

The “Official Organ”

The Official Newsletter of the Johnston Amateur Radio Society, Inc

September 2018 edition

HURRICANE FLORENCE:

As I am typing the Official Organ out, we are bracing for Hurricane Florence. This storm has made so many changes in its forecast that nobody really knows for sure what it will do. No matter what it does, please make sure that if you are in a low-lying area, move to higher ground or a shelter. Make sure that everything that can be blown away is either put in a storage building or brought inside if possible. Make sure that the batteries for your handhelds are fully charged. Make sure that you have enough food and water to last at least three days.

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KA0GMY

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JARS Meeting next Thursday:

We will be having our monthly JARS meeting next Thursday, September 20th at Bernie's Southern Gourmet located at 10365 US-70 Bus Clayton, NC 27520. We will have Marshall Sherard, KE4ZNR. will be presenting a program on Scanner Listening.

Mr. Sherard is a member of the Triangle area Scanner and Short-Wave listening club, and works professionally installing radios in police cars and other public safety vehicles.

He will bring with him several of the new type scanners, explain how they work, and answer any questions he can.

If any of our members are interested in purchasing a scanner in the near future, they should come to this meeting. This should be an extremely informative program.

President's Report:

Once again, I find myself at the helm of the best amateur radio club that I know of. I am honored to be president of JARS not once, but twice. I would like to thank Mark-N4MQU for leading our fine club for the past year. While there were some tumultuous times this past year, we came through without any major malfunctions. Mark made me aware of several things that we were supposed to be doing, but for one reason or another we were not.

Some of the things that I would like to do during my term as president are send out the minutes of the meeting in a timely manner after the

meeting as well as post them in the newsletter. That way those that can not make the meetings will be aware of what is going on in the JARS. In addition, it will notify members of any major events or decisions in the club that they may want to take part in.

Also, I agree with having a board/officers meeting. This will be an open meeting, so all are invited. If you have something that you want discussed at the board/officers meeting, make sure that you get it to a board member/officer. The minutes of these meetings will be included in the newsletter.

I hope to make this a fun and productive year.

Mike KD4MC

Vice Presidents Report:

From your Vice-President Scott Wilkinson
KJ4TUC

I am honored that you have selected me to serve as your Vice-President for the 2018-19 term. When I first joined JARS, I would have been satisfied with just being a member and didn't really think of ever becoming an officer. Thank you for your support and if you have a suggestion for me just send me an email.

As many of you know my background is in Emergency Services/Public Safety and Law Enforcement. I hope to be able to use some of my training and skills as I carry out my duties as Vice-President. One of the many responsibilities as Vice-President is to coordinate educational programs that would be of interest to our members. This year I would like to focus on Emergency Preparation and how JARS can help Public Safety and other organizations during and after an emergency. I would also like to focus on JARSComm (our big

yellow communications command post truck). This would involve JARS members equipping it with radios and equipment necessary to have it recognized by Johnston County Emergency Management as an official Emergency Response Vehicle. I also strive to earn the respect of other area ham clubs and foresee JARS as becoming the BEST Ham Club in four (4) counties and respected throughout the state of NC.

Speaking of JarsComm, I recently had the opportunity to participate in an Emergency Preparedness Mass Casualty Disaster Drill in Edgecombe County. In addition to myself, representing JARS were Mike Callam, Velda Callam, and Mark Gibson. The event was coordinated by Jonathan Wright, and several other Ham radio operators were present. The purpose of the exercise was to help train paramedic students at Edgecombe Technical Community College. Ham Radio operators and JarsComm provided for and supervised all communications during the event. During the event we did have a "Real-Life" emergency and JarsComm handled the communications for that. It was a learning experience on both sides. As Ham operators we learned how to work with other agencies and supply their communications needs. The participants learned communications skills of coordinating units in the field and calling in patient status reports to the hospital, and that Ham radio is available to them when they need it.

The topic for our educational program at the September 20 meeting is Scanner Listening.

There are so many new scanners on the market today that it makes it very confusing when we want to purchase one to fit our individual needs. I have invited Mr. Marshall Sherard KE4ZNR to talk to our group about scanner

listening and answer any questions we may have about scanners. Mr. Sherard is very knowledgeable of scanners, ham radio, and commercial radio communications. In addition to being a Ham Extra, he also holds a commercial General Radiotelephone Operator's License. Mr. Sherard is a member of the Triangle Area Scanner and Short-Wave listening Club, and is the North Carolina/South Carolina Forum Moderator and Database Administrator for Radioreference, and a communications consultant for Public Safety in central North Carolina. Professionally Mr. Sherard works as a Radio Systems Engineer within Communications Maintenance for City of Durham NC. He has had much experience in installing radios and other electronic equipment in police cars, ambulances, and other emergency vehicles.

If any of our members are interested in purchasing a scanner in the near future, they should come to the club meeting on September 20.

Scott Wilkinson KJ4TUC / NC1415LE
919-218-8166

Secretary Report:

JARS Meeting August 16,2018

The meeting was called to order by president Mark Gibson, N4MQU.

Prayer was led by Grant Bennett.

Secretary report was read by Peggy Lee, KJ4OPH and approved.

Net Whip report was given by Stephen Fowler, KJ4QNW. All nets are being called. However, Stephen say that we need more net controllers and some substitute net controllers. Any

interested in calling a net, or being a substitute net controller, get in touch with Stephen Fowler.

There was no treasurer report as Paul was not present.

Repeater Report by Van Lee, KM4TC. Nothing new to report.

LOM Award Ryan Leathers, N4RL, presented the LOM to Mark Gibson, N4MQU for the support that Mark has shown toward Ryan and the club.

New Business Auxcomm- if you received an email from Scott Lewis regarding AuxComm, please reply to it.

Old Business Elections were held for JARS Officers. Below are the results:

President	Mike Callam
KD4MC	
Vice President	Scott Wilkinson KJ4TUC
Secretary	Velda Callam
K4VJC	
Treasurer	Paul Dunn
KD4BJD	
Membership	Dianne Young
KE4VNX	
Net Whip	
Stephen Fowler KJ4QNW	
Media/Newsletter	Mike Callam
KD4MC	
Parliamentarian	Ryan Leathers N4RL
Members at Large	Stan Disbrow
WA2KQY	
Williams	Doug
KS4TI	

Peggy, KJ4OPH went over what was discussed at the JARSFest meeting on Tuesday, August 14th. JARSFest is the 3rd Sunday in November, November 18th. At the meeting, the hours of JARSFest were changed to 8AM through 130PM.

Tommy Rich, N4CBI will be cooking at JARSFest this year.

Meeting was closed at 745PM.

Velda Callam K4VJC

Life on the Farm:

Just when you think that life is getting back to whatever resembles normal, someone throws a wrench in the works. Velda has finally recovered from her shoulder surgery. She has been fired by the doctor and by physical therapy only to have to have surgery on her left elbow and wrist. She has carpal tunnel in her elbow and wrist. They are going to do both surgeries next month.

Then, on top of all that, the same doctor thinks I have a torn rotator cuff in not one, but both shoulders. I am going to get the left one done first after Velda has a full recovery from her surgeries.

I have been wanting a kayak for some time now. This past weekend, we went and got one. I didn't plan on using it until next spring. However, with Hurricane Florence bearing down on us, I might have to use it on Saturday just to go check the mail. We are as about ready as we can be here. We have everything either battened down, tied down or locked down. We have gas for the main generator and the back up generator. The pantry is stocked and we

have food in the fridge. If we did not have the generators, the fridge would not be stocked.

With the uniqueness and unpredictability of Florence, I want everyone to be safe and use common sense and we will all make it through.

73 de Mike (KD4MC), Velda (K4VJC), Remmington (Hairy Hound) and Tabitha (Krazy Kat).

[Thank You from Steve Mowels-KA0GMY](#)

THANK YOU FAMILY

Hi folks we have all referred to people that are not a true family (blood related or thru marriage) as family. Some of us say this kind of tongue in cheek while others say it and mean it. It boils down to the fact that we can speak badly about a member of our group but heaven help an outsider doing it. With this in mind I want to say thank you to my JARS family for the help and support given to my son and I over the past couple of months as we try to raise money for a kidney transplant. To give just a little background I was told that I would need a kidney transplant as my functions were becoming diminished. My son decided to help the old man out and went and got tested only to be called back and told his functions were lower than mine and he needed a transplant before I did. Basically in sitting down and figuring the cost of what he had saved, what I could afford to give him and what the insurance would pay plus

the cost of being out of work for the time they quoted it roughly boiled down to needing around \$29,000.00. We setup a go fund me page (<https://www.gofundme.com/6zhp2t-kidney-transplant>) and we have raised \$3500.00 in a little over a month. So once again thank you to all the supporters and all the family for the moral support.

Steve (KAOGMY) and Gloria

Benson Fire Department Raffle:

Stephen Fowler, KJ4QNW, asked that I post this as he is a member of the Benson Fire Department.



Stephen says that he will have tickets at the meeting next Thursday, so please get up with him if you want one (or more).

ARRL News:

Ham Radio to be Represented at 9th Annual World Maker Faire in New York City

The Garden School, K2GSG, and Hall of Science Amateur Radio clubs (ARC) in New York City will join forces this month to put Amateur Radio on display during the 9th



annual [World Maker Faire NYC](#) at the New York Hall of Science in Corona, Queens, September 22 - 23. Last year's World Maker Faire NYC drew some 90,000 attendees. The Garden School's ham radio club advisor and science teacher John Hale, KD2LPM, said participating youngsters will introduce Amateur Radio and help attendees construct small, electronic "Maker Key" Morse code oscillators. The project

helped Garden School win a blue ribbon at last year's Maker Faire.

Something new this year: visiting radio amateurs can build a tape-measure Yagi antenna for satellite or terrestrial use. In cooperation with the Hall of Science ARC, amateurs will attempt to make satellite contacts with the antennas as a demonstration, Hale said.

The Hall of Science will host a working HF radio demonstration called "When Disaster Strikes, Amateur Radio is Ready." Radio amateurs will be on hand to operate the radios and encourage those attending the Faire to attempt to make contacts.



Visitors to the 2017 World Maker Faire construct a code practice oscillator kit.

Established in 2016, the Garden School ARC is an integral part of the school's curriculum for educating students in STEM (science, technology, engineering, and math) disciplines. The Garden School ARC students are mentored by the co-exhibiting Hall of Science Amateur Radio Club (WB2JSM/WB2ZZO). Both are ARRL-affiliated clubs.

ARRL Marketing Manager Bob Inderbitzen, NQ1R, believes that Maker Faire events offer excellent opportunities to give greater exposure to Amateur Radio. "Exhibiting at a Maker Faire is a great way for radio club members to share

their enthusiasm for ham radio with the public," he said.

Inderbitzen often gives tips to ham radio groups considering a Maker Faire exhibit. "Your exhibit should represent radio communication as innovative, hands-on, and cool," he advised. "Not everyone will want to become a ham, but have radio club, class, and licensing information on hand for Faire attendees who seem especially interested."

Hurricane Watch Net Manager: September is Gearing Up to be an Active Month

While the Hurricane Watch Net ([HWN](#)) on September 5 formally secured operations initiated ahead of Tropical Storm Gordon, which had been forecast to become a Category 1 hurricane, the HWN is keeping close watch on Hurricane Florence, currently a Category 3 storm still out in the Atlantic.



"Computer models are all over the place, but the people of Bermuda should closely monitor the progress of Florence," HWN Manager Bobby Graves, KB5HAV, told ARRL. "Since 2014, the island has been hit by four storms." Graves said the net could soon find itself tracking Helene (now called Invest 92L) and a developing system that could become Isaac.

"Bottom line, September is gearing up to be an active month. I'm just praying these storms remain away from land," Graves said.

As of mid-week, Hurricane Florence was some 1,060 miles east-northeast of the northern Leeward Islands, and about 1,170 miles east-southeast of Bermuda, with maximum sustained winds of 115 MPH. The storm was moving to the northwest at 12 MPH. The National Hurricane Center predicted Florence would turn back toward the northwest early next week. Although it weakened somewhat this week, the storm was predicted to remain a strong hurricane into next week.



The HWN had activated on September 4, while Gordon was still a tropical storm. "The net rarely activates for tropical storms, unless they are forecast to become hurricanes prior to landfall or at the request of the forecasters at the National Hurricane Center," Graves explained. Gordon had been forecast to become a Category 1 hurricane prior to landfall. Some Gulf Coast ARES teams activated briefly prior to Gordon's landfall on the Gulf Coast on the evening of September 4 near the Mississippi-Alabama state line. A child was reported to have died as a result of the storm, which is generating flood-causing rainfall as it progresses into Mississippi. The storm also knocked out power for tens of thousands in the region.

"The 2018 Atlantic Basin hurricane season is still young, so please, do not drop your guard," Graves advised. "If you haven't done so already, now would be a good time to review your Family Emergency Plan and your Emergency Supply Checklist. We have links to download both, found in the middle of our website [homepage](#)."

Reverse-Polarity Sunspot Group Does Not Belong to Cycle 25, Observatory Says

The Royal Observatory of Belgium's Solar-Terrestrial Centre of Excellence ([STCE](#)) [has asserted](#) that the reverse-polarity sunspot group 2720 observed in late August belongs to the current solar cycle -- cycle 24 -- and does not represent the start of cycle 25.

"Because of its reversed polarity, some websites claimed sunspot group 2720 was possibly one of the first groups of new Solar Cycle 25," the Centre said. "This is simply not true, in view of its very low 8° latitude. The next Solar Cycle 25 sunspot group should have *both* reversed magnetic polarity *and* much higher heliographic latitude, typically 20° to 40° from the equator. Only two tiny, short-lived numbered sunspot groups are currently assigned to new Solar Cycle 25, sunspot group 2620 in December 2016 and 2694 in January 2018."

STCE said that while both of those small sunspots have been assigned to cycle 25, some uncertainty exists as to just which sunspot cycle they actually belong to. STCE said some additional sunspot groups that belong to cycle 25 were so tiny and short-lived that they were not assigned a sunspot number. "During each solar cycle, about 3% of all active regions have reversed polarity but do not belong to the previous or next solar cycle," the Centre said. "With 2,000 to 3,000 sunspot groups per solar cycle, this means that every solar cycle has a few dozen reverse-polarity sunspots that

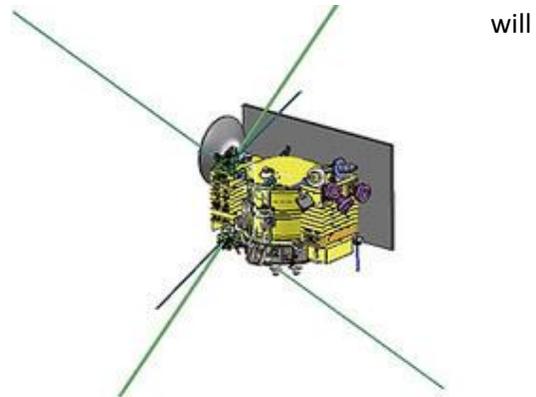
belong to the ongoing sunspot cycle despite their reverse polarity."

After examining magnetograms of the sun's surface, well-known Amateur Radio solar observer and propagation authority Carl Luetzelschwab, K9LA, agreed that AR2720 is reversed in polarity from other sunspots in the northern solar hemisphere. What confuses the issue, he said, is its low latitude, as a cycle 25 sunspot area should be at a much higher latitude.

The same weekend of sunspot group 2720, a radio blackout lasting about a day took place, affecting the HF amateur bands as well as GPS systems. Solar watcher Tamitha Skov, in her YouTube report, [called](#) the G3-level geomagnetic storm "one of the top five storms of the solar cycle."

Radio Amateurs Receive Images from Chinese Lunar Satellite

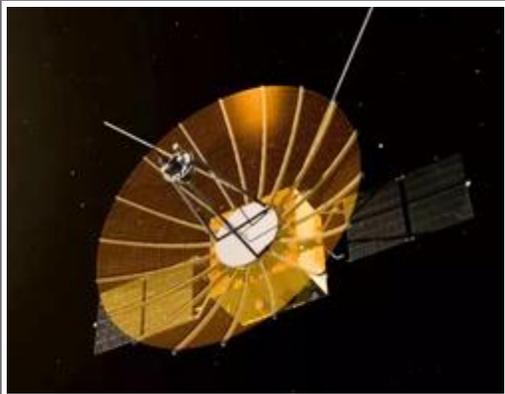
Some earthbound radio amateurs and sky watchers have received images from a tiny Chinese satellite now orbiting the moon. In May, China launched the DSLWP-A and DSLWP-B microsattellites -- also known as *Longjiang-1* and *Longjiang-2* -- into a lunar transfer orbit, although *Longjiang-1* was apparently lost in the process and likely remains in deep Earth orbit. They were deployed as secondary payloads with the *Queqiao* relay satellite as part of the Chang'e 4 mission to the far side of the moon. DSLWP stands for "Discovering the Sky at Longest Wavelengths Pathfinder." The satellite



will test low-frequency radio astronomy and space-based interferometry, and while it carries Amateur Radio and educational payloads, no transponder is aboard. The Chang'e 4 mission will be the first-ever attempt at a soft landing on the far side of the moon. The Chang'e-4 lander and rover are scheduled to launch in December. The Harbin Institute of Technology (BY2HIT) developed and built the DSLWP spacecraft and is overseeing that mission. The microsat also carries optical cameras from Saudi Arabia.

An open telecommand protocol allows radio amateurs to take and download images. The spacecraft transmits on 70 centimeters (435.400/436.400 MHz), with 250/500 bps GMSK using 10 kHz wide FM single-channel data, with concatenated codes or JT4G. JT4 uses four-tone FSK, with a keying rate of 4.375 baud; the JT4G sub-mode uses 315 Hz tone spacing and 1,260 Hz total bandwidth.

According to an [article](#) in *GBTimes*, *Longjiang-2* (DSLWP-B) used its own propulsion system to slow down and enter lunar orbit, while the relay satellite "continued past the moon to its special destination." *Longjiang-2* has used a student-developed camera to take images of the moon, Mars, the sun, and other celestial objects. Data and images have been downloaded by hams and satellite-tracking enthusiasts around the world, including the US, [Brazil](#), China, the [Netherlands](#), and [Italy](#).



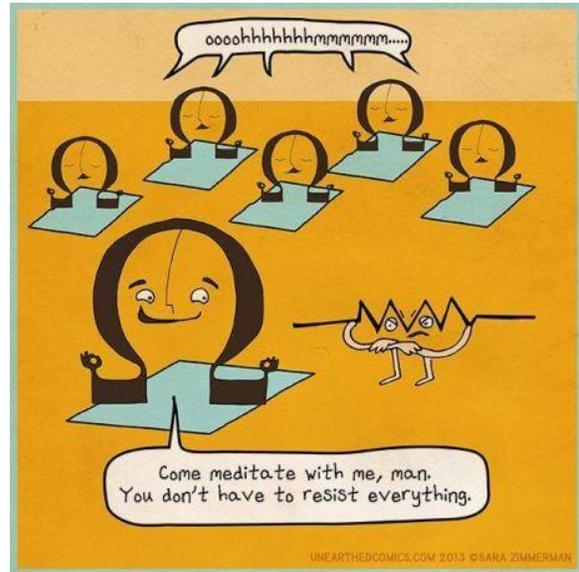
The *Queqiao* communications relay satellite. [CASC image]

The Harbin Institute of Technology team also operates [LilacSat-1](#), a 2U Amateur Radio CubeSat launched as part of the European QB50 initiative, and [LilacSat-2](#) (CAS-3H), an Amateur Radio and technology test satellite.

The *Queqiao* communications relay satellite is required for the lunar far-side landing to facilitate communication with a not-yet-launched lander and rover because the moon's far side never faces Earth, and some significant scientific measurements from the dark side of the moon require real-time contact with Earth. *Queqiao* was developed by the China Academy of Space Technology (CAST).

The Harbin Institute of Technology Amateur Radio Club has invited more radio amateurs to get involved with the DSLWP mission, and QSL cards have been designed for different flight phases for amateurs who successfully receive telemetry or make contact.

Ham Radio Humor:



Johnston County ARRL VE Team:



The Johnston County ARRL VE Team will be hosting an amateur radio exam session on Monday, September 24th at 7PM at the American Red Cross in Smithfield located at 805-A S. 3rd Street. The cost is \$15.00. You will also need a valid photo ID and a copy of your license if you are coming in for an upgrade. If you do not have an FRN, go to: <http://wireless.fcc.gov/uls/index.htm?job=home> and register for one. This keeps you from having to disclose your Social Security Number.

More information can be obtained by getting in touch with Michael Callam-KD4MC either at 919-934-9623 or mcallam@centurylink.net.

JARS Officers

Pres Mike Callam KD4MC

V.P. Scott Wilkinson KJ4TUC

Sec. Velda Callam K4VJC

Treas. Paul Dunn KD4BJD

Membership Dianne Young KE4VNX

Net Whip Stephen Fowler KJ4QNW

Media/Newsletter Mike Callam KD4MC

Parliamentarian Ryan Leathers N4RL

Members at Large:

Stan Disbrow WA2KQY

Doug Williams KS4TI

Johnston Amateur Radio Society, Inc.

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That does it for another edition of the "Official Organ". Everybody stay safe during the hurricane, monitor your weather radio and 146.880 for Skywarn. Also, there will be someone on 147.270. If the '27 goes down, we will be using 147.270 simplex.

73 de Mike KD4MC

