

2025 October 23 Announcements – Operating Events, Solar Report, DX and ARRL Letter

This document will be posted to the SMARC website, <https://w4olb.org/>, after the Thursday Evening Net. Click on “Files” and then “Net Announcements” on the drop down menu. The format is PDF and the highlighted links are directly clickable. Only the latest four weeks of announcements are retained.

***** Operating Events *****

From the WA7BNM Contest Calendar website come the following operating events or contests that may be of interest to SMARC members and other Amateur Radio operators. Links to the rules and regulations for each event may be found at <https://contestcalendar.com/index.html>. Select the “8 Day Calendar.”

NOTE: All times are EDT (UTC-4, unless otherwise noted, although most are listed at the WA7BNM Contest Calendar website as UTC. Translations to the correct days have been taken into account.

➤ Weekly Sprints or Short Events:

- NCCC (Northern CA Contest Club- both are tonight, Thursday)
FT4 Sprint 9:00 to 9:30 PM
Website: <https://www.ncccsprint.com/ft4ns.html>
Sprint Ladder (CW) 10:30 to 11:00 PM
Website: <https://ncccsprint.com/rules.html>
- Radiosport World Weekly RTTY Test
Thursday 9:45 to 10:15 PM
Website: <https://radiosport.world/wrt.html>
- K1USN Slow Speed Tests (SST – CW max 20-wpm)
Friday 4:00 to 5:00 PM and Sunday 8:00 to 9:00 PM
Website: <http://www.k1usn.com/sst.html>
- Worldwide Sideband Activity Contest
Monday 9:00 to 9:59 PM
Website: <https://wwsac.com/rules.html>
- Phone Weekly Test (SSB)
Tuesday 10:30 to 11:00 PM
Website: http://www.perluma.com/Phone_Fray_Contest_Rules.pdf

➤ Operating event for the entirety of 2025

- DX Marathon, 160M to 6M using CW, Phone and Digital modes, no QSL required.
Website: <https://dxmarathon.com/rules/2025/>.

➤ State QSO Parties: None. For details please see <https://contestcalendar.com/>

➤ Other activities of possible interest.

- CQ Worldwide DX Contest, SSB: Friday, 10/24 8:00 PM to Sunday, 10/26 7:59 PM, 160M to 10M (legacy bands only), SSB. Exchange: Signal report (phony baloney “59” is good enough and expected) + CQ Zone (we are in CQ Zone 04). For details, <https://cqww.com/rules.htm>.

General CAUTIONS: HF contests are allowed *only* on the “legacy” bands (i.e., 160M, 80M, 40M, 20M, 15M and 10M); there are *no* contests on 60M, 30M, 17M and 12M. Watch the band edges corresponding to the privileges of your license class and the phone edges with respect to LSB (160M to 40M) and USB (20M to 10M). Be aware of the digital modes upper frequency segment limits on each band. The lower 100-kHz segments of 6M and 2M are reserved for CW, i.e., *no* phone nor digital modes.

***** Solar Report ***** [K9JU]

Unless other wise noted, the following information comes from <https://solarham.com/>. Other sources may include <https://www.wm7d.net/>, <https://spaceweather.com/> and <https://www.spaceweatherlive.com/>. See those websites for further details. All times are EDT (UTC - 4).

- The [observed – *ed.*] Solar Flux Index (SFI ⁽¹⁾) at 4:00 PM (2000Z) was 130 (161 one week ago and 133 yesterday).
- The Wolf or Zurich (Sunspot) Number ⁽²⁾ is 117(106 one week ago). The number of Active Regions (AR) was ten (10) at the time of publishing the number (5 one week ago and 8 at 5:00 PM). The count of individual sunspots = Wolf number - [10 * (number of ARs)] or, 117 – [10 * (10)] = 17 (56 one week ago). For a short discussion about Rudolf Wolf, see https://en.wikipedia.org/wiki/Rudolf_Wolf.
- The X-ray solar flare activity decreased during the 7-day period since last week although there were ten (10) M-class flares, the largest being an M1.81 at 11:00 AM on 10/19. None of the flares reportedly produced CMEs ⁽¹⁰⁾. All x-ray flare activity has been in the C-class range since midday 10/20. [NOTE: X-ray flare categories are, from bottom to top, A, B, C, M and X. A-, B-, and C-class flares do not cause Radio Blackouts (RBO), but probably add to the SFI.]
- At 6:30 PM, the geomagnetic field was at a quiet geomagnetic level with a K_p ⁽³⁾ = 1.33 (a 3-hour measurement as of 5:00 PM) and also at a quiet level with a Hp30 ⁽¹²⁾ = 1.67 (a 30-minute measurement). Between 4:00 and 6:30 PM (period ending times), in 30-minute increments, the Hp30 was 1.67, 1.67, 2.33, 3.00, 2.00 and 1.67 ranging from 1.67, quiet, to 3.00, active geomagnetic field conditions. [At 7:00 PM, Hp30 = 2.33 and at 7:30 PM, Hp30 = 2.67 with both of the measurements indicating unsettled geomagnetic field conditions – *ed.*]
- The Solar Wind ⁽⁹⁾ parameters at 6:30 PM: the wind speed was above average [average ~300 km/s - *ed.*] at ~435 km/sec; the density was just above average [average ~3.14 p/cm³ - *ed.*] at ~3.8 protons/cm³; and the B_z component of the Interplanetary Magnetic Field (IMF ⁽¹⁶⁾) was north pointing at +3nT ⁽²¹⁾ following close to 4-days of mostly slightly north pointing.

- Another relatively large Coronal Hole ⁽⁷⁾ in the southern hemisphere of the sun is rotating into view on the east limb. Increased solar wind speed and possible geomagnetic disturbed HF communications may be expected to start in 5-6 days. For an explanation of which parameter values of the solar wind might lead to geomagnetic storms, see footnote (***) below.
- Summary: The values of SFI and so-so SN, compared to the values at the solar cycle minimum of 60 and 0, respectively, should provide fairly decent radio propagation conditions for daytime DX on the higher HF bands (20M to 10M) until the high speed solar wind arrives. Nighttime hours should still give good DX on 40M and 30M. Lightning static associated with thunderstorms are reducing so readability of DX signals on 80M and to a lesser extent on 160M are improving during the nighttime hours.

According to Dr. Tamitha Skov ⁽⁸⁾ we are probably past the maximum of Solar Cycle 25 so conditions will, for the most part, remain good especially during those months between the late August and early September through the winter solstice until mid to late May ^(***). Enjoy these HF DX conditions for the next year or, maybe two, as they won't last forever! The predicted Solar Cycle 25 minimum in 2030.

For up to date info, stay tuned to <https://www.solarham.net/>, <https://spaceweather.com/> and <https://www.spaceweatherlive.com/>

⁽¹⁾ Solar Flux Index (SFI): See https://glossary.ametsoc.org/wiki/Solar_flux

⁽²⁾ Wolf [Sunspot] Number: See https://en.wikipedia.org/wiki/Wolf_number and <https://ngdc.noaa.gov/stp/solar/ssndata.html>. The number is published at 0030 UTC (8:30 PM ET). The number also appears to be based upon multiple observations throughout the 24-hours per day.

⁽³⁾ K_p is the planetary K-index. See <https://www.swpc.noaa.gov/products/planetary-k-index> and <https://seetheaurora.com/kp-index-explained>.

⁽⁴⁾ Solar flare definition and classes at <https://www.spaceweatherlive.com/en/help/what-are-solar-flares.html#:~:text=A solar flare is defined as a sudden%2C,up in the solar atmosphere is suddenly released>. Also, read <https://www.space.com/solar-flares-effects-classification-formation>.

⁽⁵⁾ Radio Black Out categories may be found at the SMARC website under “Files” and “Presentations.”

⁽⁶⁾ Geomagnetic Storm categories may be found at the SMARC website under “Files” and “Presentations.”

⁽⁷⁾ Coronal Holes (CH): See <https://www.swpc.noaa.gov/phenomena/coronal-holes>

⁽⁸⁾ Tamitha Skov, WX6SWW, <https://www.spaceweatherwoman.com/>

⁽⁹⁾ Solar wind parameters at <https://www.solarham.net/solarwind.htm> and explanations of the parameters at <https://hypertextbook.com/facts/2005/RandyAbbas.shtml>

- (10) CME (Coronal Mass Ejection): See: https://en.wikipedia.org/wiki/Coronal_mass_ejection
- (11) Carrington Event: See https://en.wikipedia.org/wiki/Carrington_Event. YouTube video explaining in simple terms the Carrington Event and solar storms: <https://www.youtube.com/watch?v=85-p9EIEVUA> [thank you to Joe, WB9VVH - *ed*].
- (12) Hp30 and Hp60 Indexes: See <https://kp.gfz-potsdam.de/en/hp30-hp60>
- (13) CIR (Co-rotational Interactive Region): See [https://www.swpc.noaa.gov/news/coronal-hole-high-speed-streams-ch-hss#:~:text=Persistent coronal holes are long-lasting sources for high,forms%2C known as a co-rotating interaction region \(CIR\)](https://www.swpc.noaa.gov/news/coronal-hole-high-speed-streams-ch-hss#:~:text=Persistent coronal holes are long-lasting sources for high,forms%2C known as a co-rotating interaction region (CIR))
- (14) Solar Dynamics Observatory Helioseismic and Magnetic Imager (SDO HMI): https://en.wikipedia.org/wiki/Solar_Dynamics_Observatory
- (15) Magnetic Filaments: <https://spaceweather.com/glossary/filaments.html>.
- (16) Interplanetary Magnetic Field (IMF): <https://www.spaceweatherlive.com/en/help/the-interplanetary-magnetic-field-imf.html>
- (17) Solar filament or prominence: https://en.wikipedia.org/wiki/Solar_prominence
- (18) SWPC: Space Weather Prediction Center: <https://www.swpc.noaa.gov/>.
- (19) Parker Spiral: https://en.wikipedia.org/wiki/Heliospheric_current_sheet.
- (20) Solar Radiation Storm: <https://www.swpc.noaa.gov/phenomena/solar-radiation-storm>.
- (21) Tesla: A unit of measure of a magnetic flux density (one Weber per square meter). The unit nT is one billionth (nano) of one Tesla. A typical refrigerator magnet measures approximately 5-mT (five thousandths of one Tesla). For more information, see [https://en.wikipedia.org/wiki/Tesla_\(unit\)](https://en.wikipedia.org/wiki/Tesla_(unit)).

The following explanations are reproduced from The Daily DX (by Bernie McClenny, W3UR) Propagation Forecast by Frank Donovan, W3LPL. Permission to reproduce the information was granted by Frank and all credit for the content is his. Thank you, Frank.

(*) Thermally driven high velocity thermospheric winds at F2 region altitude blow from the high temperature day side hemisphere to the lower temperature night side hemisphere reducing the volume of neutral atomic oxygen available to be ionized in the F2 region during daytime hours, lowering the MUF [Maximum Usable Frequency – *ed*] for F2 propagation crossing the northern hemisphere to mostly less than 24 MHz through mid-September and mostly less than 28 MHz through late September.

(**) Sustained southward orientation (-Bz) of the north-south component of the interplanetary magnetic field (IMF) plays a crucial but unpredictable role in triggering all geomagnetic storms. Brief minor to moderate geomagnetic storms may be gradually triggered when the IMF is sustained in a southward orientation (-Bz) with an IMF field strength of about -5 nanoteslas or less for at least a few hours coincident with the influence of a geoeffective coronal hole high speed stream or CME. More frequent, longer duration, minor to severe geomagnetic storms may be triggered suddenly and unpredictably

when the IMF is sustained in a southward orientation (-Bz) with IMF field strength of about 5 nanoteslas or more for a period of several hours or more coincident with the influence of a geoeffective CME and solar wind speed of about 500 km/second or more.

(***) Comment and information belong to Frank Donovan, W3LPL, and all credit for the content is his.

For an explanation of the processes involved when a CME hits the magnetic field of the earth, watch <https://www.youtube.com/watch?v=j59pEqkPkLE>. Thanks to Joe, WB9VVH, for the link.

***** DX *****

The following information is from several sources including DX World <https://www.dx-world.net/>, DXNews <https://dxnews.com/>, the ARRL DX Bulletin <http://www.arrl.org/w1aw-bulletins-archive-dx> and/or personal experience. Most, if not all, DXpeditions will operate SPLIT; refer to the operating manual for your radio for instructions. Do NOT call on the frequency of the DXpedition as they are not listening on their own frequency! NOTE: Following the call and location of the DXpedition, in parenthesis, are the principal prefix, the general location plus latitude/longitude, beam heading (°) from East TN, and the ClubLog Most Wanted list standing, out of 340 for the country/entity. The Most wanted, #1, is P5, North Korea and least needed, #340, is the USA.

- PJ6Y, Saba and Eustatius Islands (PJ6, island nations in the Caribbean Sea with stations on Saba Island located at 18°N/63°W, 128°, #167) until 10/29. 160M to 6M using CW, SSB and FT8. This operation features young operators both local and remote. For more information see, <https://www.qrz.com/db/PJ6Y>.
- Continuing DXpeditions:

C5LT and C5R, The Gambia (C5, the smallest African nation on the Atlantic Ocean side of west Africa, located at 13°N/17°W, 89°, #134) C5LT until 10/31 and C5R until 11/12. No mention of bands nor modes but a previous 2025 operation was “HF bands” using CW, SSB and FT8. For more sketchy information see, <https://www.dx-world.net/c5lt-c5r-the-gambia/>.

XT2AW Burkina Faso (XT, a landlocked nation in Africa south of Mali, located at 12°N/2°W 93°, #156) until 10/28 on 80M to 6M using a lot of FT8 (MSHV ⁽²⁾) plus some SSB. For more information see, <https://www.dx-world.net/xt2aw-burkina-faso/>.

⁽¹⁾ F/H (Fox and Hound or DXpedition) mode. See <https://www.onallbands.com/using-the-ft8-dxpedition-mode-a-k-a-fox-and-hound/>. Keep in mind, you are the hound.

⁽²⁾ MSHV (Multi Stream HV) mode. See <http://lz2hv.org/node/10>.

⁽³⁾ Super F/H (Super Fox and Hound or simply “Super Fox”) mode. Only General Availability version 2.7.0 (or later) will work for SuperFox mode. Find a PDF user guide in the Version 2.7.0 section <https://wsjt.sourceforge.io/wsjt.html>. Scroll down to the “Latest General Availability(GA) releases: WSJT-X 2.7.0” section.

⁽⁴⁾ Download the Win 64-bit software at <https://sourceforge.net/projects/wsjt/files/wsjt-x-2.7.0/wsjt-x-2.7.0-win64.exe/download>. Versions for Mac OS and several versions of Linux are also available.

For a bar graph of DXpeditions, on a per month basis, go to <https://www.dx-world.net/>.

Remember: Technician Class Amateur Radio Operators have (somewhat limited) operating privileges to use phone (**only** SSB) and digital modes on the 10M band using up to 200-Watts PEP output power. Your segments are digital from 28.000-MHz to 28.300-MHz (stay near the digital mode frequencies 28.070-MHz and above out of courtesy to CW operations) and SSB from 28.300-MHz to 28.500-MHz. You are not authorized to use FM mode as it is above your phone cutoff frequency. 10M has experienced exceptional propagation to all parts of the world during daylight hours. The conditions should continue for another 1-1/2-to 2 years. A simple 10M dipole is only 16' 6" in length and can be fed in the center with cheap RG-6/U. "But it ain't 50-Ohms coax?" So what! The SWR is only 1.5:1 which any HF radio should handle. The loss characteristics are better than RG-8X. Get on 10 and have fun! You just might get the DX bug and upgrade to General Class. A win-win situation for you.

***** **ARRL Letter** *****

From the ARRL Letter and other ARRL publications, all copyright and published by the American Radio Relay League, Newington, CT. See ARRL website <http://www.arrl.org/>.

- The ARRL podcast, "On The Air," continues with Josh, KE5MHV, discussing "The EOC: Serving at the hub" and offers tips on operating at an EOC for the first time. New subjects for podcasts are monthly. [Listen to the podcasts with iTunes for iOS, Stitcher for Android and blubrry for desktop computers.]
- The next "On The Air Live" on Tuesday, 2025 October 28 at 8:00 PM ET is from Wayne, KB4DFS, addressing "How VarAC can be used to remain in contact with loved ones during emergencies." Registration is required and is free for ARRL members. Past sessions are available in archive, accessed through the ARRL website, <http://www.arrl.org/>.
- For technicians wishing to consider 10M operations, you will find an earlier podcast by Scott, WA9WFA, "A Tour of 10 Meters," an explanation of why now is a good time to get on the band, available in the archives [2024 September 12].
- New editions of the ARRL Audio News," a summary of the top news for the week of ham radio and the ARRL, appear every Friday. All editions of the Audio News are available at the blubrry website, <https://blubrry.com/arrlaudionews/>. The latest Audio News may be heard locally on the W4KEV repeater (Knoxville), 145.370-MHz, on Fridays, Saturdays and Sundays at 8:30 AM and 10:00 PM.
- The ARRL is pushing legislation called for the passage of federal legislation that would grant Amateur Radio Operators the same rights to install antennas on their property as those enjoyed by users of TV antennas, wireless internet, and flagpoles. To advance the legislation, ARRL is calling on its members and all licensees of the US Amateur Radio Service to take action by sending letters to their congressional representatives. Through a dedicated online tool at <https://send-a-letter.org/hoa/>, hams can easily generate and submit pre-drafted letters with a few clicks. If you have not done so before now, please go to the website to generate and

sign the precomposed letter. Yes, it won't be unique but sheer numbers of letters can show support from the Amateur Radio community.

- How does the continuing government shutdown effect us hams? Well, to put it bluntly, a whole bunch. No new licenses will be issued and no modifications nor renewals of existing licenses will be processed. However, it is suggested that exam sessions continue normally. Those needing an FRN may proceed to do so.

73 ES GUD DX DE

Bob Loving K9JU

Maryville, TN

k9ju@arrl.net