for test sessions
http://indyhams.org/events/ Indiana events and public service opportunities.

ARRL AGAIN ASKS FCC TO ELEVATE AMATEUR SERVICE TO PRIMARY ON 2300-2305 MHZ

In comments filed in response to an AT&T Mobility *Petition for Rule Making* seeking a new air-to-ground communications system on 2.3 GHz Wireless Communications Service (WCS) spectrum, the ARRL has once again asked the FCC to elevate the Amateur Service allocation at 2300 to 2305 MHz from secondary to primary. The *Petition* (RM-11731) asked the Commission to authorize an LTE-based in-flight connectivity service in the WCS "C" and "D" blocks (2305-2315 MHz and 2350-2360 MHz, respectively) for airlines and airline passengers. AT&T has asserted that restrictions on out-of-band emission and power limits to protect adjacent-band users make the use of the C and D blocks problematic. The wireless provider asked the FCC for rule changes to permit deployment of its service

"using currently fallow spectrum" while also "preserving adequate interference protection to users of adjacent bands."

"Notwithstanding this broad and nebulous claim, there is no showing anywhere in the four corners of the *Petition* that the proposed rule changes would permit *any* continued Amateur Radio operations on a secondary basis in the shared A block (2305-2310 MHz)," the ARRL commented on September 22. More to the point, the League said, there is no showing in the *Petition* that Amateur Radio operations in the adjacent 2300-2350 MHz band would be protected from increased out-of-band emissions, if the FCC were to implement the changes requested.

The League asserted in its comments that the FCC has, to date, "failed to protect Amateur Radio operations at 2300-2305 MHz from WCS out-of-band emissions." The ARRL said the band is "regularly and substantially utilized by radio amateurs" for weak-signal, long-distance communication and, only by circumstances -- a lack of a primary occupant -- has it been able to enjoy that segment as a *de facto* primary user.

"The Commission's rules are quite clear that WCS licensees enjoy no entitlement to disrupt adjacent-band radio service operations," the ARRL commented. But, the League pointed out, previous FCC actions to expand mobile broadband devices left 2300-2305 MHz vulnerable to increased out-of-band interference that would be difficult or impossible to mitigate. The ARRL said amateur stations operating in the 2300-2305 MHz band would be unable to avoid interference from AT&T Mobility's proposed system, and that the FCC has refused to clarify the obligation of WCS mobile providers to avoid interference to Amateur Radio operations there.

The ARRL objected to what it called the FCC's "practice of making allocation decisions which place incompatible uses in close proximity to amateur stations and then place on the amateur licensees the burden of avoiding the interference." Read more. --ARRL Letter

ARRL TAKES ISSUE WITH NTIA'S WRC-15 PROPOSAL FOR 5 MHZ

The ARRL is taking issue with the World Radiocommunication Conference 2015 (WRC-15) stance of the National Telecommunications and Information Administration (NTIA) with respect to an upgraded 60 meter Amateur Radio allocation. In response to WRC-15 agenda item 1.4, the NTIA has called for no change at 5250-5450 kHz. The League said in comments filed September 24 in IB Docket 04-286 that while it concurs with the NTIA's view regarding 5250 to 5275 kHz -- allocated to the radiolocation service for oceanographic applications at WRC-12 -- the rest of the agency's proposal is "unsupportable in light of actual domestic and international practice and contains assertions of incompatibility that are demonstrably not correct." The US has authorized Amateur Radio secondary operation on five discrete channels in the 5275-5450 kHz range for more than a decade, the ARRL pointed out, with no instances of unresolved interference to primary users.

"Against this backdrop, the stated reason for the no-change proposal -- that '[e]xperience has shown that sharing is not possible between the Amateur Service and the fixed and mobile service' -- fails the straight-face test," the ARRL said in its comments.

The NTIA's position is at odds with the proposal for agenda item 1.4 previously adopted by the FCC's WRC-15 Advisory Committee (WAC). In January, the WAC recommended a secondary allocation to the Amateur Radio Service from 5275-5450 kHz, and the FCC indicated in a subsequent *Public Notice* that it could generally support this recommendation.

The League called the NTIA's position "particularly puzzling" given the position of federal agencies, for which the NTIA manages spectrum, to allow what the ARRL called, "*a more disruptive service* (radiolocation) in the *identical* frequency range under consideration here *less than three years ago*."

"Neither NTIA nor its constituent federal agencies have credibly or persuasively articulated why fixed and mobile systems in the 5250-5450 kHz range can withstand the demonstrated potential for interference from automated, wideband, HF oceanographic radars, but cannot withstand operation by trained, licensed operators using smaller bandwidths, actually monitoring the spectrum to be used before and during a transmission, and with the capability to shift frequency immediately to avoid incidents of interference with a primary service," the ARRL commented.

The League asserted that the Amateur Service deserves "the same treatment" that NTIA proposed for HF radiolocation less than 3 years ago. "Proponents of a different treatment, particularly a channelized treatment or a no-change approach, have still not presented a compelling distinction between amateur operation and radiolocation that would justify a departure from the general policy followed by the United States at WRC-12," the ARRL concluded.

THE ARRL FOUNDATION INVITES SCHOLARSHIP APPLICATIONS FOR 2015-16 ACADEMIC YEAR

The ARRL Foundation has begun accepting scholarship applications from eligible young radio amateurs pursuing post-secondary education. Individuals and clubs support many of the 80 scholarships, ranging from $500 to $5000, that are awarded annually. In addition, one applicant may be selected to receive the prestigious William R. Goldfarb Memorial Scholarship, a "gap" scholarship that assists with the cost of college throughout four academic years to earn a bachelor's degree in a business, computer, medical, nursing, engineering, or science-related field. Applicants for all scholarships must be active radio amateurs and must complete and submit the online application.

"This is a tremendous opportunity for students graduating from high school or currently enrolled in college to apply for a monetary award to help with their educational expenses," says ARRL Foundation Secretary and ARRL Development Manager Lauren Clarke, KB1YDD. "All ARRL Foundation scholarships are made possible by individuals or clubs. With these awards, donors hope to encourage young people to be active in Amateur Radio and to earn their degrees."

For 2014, the Foundation awarded 79 annual scholarships through 58 funds to young Amateur Radio operators, valued at $106,250. In addition, the Foundation Board selected 17-year-old Padraig Lysandrou, KC9UUS, of Bloomington, Indiana, as the 2014 recipient of the Goldfarb award. This fall, Padraig is attending Cornell University School of Applied & Engineering Physics.

The **Indianapolis Amateur Radio Association**, operator of the **Indianapolis Hamfest**, sponsors a $1000 scholarship awarded to a licensed amateur pursuing a course of study in Electrical or Electronics Engineering, Computer Science, or related fields. Preference is given to applicants living in Indiana or the ARRL Central Division. The 2014 scholarship was awarded to James R. Lithgow, KC9LXT of Schaumburg, IL.

Students planning to apply for 2015 awards should first carefully review the eligibility requirements and scholarship descriptions. Although only one application per applicant is required, applicants may ask to be considered for as many of the scholarships for which they are eligible (some scholarships have geographic criteria or other requirements) Check off only the scholarships for which you would like to be considered. In addition to completing the online application, applicants must submit a PDF of their academic transcript from their most recently completed school year. Goldfarb Scholarship applicants also must submit a copy of their completed *Free Application for Federal Student Aid* (FAFSA).

Applications are due January 31, 2014, by 11:59 PM Eastern Time. Awards winners typically are notified in mid-May by USPS mail and e-mail.

Established in 1973 as an independent and separate IRS 501(c)(3) organization, the ARRL Foundation manages grant and scholarship programs to support the Amateur Radio community. All grants and scholarships are funded entirely by the generous contributions of radio amateurs, clubs and friends. Individuals, groups or clubs wishing to establish an ARRL Foundation Scholarship Fund should visit the ARRL Foundation website.

For more information about ARRL Foundation scholarships, e-mail the ARRL Foundation or call 860-594-0348. --ARRL Letter

FCC TURNS DOWN PETITION TO CREATE A 4 METER BAND IN THE US

It doesn't look like US radio amateurs will be gaining a new band at 70 MHz anytime soon. The FCC has denied a *Petition for Rule Making* filed earlier this year by Glen E. Zook, K9STH, of Richardson, Texas, seeking to add a 4 meter band to Amateur Radio's inventory of VHF allocations. Zook had

floated the proposal in 2010, and his petition was dated January 27, 2010, but the FCC said it did not receive it until last May. Zook asked the Commission to allocate 70.0 to 70.5 MHz to Amateur Radio because, Zook's *Petition* asserted, "the recent migration of broadcast television stations to primarily UHF frequencies basically eliminates any probable interference to television channels 4 or 5." VHF TV channel 4 occupies 66 to 72 MHz.

"Because the Zook *Petition* is based on a faulty premise -- that broadcasting use within the 70.0-70.5 MHz band will diminish or cease -- its argument that amateur band users could operate without causing harmful interference to any existing service lacks sufficient support to warrant our further consideration, The FCC said in a September 17 Order denying the *Petition*.

The FCC pointed out that three full-power TV stations, 110 low-power TV stations and translators, and six Class A TV stations now occupy channel 4 in the US. In addition, the Commission, through an "ongoing incentive auction proceeding," is attempting to "repurpose" a portion of television broadcast spectrum for broadband operations and "repack the remaining TV stations into a smaller frequency range." Under certain scenarios, the FCC said, channel 4 could become even more heavily populated by broadcast users in the future.

"Given the complexity of the of the incentive auction proceeding, we also conclude that it would not serve the public interest to further complicate that unique undertaking by proposing to introduce a new service into the broadcasting frequencies at this time," the FCC said. The *Order* noted that fixed and mobile services will continue to operate in the frequencies between channels 4 and 5 (76 to 82 MHz).

As Zook noted in his petition, a 4 meter band has been authorized for Amateur Radio use in the UK and in a number of other European and African countries. The FCC said that since it wasn't planning to grant Zook's petition, it declined to evaluate his claims "regarding the benefits that amateurs would derive from use of the band." Read more. --ARRL Letter

DAYTON HAMVENTION SEEKS 2015 AWARD NOMINATIONS

Dayton Hamvention® is seeking nominations for its 2015 awards for Amateur of the Year, Special Achievement, Technical Excellence, and Club of the Year. Completed nomination forms and supporting documentation are due by January 16, 2015. All Amateur Radio operators (and clubs) are eligible. Winners will be recognized at the 2015 Hamvention®, which takes place May 15-17.

The Amateur of the Year Award goes to an individual who has made a long-term, outstanding commitment to the advancement of Amateur Radio. The Technical Excellence Award is given to an individual who has made an outstanding technical advancement in the field of Amateur Radio. The Special Achievement Award honors someone who has made an outstanding contribution to the advancement of Amateur Radio, typically by spearheading a significant project. The Club of the Year award is presented to a club that has made a significant contribution to the advancement of Amateur Radio.

The Hamvention® Awards Committee makes its decisions on all awards based upon the information it receives and not on the number of nominations submitted.

Documentation that informs the Awards Committee of a nominee's accomplishments may include magazine articles, newsletters, newspaper clippings, and even videos. These materials become the property of Hamvention® and will not be returned.

Additional detail and a nomination form are available on the Dayton Hamvention® website. Submit nominations via e-mail or mail them to Dayton Hamvention Awards, PO Box 1446, Dayton, OH 45401-1446. -- *Thanks to Dayton Hamvention*

ACTOR TIM ALLEN GETS HIS HAM TICKET FOR REAL

Actor and comedian Tim Allen now not only plays an Amateur Radio operator on television, he *is* one! Allen got his Technician ticket on September 4, but did not release the news until this week. In his weekly ABC comedy TV show "Last Man Standing," Allen plays Mike Baxter, KA0XTT, and the show,

which starts its new season October 3, has featured ham radio in some episodes (Allen's TV wife Mandy Baxter is KF0XIE). "Last Man Standing" producer John Amodeo, NN6JA, told ARRL that the agreement with Allen was that "we would not publicize his license until he approved it." Allen subsequently revealed to Tom Medlin, W5KUB, for one of Medlin's webcasts that he had passed his Technician license test but, per Allen's request, did not mention his call sign, Amodeo said. The call sign has since been disclosed elsewhere.

"The Amateur Radio operators on the crew of 'Last Man Standing' are delighted that Tim has taken and passed his Technician exam and received his own, real call sign," Amodeo said. "It took more than 3 years to make it happen, and it started with Tim's personal interest in radio technology and his request to make the Mike Baxter character an Amateur Radio operator." The ham shack on the show is a working station.

More than 2 dozen members of the "Last Man Standing" crew -- and now Allen, its star -- have been inspired by the show's Amateur Radio component to get licensed. On September 28, the K6H "Hollywood Hamnado" special event station was on the air, with "Last Man Standing" crew members at the helm from the show's set.

Amodeo said K6H went very well. "We had about 35 operators and guests on Stage 9 here at CBS Studio Center" he told ARRL. "All enjoyed being on the set of 'Last Man Standing.' The feeling was like a Field Day and a mini Hamvention." Amodeo said that all six K6H stations had "continuous contacts from start to finish."

Most of the K6H event and several interview segments, including one with the VEs who administered Allen's test, have been posted on Medlin's website.

Amodeo expressed gratitude to the ARRL for its "continued support," starting with the assistance of former ARRL Media and Public Relations Manager Allen Pitts, W1AGP, in the creation of the KA0XTT call sign and the more recent assistance of ARRL VEC staffers Maria Somma, AB1FM, and Amanda Grimaldi, KB1VUV.

"We hope Tim will find Amateur Radio to be an enjoyable and useful hobby for many years to come," he added. --ARRL Letter

NEW $21.40 VANITY CALL SIGN FEE NOW IN EFFECT

The new Amateur Service vanity call sign regulatory fee of $21.40 became effective on September 11. The FCC released a *Report and Order and Further Notice of Proposed Rulemaking* (R&O) on August 29, in which it recalculated the fee to $21.40 for the 10-year license term. The $5.30 increase represents the largest vanity fee hike in many years. In the past, new vanity fees did not become effective until 30 days after their publication in The Federal Register, which occurred on September 11.

The FCC reported there were 11,500 "payment units" in FY 2014, and that the vanity program generated an estimated $230,230 in FY 2013 revenue. The Commission estimated that it would collect nearly $246,100 in FY 2014 vanity call sign fees.

The vanity call sign regulatory fee is payable when applying for a new vanity call sign or when renewing any vanity call sign designated as "HV" in the FCC's ULS database.

As of October 1, 2013, the Commission no longer accepts checks -- including cashier's checks -- for the payment of regulatory fees. All payments must now be made by online ACH payment, online credit card, or via wire transfer. Any other form of payment will be rejected and returned to the applicant. --ARRL Letter

MOON-BOUND HAM RADIO PAYLOAD WILL TRANSMIT EARTHLY MESSAGES FROM SPACE

The Amateur Radio payload on the lunar-orbiting 4M-LXS spacecraft is set to carry up to 2500 brief digital messages into space for retransmission via JT65B mode on 145.990 MHz. China recently announced plans to launch the orbiter carrying the 14 kg battery-powered payload, developed by

LUXspace in Luxembourg. The International Amateur Radio Union (IARU) is a partner in the experiment. Getting a message into space required registering and uploading one via the 4M website. A "73 de W1AW" message was among those uploaded before the message collection site closed on September 17. While the window was open, the site gathered messages of up to 13 characters -- the maximum for JT65 transmissions -- to transmit "from the moon," the 4M Manfred Memorial Moon Mission website said.

Signals from the Amateur Radio payload can be decoded using the free WSJT software by Joe Taylor, K1JT. The Manfred Memorial Moon Mission memorializes Manfred Fuchs, the late founder and chairman of LUXspace parent company OHB of Bremen. He died in April. The 4M mission is expected to launch sometime after 1800 UTC on October 23.

According to LUXspace, the 4M spacecraft will transmit continuously on 145.980 MHz (± 2.9 kHz) at 1.5 W into a simple quarter-wave monopole antenna. "This will give S/N comparable to EME signals at Earth's surface," LUXspace said. "The transmission is based on a 1-minute sequence and a 5-minute cycle. The transmission will start 4670 seconds (77.8 minutes) after launch."

The 4M mission was detailed during a presentation the EME 2014 conference held recently in France. A paper, "4M Mission: A Lunar Flyby Experiment" also is available. During the lunar flyby, the spacecraft will be about nearly 248,000 miles from Earth and between 7440 and 14,480 miles from the Moon. The spacecraft will be part of the last stage of the lunar mission. The planned trajectory calls for a lunar flyby and return to Earth, with a 90 percent chance that the spacecraft will re-enter Earth's atmosphere. LUXspace has provided a tracking tool on its website. Read more. -- *Thanks to LUXspace, AMSAT-UK*

QATARI ES'HAIL 2 SATELLITE WILL INCLUDE AMSAT-DL PHASE 4 AMATEUR RADIO TRANSPONDERS

Gunter's Space Page has reported that the *Es'hail 2* communications satellite will carry analog and digital Amateur Radio transponders. The new satellite, which will be operated by Es'hailSat, the Qatar Satellite Company, will be in a geostationary orbit, positioned at the 26° East "hotspot" position for TV broadcasting to the Middle East and North Africa. Launch is planned for late 2016.

Es'hail 2 will provide the first Amateur Radio geostationary communication capability linking Brazil and India. It will carry two AMSAT-DL-designed Phase 4 Amateur Radio transponders, consisting of a 250 kHz linear analog transponder and an experimental digital modulation transponder with an 8 MHz bandwidth. Uplinks will be in the 2.400-2.450 GHz range, with downlinks in the 10.450-10.500 GHz Amateur-Satellite Service allocation. Both transponders will be equipped with antennas capable of providing full coverage over about one-third of Earth's surface.

The Qatar Amateur Radio Society and Qatar Satellite Company are cooperating on the Amateur Radio project. AMSAT-DL is providing technical support. -- *Thanks to Gunter's Space Page via AMSAT News Service*

FCC COMMISSIONER SAYS THEY WILL LOOK AT LOW AND HIGH FOR 5G SPECTRUM

Some UHF and Super High Frequency spectrum could be up for reassignment at some future date. This when the United States begins ushering in the next generation of broadband technology known as 5G.

In a September 22nd talk before a communications industry conference in Atlanta Georgia, FCC Commissioner Jessica Rosenworcel said that we can no longer limit ourselves to frequencies in the traditional range. We need to look elsewhere. The only question said Rosenworcel is where.

She then said, and we quote: "First, I think we need to look low. We should explore if spectrum in the 400 MHz range can be repurposed for mobile broadband use." She went on to note that will not come overnight, because this band is segmented into many small parts. These parts are a puzzle that does not fit back together easily. Rosenworcel also noted that if we can find a way to put even a few pieces together, we may be able to develop a new swath of airwaves prime for mobile broadband. But the

FCC Commissioner did not limit her comments to the 400 MHz range.

She also noted and we again quote: “I think we need to look high. Very, very high. Let’s bust through our old 3 GHz ceiling. Let’s take a look at spectrum all the way up in the 60 GHz and maybe all the way to 90 GHz. At these ranges, we can aggregate spectrum and allow data intensive applications to ride across hundreds of megahertz at a time. ”She ended this part of her presentation by noting that a look low and look high policy like the one she is suggesting will require thinking through some novel technical and policy issues. But says Commissioner Rosenworcel, if we get them right, we will have more resources to play with as we move to next cell phone generation networks.

SHORTS

JOSEPH LAWRENCE, K9RF, INDIANA SECTION MANAGER - reminds us that the ARRL is the national association for amateur radio and provides service to all amateur radio licensees. To that end, he wants to make sure that all hams, both ARRL members and non-members are aware of the current and archived section newsletters. They are available at the following URL:

http://inarrl.org/section_monthly_news.html

SPACE SYMPOSIUM OCTOBER 10-12 TO MARK AMSAT'S 45TH ANNIVERSARY – AMSAT reports that preparations for its Space Symposium in Baltimore October 10-12 are moving into high gear. This year's Space Symposium will, in part, celebrate AMSAT's 45th anniversary. Registration remains open.

The AMSAT Space Symposium's keynote speaker with be Jan King, W3GEY, a founding member of AMSAT and a former member of the Board of Directors and vice president of engineering. He'll deliver his talk, "Never, Never, Never Give Up!" during the Symposium banquet on Saturday, October 11.

One of the original Tuskegee Airmen, Col Charles E. McGee, will attend on Friday, October 10. He will talk about his experiences as a Tuskegee Airman and as an Army Air Corps and Air Force Pilot. McGee holds a US Air Force record of 409 fighter combat missions flown in World War II, Korea and Vietnam and has received numerous awards for his service, including the Congressional Gold Medal.

An evening reception Friday, October 10, will include a "space auction. "All proceeds will support AMSAT's two major initiatives -- the development and launch of the Fox satellite series and the Amateur Radio on the International Space Station (ARISS) program. AMSAT is seeking donations of "specialty items" with a minimum value of $100. Contact Frank Bauer, KA3HDO.

Informal tours will be available for Symposium participants on Sunday, October 12, of Baltimore Inner Harbor, including the Aquarium, the B&O Railroad Museum, the Edgar Allan Poe House, or the National Electronics Museum, which is opening exclusively for AMSAT on Sunday, 1-3 PM. Contact Dan Schultz, N8FGV.

A tour of the Udvar Hazy National Air and Space Museum is planned for Monday, October 13. -- *Thanks to the AMSAT Symposium Committee via AMSAT News Service*

SATELLITE CARRYING AMATEUR RADIO PAYLOAD LAUNCHED TO INTERNATIONAL SPACE STATION – When the commercial SpaceX Falcon 9 resupply vehicle lifted off from Cape Canaveral to the International Space Station on September 21, it also carried the SpinSat satellite, which includes an Amateur Radio payload. The satellite will be stowed aboard the ISS until deployment later this fall from the airlock of the Japanese Experiment Module.

Developed by the Naval Research Laboratory, the 125-pound SpinSat is a 22- inch diameter sphere that carries a 2W 9600 bps AX.25 packet radio store-and-forward system on 437.230 MHz. The satellite's primary mission is to demonstrate a new micro-thruster technology, from which SpinSat derives its name; its 12 electronically controlled solid-propellant thrusters will be fired in pairs to spin the spacecraft.

While in space, SpinSat will be used in a test to calibrate the Space Surveillance Network. Lasers will be aimed at the spacecraft from Earth, and the reflected light measured to determine the where the

satellite is passing overhead. SpinSat also will model the density of the atmosphere.

Equipped only with primary batteries and just 4.8 grams of fuel, the satellite's working phase is expected to last up to 6 months. -- *Thanks to AMSAT News Service via Trevor, M5AKA; NASA, and SpaceX*

THE 442.900 MHZ REPEATER IN DANVILLE IS BACK ON AIR – using the high Antenna. A PL-Tone of 136.5 Hz is now required in order to access the repeater. Although the 442.900 MHz Repeater is a RACES repeater, it is open to general use whenever RACES is not using the it The 442.900 can be linked to the 147.165 MHz repeater if necessary.

FREE GREY LINE SOFTWARE - Simon Brown, G4ELI has released a simple Windows program which displays Gray-line, Geomagnetic Indices, Solar Data as well as Sunrise and Sunset times. The program is free of cost and can be downloaded at tinyurl.com/G4ELI-gray-line.

SPACE WEATHER PREDICTION CENTER WEBSITE – A new Space Weather Prediction Center website will be operational next Tuesday, October 14. Following that date the www.spaceweather.gov and www.swpc.noaa.gov sites will link to the new web site which is in late beta-testing. The familiar Spaceweather website will remain active as a legacy site for another 60 days as a transition. – Daily DX [Editor's note: This is not the familiar Spaceweather.com web site. No possibility of confusion here!]

DIGI-KEY ONLINE SCHEMATIC EDITOR – Electronics distributor, Digi-Key, has released a free online schematic editor. Scheme-it is a free online schematic and diagramming tool that allows anyone to design and share electronic circuit diagrams. It works natively in all major web browsers without requiring the use of any plug-ins. Of course, it links rather easily to the Digi-Key parts catalog!

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