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February 29, 2024

John E. Ross, KD8IDJ, [Editor](#)

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#### HAARP Needs Ham Help

Amateur radio operators and radio astronomers are being asked to help monitor a new research project by the [High-frequency Active Auroral Research Program](#) (HAARP).

The project officially began on February 28, but it will run until March 3, 2024.

Some examples of experiments planned for the project are the production of extremely low frequency (ELF) and very low frequency (VLF) emissions and studies on the effects of ionospheric plasma waves on orbiting satellites. HAARP

scientists believe these experiments will help lead to a greater understanding of the production and enhancement of ELF and VLF waves, as well as lay groundwork for future studies of satellite interactions with space plasma.

Operating frequencies will vary, but all HAARP transmissions will be between 2.8 and 10 MHz. Actual transmit days and times are highly variable based on real-time ionospheric and/or geomagnetic



The High-frequency Active Auroral Research Program array. [University of Alaska Fairbanks, photo]

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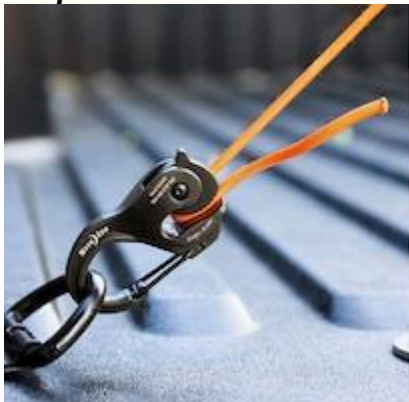
conditions. There are no specific data collection requests from funded investigators, but reception reports from hams are appreciated and may be submitted to [uaf-gi\\_haarp@alaska.edu](mailto:uaf-gi_haarp@alaska.edu) or mailed to HAARP PO Box 271, Gakona, AK 99586.

Below are the anticipated operating times and frequencies:

- March 1 from 0130 to 0800 UTC: 2.8, 3.25, 3.3, 4.1, 5.4, 6.8, and 9.6 MHz
- March 2 from 0230 to 0900 UTC: 3.25, 4.5, 5.8, and 9.6 MHz
- March 3 from 0200 to 0800 UTC: 2.8, 3.25, 3.3, 4.1, 5.4, 6.8, and 9.6 MHz

Numerous experiments will operate at frequencies based on the f0F2 critical frequency calculation from the Gakona, Alaska, ionograms. For updates on ionospheric conditions in Gakona, consult the ionograms from the [HAARP Diagnostic Suite](#).

**Editor's note: Amateurs are reminded that another way they can use their stations to advance scientific understanding of the ionosphere is participating in the upcoming [HamSCI Solar Eclipse QSO Party](#) and associated events surrounding the April 8 eclipse.**



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Preparation Underway for Severe Spring Weather

The severe weather season (March through May) is fast approaching, and [National Weather Service](#) (NWS) offices across the country are getting ready.

Warning Coordination Meteorologist Brandon Peloquin at the Wilmington, Ohio, NWS office said many of the NWS offices across the country meet with partner organizations in the spring to make plans for the weather ahead. "Amateur radio operators and weather spotters are extremely important, and we could not do what we do without them," he said. "In fact, many of the watches and warnings issued are made because weather spotters provided critical information."

Peloquin said that Doppler radar is a great tool for tracking storms, but weather spotters have a different vantage point and can see things that radar can't.

Severe Weather Awareness Weeks are scheduled by each state and usually occur during March to remind and educate communities about severe weather seasonal threats and how to avoid them. The NWS [SKYWARN®](#) Storm Spotter Program is a volunteer program with almost 400,000 trained severe weather spotters. Spotter training is



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available at the state level and is offered several times each year, and classes can be found [at this link](#). Every December, NWS and ARRL hold [SKYWARN Recognition Day](#) to honor all SKYWARN storm spotters and amateur radio operators for their contributions during severe weather.

Amateur radio is a strong tool for community resilience during times of severe weather and other emergencies and is useful for public service throughout the year. Those interested in using their license privileges to serve others are encouraged to participate in their local Amateur Radio Emergency Service® (ARES®) groups. Find out how at [www.arrl.org/ares](http://www.arrl.org/ares).

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YLRL Celebrates International Women's Day with Special Event  
The [Young Ladies Radio League](#) (YLRL) is hosting an International Women's Day YL Parks on the Air® (POTA) Party from 0000Z - 2359Z on March 8.

[International Women's Day](#) is a global day celebrating the social, economic, cultural, and political achievements of women. This year's theme is Inspire Inclusion.

To celebrate the day, the goal of this special event is to activate any POTA park during the 24-hour event window using any mode and frequency within your license class. Contacts can be submitted to the POTA database. YLRL encourages participants to wear pink, decorate their station, and to share experiences and photos on social media using the hashtag #YL\_POTA\_Party.



Jherica Goodgame, KI5HTA, operates a POTA activation.

The YLRL was founded in 1939 by Ethel Smith, K4LMB (SK), who was the group's first president, and it continues to use her call sign today. She served as the Section Emergency Coordinator for the ARRL Virginia Section from 1966 - 1969, and later as ARRL Assistant Director for four different Roanoke Division Directors. In 1972, she received the ARRL Roanoke Division Service Award.

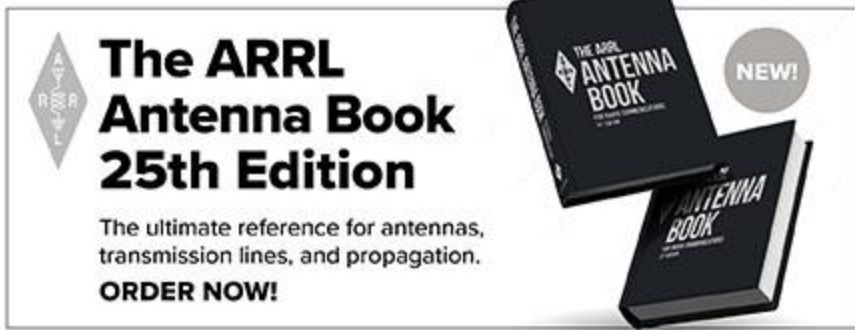
The YLRL will [celebrate its 85th year](#) in July 2024.

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### Amateur Radio in the News

ARRL Public Information Officers, Coordinators, and many other member-volunteers help keep amateur radio and ARRL [in the news](#).

["Lilburn Elementary School students speak with Astronauts on the International Space Station"](#) / WANF (Atlanta) February 11, 2024 -- *The North Fulton Amateur Radio League is an ARRL Affiliated Club.*

["Unveiling the Mysteries of Solar Eclipses Through 'Eclipse Radio' Projects"](#) / The United Business Journal (Pennsylvania) February 21, 2024 -- *The University of Scranton Amateur Radio Club is an ARRL Affiliated Club.*

["Exploring the world of ham radio: An educational event by Pine State Amateur Radio Club"](#) / Bangor Daily News (Maine) February 23, 2024 -- *The Pine State Amateur Radio Club is an ARRL Affiliated Club.*

[Share](#) any amateur radio media hits you spot with us.



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### ARRL Podcasts

#### On the Air

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The Joys of Being a General

The January/February 2024 issue of *On the Air*

featured a story from Brian McSpadden Gardener, KE8JVX, about "The First-Year Experiences of a

General-Class Ham," in which Brian detailed how he

got his feet wet as a General, and how he put together his first station

for HF. Brian joins this episode of the podcast to tell us a little more

about his first year as a General, as well as what he's done since

then.



## ARRL Audio News

Listen to [ARRL Audio News](#), available every Friday. ARRL Audio News is a summary of the week's top news stories in the world of amateur radio and ARRL, along with interviews and other features.

The On the Air podcast and ARRL Audio News are available on blubrry, iTunes, and Apple Podcasts -- [On the Air](#) | [ARRL Audio News](#).



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### Announcements

**Amateur radio operators have the opportunity to celebrate the anniversary of the launch of the USS Midway.** On March 9, 2024, from 1700Z - 2359Z, the ship's radio station will operate as NI6IW on 7.250, 14.320, and 14.070 MHz, as well as on PSK31, D-STAR, and the [PAPA](#) repeater system. The USS Midway is located in San Diego, California, at the USS Midway Museum. It was launched on March 20, 1945, and decommissioned on April 11, 1992. Commissioned 8 days after the end of World War II, Midway was the largest warship in the world until 1955. A QSL card is available for the special event by sending a self-addressed stamped envelope with your QSL card to USS Midway CV-41 COMEDTRA, 910 N Harbor Dr., San Diego, CA 92101. A complete history of the ship can be found at [USS Midway: A Navy Battle 'Aircraft Carrier' with An Armored Flight Deck | The National Interest](#).

### In Brief...

**The results from HamSCI's first Festivals of Eclipse Ionospheric Science event have been released.** [HamSCI](#) has announced the results from the inaugural running of the [Gladstone Signal Spotting Challenge](#). Held during the October 14, 2023, North American annular solar eclipse, the challenge was designed to recognize operators of digital mode stations who contribute valuable data to ionospheric research. Receiving stations uploaded their records to sites such as [PSKreporter.info](#), [WSPRnet.org](#), and [reversebeacon.net](#). Transmitting stations were received by stations worldwide who uploaded their results to the same databases, creating records of the transmitting stations' activities. Here is the [link to the full results](#), including participant scores and a sampling of station design details and station photographs. The next event will be held on April 8, 2024, during the North American total solar eclipse.

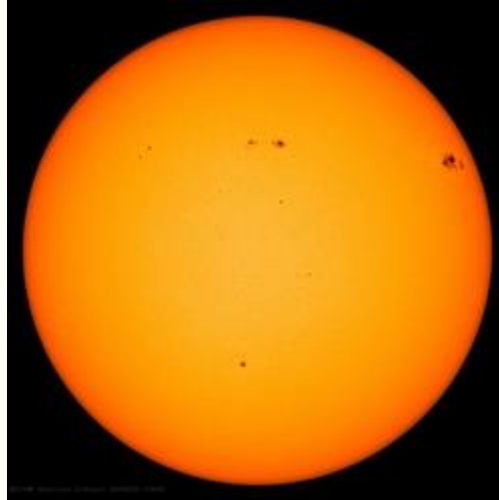
## The K7RA Solar Update

Tad Cook, K7RA, of Seattle, Washington, reports for this week's ARRL Propagation Bulletin, ARLP009:

Seven new sunspot groups emerged this week: four on February 23, one on February 25, another on February 26, and one more on February 28.

Solar activity increased this reporting week, compared to the week before. The average daily sunspot number rose from 84.4 to 108.4, and the solar flux rose from 164 to 175.

Despite the numbers rising, geomagnetic conditions were quiet. The planetary A index went from 4.4 to 8.4, and middle latitude numbers increased from 3.3 to 7.4.



This solar disk image was taken on February 29, 2024. [Photo courtesy of NASA SDO/HMI]

A solar flux prediction from the United States Air Force shows that we are currently at a peak that may return between March 20 - 24.

Predicted solar flux is 180 on February 29; 175, 170, 170, 175, and 175 on March 1 - 5; 165 on March 6 - 9; 168 on March 10; 165 on March 11 - 12; 160 on March 13 - 14; 168 and 172 on March 15 - 16; 175, 175, and 178 on March 17 - 19; 180 on March 20 - 24, and 175 on March 25 - 26.

Predicted planetary A index is 8 on February 29 through March 2, 5 on March 3 - 23, and 15, 12, and 12 on March 24 - 26.

[Spaceweather.com](https://www.spaceweather.com) reported on giant sunspot AR3590. "In only 23 hours spanning February 21 - 22, the active region unleashed three powerful X-class solar flares (X1.8, X1.7, and X6.3). The X6.3 flare is the strongest of Solar Cycle 25 so far, and the most powerful flare since the great solar storms of September 2017."

Because there were no coronal mass ejections there were no geomagnetic storms, but extreme ultraviolet radiation ionized the top of Earth's atmosphere and caused several shortwave blackouts over Hawaii and Australia during February 21 - 22.

Sunspot group AR3590 is the largest of the current solar cycle.

Here is a brief article on solar basics:

<https://www.ktvh.com/news/weather-wise/weather-wise-sunspots>

Sunspot numbers for February 22 - 28 were 46, 116, 106, 114, 133, 103, and 127, with a mean of 106.4. The 10.7-centimeter flux was 173.3, 172.9, 179.2, 180.8, 171.7, 168.3, and 179.1, with a mean of 175. Estimated planetary A indices were 6, 3, 7, 13, 11, 13, and 6, with a mean of 8.4. Middle latitude A index was 6, 2, 6, 14, 10, 9, and 5, with a mean of 7.4.

Send your tips, questions, or comments to [k7ra@arrl.net](mailto:k7ra@arrl.net).

A comprehensive K7RA Solar Update is posted Fridays on the ARRL website. For more information concerning radio propagation, [visit](#) the ARRL Technical Information Service, [read](#) "What the Numbers

Mean...", and [check out](#) the Propagation Page of Carl Luetzelschwab, K9LA.

A propagation bulletin [archive](#) is available. For customizable propagation charts, visit the [VOACAP Online for Ham Radio](#) website.

[Share](#) your reports and observations.

A weekly, full report is posted on [ARRL News](#).

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#### Just Ahead in Radiosport

- March 2 - 3 -- [ARRL International DX Contest, SSB](#) (phone)
- March 2 - 10 -- Novice Rig Roundup (CW)
- March 2 -- Wake-Up! QRP Sprint (CW)
- March 3 -- UBA Spring Contest (CW)
- March 3 -- SARL 40m SET (phone)
- March 3 -- NSARA Contest (CW, phone, digital)
- March 3 -- WAB 3.5 MHz Phone (phone)
- March 4 -- RSGB 80m Club Championship, Data (digital)
- March 5 -- ARS Spartan Sprint (CW)
- March 5 -- AGCW YL-CW Party (CW)
- March 7 - 8 -- Walk for the Bacon QRP Contest (CW)
- March 7 -- NRAU 10m Activity Contest (CW, phone, digital)

Visit the [ARRL Contest Calendar](#) for more events and information.

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#### Upcoming Section, State, and Division Conventions

- March 1 - 2 | [Greater Houston HamFest](#), hosting the ARRL West Gulf Division Convention, Rosenberg, Texas
- March 8 - 9 | [Acadiana DX Association Hamfest & Swapmeet](#), hosting the ARRL Louisiana State Convention, Rayne, Louisiana
- March 16 | [49th Annual Stuart Hamfest](#), hosting the ARRL Southern Florida Section Convention, Stuart, Florida
- March 16 | [St. Patrick's Day Hamfest](#), hosting the ARRL West Texas Section Convention, Midland, Texas
- April 6 | [Raleigh Hamfest](#), hosting the ARRL Roanoke Division Convention, Raleigh, North Carolina
- April 12 - 13 | [Green Country Hamfest 2024](#), hosting the ARRL Oklahoma State Convention, Claremore, Oklahoma
- April 20 | [Delmarva Amateur Radio and Electronics Expo](#), hosting the ARRL Delaware State Convention, Georgetown, Delaware

Search the [ARRL Hamfest and Convention Database](#) to find events in your area.

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#### Have News for ARRL?

Submissions for the ARRL Letter and ARRL News can be sent to [news@arrl.org](mailto:news@arrl.org). -- John E. Ross, KD8IDJ, ARRL News [Editor](#)

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- Listen to [ARRL Audio News](#), available every Friday.
- *The ARRL Letter* is available in an accessible format, posted weekly to the [Blind-hams Groups.io](#) email group. The group is dedicated to discussions about amateur radio as it concerns blind hams, plus related topics including ham radio use of adaptive technology.
- [NCJ -- National Contest Journal](#). Published bimonthly, features articles by top contesters, letters, hints, statistics, scores, NA Sprint, and QSO parties.
- [QEX -- A Forum for Communications Experimenters](#). Published bimonthly, features technical articles, construction projects, columns, and other items of interest to radio amateurs and communications professionals.

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