THE eQRM

NOVEMBER 2023

The BVARA in Beaver County Pennsylvania

Beaver Valley Amateur Radio Association W3SGJ

2M Repeater 145.310 PL 131.8

On the Cover:

We here at the BVARA are wishing you a very happy and memorable Thanksgiving with family and friends!

Inside this edition

Check into our nets

Wednesday 2 Meter

8:30PM on 145.310 MHz PL 131.8

Wednesday 10 Meter

9:00PM on 28.470 MHz

 If you would like to contact the editor of the eQRM, please email David at kc3bxc.73@gmail.com. Please visit us online at www.W3SGJ.org. To subscribe to our newsletter, please visit W3SGJ.org/newsletter.php

Who We Are

2023 BVARA OFFICERS

President: Jack Spencer, KZ3Z

Vice President: Dan Grazulis, KB3VSP

2nd Vice Pres.: Doug Lawrence, K3GTX

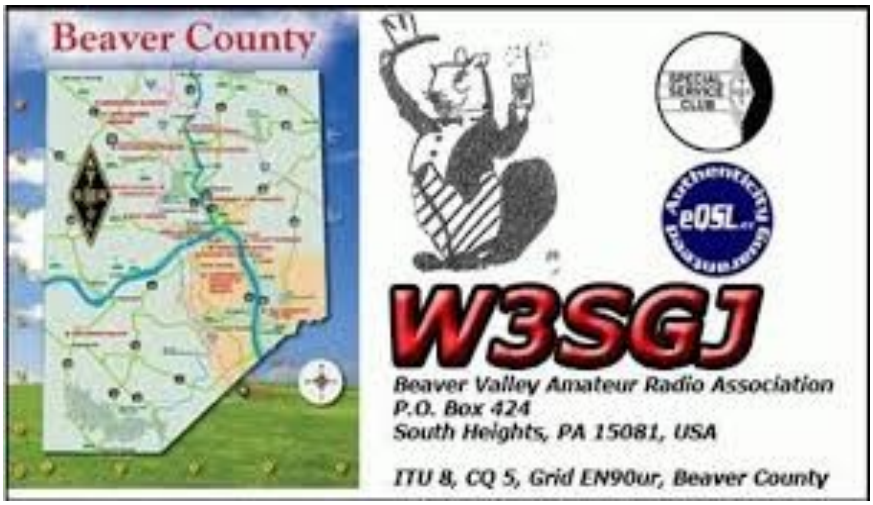
Treasurer: Pam Spencer, W3PMS

Secretary: Tom Stoops N3XC

Director: Tony Pavilonis, K3AHP

Director: Jim Allen, KC3IXE

Trustee: Doug Hanna, N4YKQ



MONTHLY MEETINGS

E-Board meetings are now held the Saturday before the monthly club meeting.

VE testing begins at 5:00 PM.

Regular meetings are at 6:30 PM

All meetings are held at the
Beaver County Emergency Services Center (A.K.A. THE 911 Center)
351 14th Street
Ambridge, PA 15003
on the second Thursday of every month (unless otherwise stated).

2023
Nov 09
Dec 09 Christmas Party
2024
Jan 11
Feb 08
Mar 14
Apr 11
May 09
Jun 13
Jul 11
Aug 08
Sep 12

This Month:

Speakers:

BVARA Club Members
Moderator: Rich – K3SOM

Topic:

My Projects Including:
Design/Need, Purchase/Build, Current Status, Results, Lessons Learned

Including:

Continuing with our BVARA Presentation Series this year, our topic this month takes us '*One Step Beyond'* by asking several of our club members to talk about one project. That project can be planned for the future, in purchase (parts or kit), putting it together, built, testing, or in current use. For those who seek knowledge in whatever form, here is an opportunity for you! If it's already finished, then what has been your experience with it? What would you change, if anything?

I'm expecting around five club members, more or less, to tell us what they're doing. Nothing formal, feel free to ask constructive questions of our fellow club members; a question starts a conversation, and others may also have questions too. Maybe a club member is stuck at one of the early stages. For example, where can I buy this widget, or can this be built from this or that? You get the idea. Maybe everything is there except for this one item.

To keep some boundaries around this, I suggest that once you start, I will give you an indication that 10 minutes are up and you have five more minutes to finish. That way, the other club members who have agreed to tell us about a project of theirs get an equal opportunity to show the club what they are working on or planning. My indicator is a Staples "*That was easy!"* button.

But wait, there's potentially more! My Paddle Project took a back seat to our 100th Anniversary activities, but if we have time, I'll talk about finding key parts for my Adventurer-3 3D Printer. Chronic feed tube blockages and broken filaments were causing me havoc. I didn't have to go to China to find expert help. This will be one presentation that you won't want to miss!

Rich's Background:

Extra Class Ham, Licensed since 1962, VE,
B.S. Electrical Engineering

More this Month

The Freedom Square Diner in Monaca has a great wait staff. Come let them take your order.

Weekly

Thursday Morning Breakfast
(or you can have lunch)

Come join us!

The BVARA meets every Thursday at the Freedom Square Diner in Center Township, just to the right of the Cinemark Center Township Marketplace at 09:30 AM. All radio amateurs and those interested in amateur radio are encouraged to come join us at our Thursday morning breakfast.

See you Thursday at

The eQRM urges all Beaver County licensed amateurs to participate in the County's RACES and ARES programs.

Any Beaver County Amateur that is interested in participating in the RACES/ ARES programs can do so by checking into the Beaver County Public Service Net which meets every Monday evening at 8:30 PM local time on the WW3AAA 146.850 MHz repeater (131.8 PL)

RACES / ARES

The eQRM Urges All County Hams to Participate.

Get your License or Upgrade

If you are interested in getting your first FCC license or upgrading your current amateur radio license, the Beaver Valley Amateur Radio Association holds VE Test sessions (Volunteer Examinations) the second Thursday of each month at the Beaver County Emergency Services Center in Ambridge Pennsylvania prior to our BVARA Club meeting. If there is no meeting there is no test session. Please come take your test with us!

For more information, contact :
Rich Soltesz, K3SOM
(724) 847-0610
k3som@arrl.net

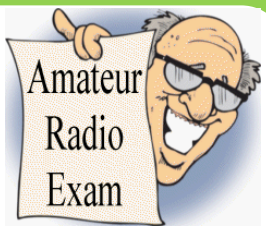
VE TEST SESSIONS

Beaver County Emergency Services Center 351 14th Street Ambridge, PA 15003.
Tests begin promptly at 5 pm on the same day as BVARA Club Meetings
(the second Thursday of the month).
All classes of amateur radio license tests are administered.

ALL candidates MUST bring ALL of the following:

1. 2 forms of I.D. - one MUST be a photo I.D.
2. A pencil AND a pen with blue or black ink.
3. The original AND a photocopy of any valid ham license.
4. The original AND a photocopy of any C.S.C.E.
5. The test fee of $15 - cash only.
6. Your FRN Number. (free from the FCC, call for details)

Testing this Month :



October 2023 VE Test Session Results

Our October VE Test Session had one successful candidate, with her achievement of upgrading her current license. Our electronic filing system once again worked superbly.

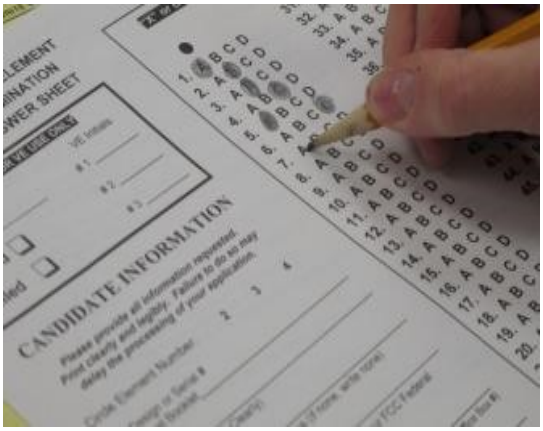
Our testing was conducted at our normal location at the Beaver County Emergency Services Center in Ambridge, PA. Our next VE Test Session will be on November 9th, 2023.

Congratulations to:

Jonica R Palmer, N2RWI, General, Conway, PA

All of our BVARA testing would not be possible without the help of the following Extra-Class VE Team members:

Reg Genola – W3REG,
Tony Pavilonis – K3AHP,
Mick Pyzoha – N3OJP,
Bart Stack – KB3NFM, and
Bob Winkle – N3AZZ, and
Frank Witkowski – W3FJW



73 from Rich Soltesz – K3SOM, VE Liaison

Membership Information

By becoming a BVARA member you help secure the future of Amateur Radio in Beaver County. Additionally, the BVARA receives a portion of each ARRL membership you purchase!

Join the BVARA and ARRL

Sign up for:		**Price**	
◯	BVARA full membership	25.00	_____
◯	BVARA student membership	15.00	_____
◯	BVARA associate membership	10.00	_____
◯	BVARA Child under 21 at home membership	5.00	_____
	One year ARRL membership	49.00	_____
	A Club Donation		_____
ARRL Member?	Yes No	Total Enclosed	_____

Your License Class (If you have one.)

◯ Technician
◯ General
◯ Advanced
◯ Extra Class

Name _____
Address _____
_____
Email _____
Phone _____
Your Call sign _____
Your Signature _____

Make check or money order payable to:

The Beaver Valley Amateur Radio Association, P.O. Box 424

South Heights, Pa 15081

Hamfests & General Announcements

I know you don't want to hear it but,

we will have to wait till next year for a Western Pennsylvania hamfest.

BVARA Coming Attractions

November

Possible Fox Hunt

More POTA Activations

Thanksgiving Holiday

December

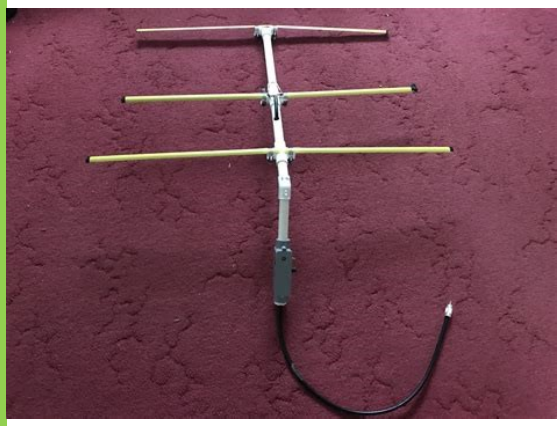
Christmas Dinner, with Ham of the Year award, December 9th

(TBD)

Build Project for a Fox Hunt, Steel-Tape Yagi Antenna

The October Presentation on potential Fox and Hound club activities generated a high level of interest among club members. The presentation showed how a 'Hound' participant can readily find the 'Fox', in the form of a two-meter hand-held transceiver with an Arduino-based PC board that generates FM 'Fox' noises along with a Morse Code ID at regular intervals. The Fox was placed in the back of the conference room atop a wall-mounted box.

Beginning in the front of the room, another hand-held transceiver that was connected to a variable attenuator and a home-made Yagi was readily able to 'find' the direction to the Fox. As the Hound approached the back of the room, the attenuator was engaged to reduce the strength of the signal so that a new direction could be determined. At the back of the room, the Hound needed to determine whether the Fox was behind the 'tree' to the left or the 'tree' to the right. Once again, the attenuator was adjusted so that the signal reduction approached nearly 100 dB! "Easy – Peasey" someone said.



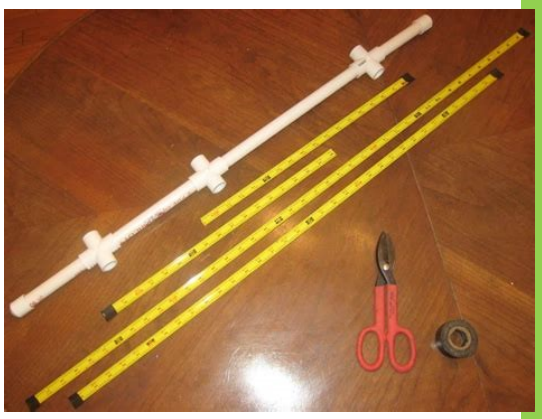
One member wanted to have a club project to build the portable antenna. A sign-up sheet indicated high interest, so we began in earnest to make it happen. What was most interesting, was the amount of ideas and the team effort to lower the cost, but not the quality. For example:

One member had a Harbor Freight coupon for Steel Tapes at $2.00 each, limit of four. That would be enough Steel tape for eight Yagis.

Another member had a quantity of Stainless-Steel hose clamps from a retired cubical quad antenna. Six clamps for eight antennas; no problem, no cost.

Eight carefully-made Beta match #14 wires, a critical component for best SWR, were also donated at no additional cost.

Another member had a large quantity of RG-58 coax, with enough for everyone. Again, at no additional cost. That coax was also used for the common-mode choke.



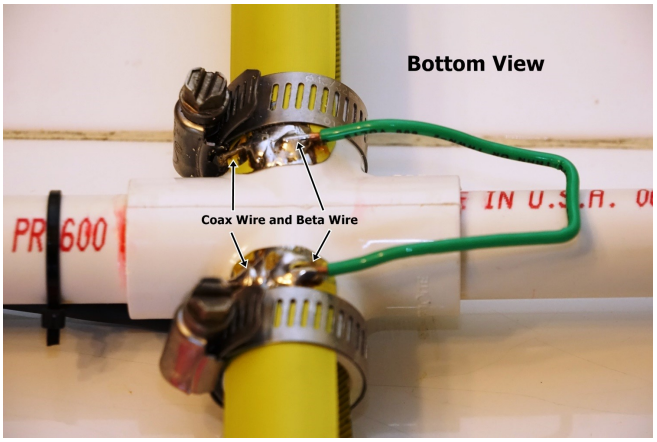
Prior to the build session, each member was asked to put together the Yagi boom and fittings as well as to cut out the Steel tape for the Reflector, the two sides of the Driven Element and the Director. A detailed diagram with all dimensions and components was our documentation for the build session. Our club treasurer contacted the 911 Center and secured a two-hour window for Thursday evening, just two weeks after our October meeting.

Seven members participated, with one unable to come

(health issue) and five Yagi antennas were constructed, with the last one needing a little rework. Members now just need to match the coax connector to their desired hand-held to complete their project.

The photos show some of the details. Thanks to a team effort from everyone to make this activity a real success!

Rich – K3SOM



Driven element detail showing the coax and Beta match soldered to the Steel tape

Fox Hunt Yagi – Measured SWR and Impedance at 146.565 MHz (M1 Marker, bottom center)

Of Interest to All

Tim Davis and Rich, K3SOM review some Yagi dimensions

Tony, K3AHP attaches the Steel tape elements to the Yagi boom

Dan, KA3QIF and Bob, N3AZZ discuss a unique mounting arrangement for Dan's attenuator while Tom, N3XC in the background works on some details of his Yagi.

Larry, KC3ROS had just completed his Yagi and took these photos

National Museum Of Broadcasting Announces Proposed Site, Plans For Museum

By Mark Miller | November 2, 2023 | 2:00 p.m. ET.

The National Museum of Broadcasting (NMB) in Pittsburgh today announced plans for a museum to showcase the origins of broadcasting and electronic media with a vision to eventually become an important focal point for tourism and education related to the region's history of innovation.

"Our museum will be more than a bunch of dusty old radios and TVs, although we have plenty of them," said Bill Hillgrove, Pittsburgh broadcaster and sports announcer and president of the non-profit museum's board of directors, in his opening remarks to the crowd of community leaders, elected officials and some of Pittsburgh's famed broadcast celebrities. "It will be an experience … to show how electronic media began and evolved in immersive and interactive ways."

The proposed museum will take millions of dollars to construct and develop in the next several years, but Hillgrove and the board credited the support and partnership of the Regional Industrial Development Corporation (RIDC) and Pennsylvania State Sen. Jay Costa (D) of Allegheny County's 43rd District, with helping to bring together the parties to make it a reality.

"All of our communities deserve the opportunities and success that come from economic revitalization and the continuous development of places and spaces that make our state and this region culturally diverse," Sen. Costa said at the press conference. "Cultural attractions, and this future museum, will be another one of our treasured entities that support tourism which, in the end, complements what new business and the redevelopment of these brownfields are already doing in this community."

The site of the proposed museum was one of several suggestions for the vacant bank building, a suggestion that was brought forth in a 2020 reuse study commissioned by the RIDC, which currently owns the property. In that study, residents and community leaders noted the historic significance of the Turtle Creek Valley from the time of George Westinghouse and his development of the Westinghouse Electric and Manufacturing site, to its transformation in what is now known as Keystone Commons. The RIDC purchased the former Westinghouse plant— which housed the original KDKA Radio studio — from Westinghouse Electric in 1989.
The bank building sits across the street from Keystone Commons and just yards away from the site where the first licensed radio broadcast, on what came to be known as KDKA, occurred on Nov. 2, 1920. The announcement of the future of a historic broadcast museum on the date from 103 years before, was not lost on the RIDC.

BRAND CONNECTIONS

"Our efforts to revitalize old industrial properties always include components that connect us to our history, even as we move the properties toward the future," said Timothy White, RIDC senior vice president of business development and strategy. "The National Museum of Broadcasting would be a welcome addition to the campus George Westinghouse built: Keystone Commons. We look forward to working with Senator Costa and the museum's leadership as they seek to realize their vision."

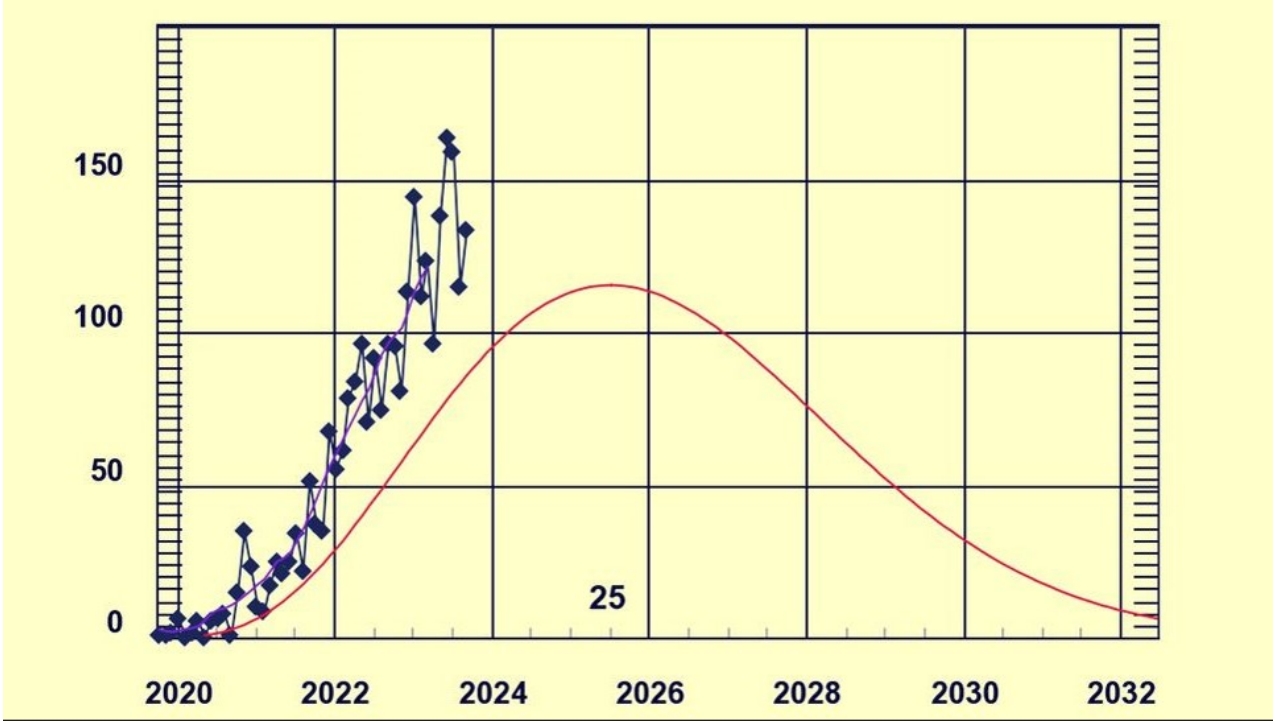
The vacant bank building stands at more than 10,000 square feet of useable space, with parking for 250 vehicles. It is accessible from I-376 (Parkway East), PA Route 30 and the Pennsylvania Turnpike. The location made it "an ideal spot for a museum," Costa added.
At the close of the press conference, the NMB's board of directors joined Costa and Hayley Haldeman, chairperson of the Pennsylvania Historical & Museum Commission (PHMC), in the unveiling and rededication of an historic marker that will be placed down the street from the proposed museum, to memorialize the site where radio and media were born in 1920.
"The historical marker program, which began in 1946, stands as one of the Historical & Museum Commission's most popular initiatives. Each marker serves as a vital connection to our history," Haldeman said. "This rededicated marker, honoring the birthplace of radio and media in 1920, joins more than 2,500 markers spread throughout the state. These markers collectively tell the story of the remarkable individuals, locations and events that have shaped our Commonwealth's legacy."

The National Museum of Broadcasting in Pittsburgh is a 501 C3 nonprofit organization dedicated to the preservation of radio and television and related broadcast and electronic industries, based in the city where broadcasting began in 1920.
Courtesy: https://tvnewscheck.com/uncategorized/article/national-museum-of-broadcasting-announces-proposed-site-plans-for-museum/

Expert Panel Acknowledges That Their 2019 Forecast for Solar Cycle 25 Was Wrong and Requires a Revised Prediction[1]

The sun's current cycle, Solar Cycle 25, officially began in early 2019. At the time, an expert panel that was commissioned by the National Atmospheric and Oceanic Administration's (NOAA), NASA and the International Space Environment Services (ISES), predicted[2] that Solar Cycle 25 would most likely peak at some point in 2025 and be underwhelming compared with average cycles, much like its predecessor, Solar Cycle 24.

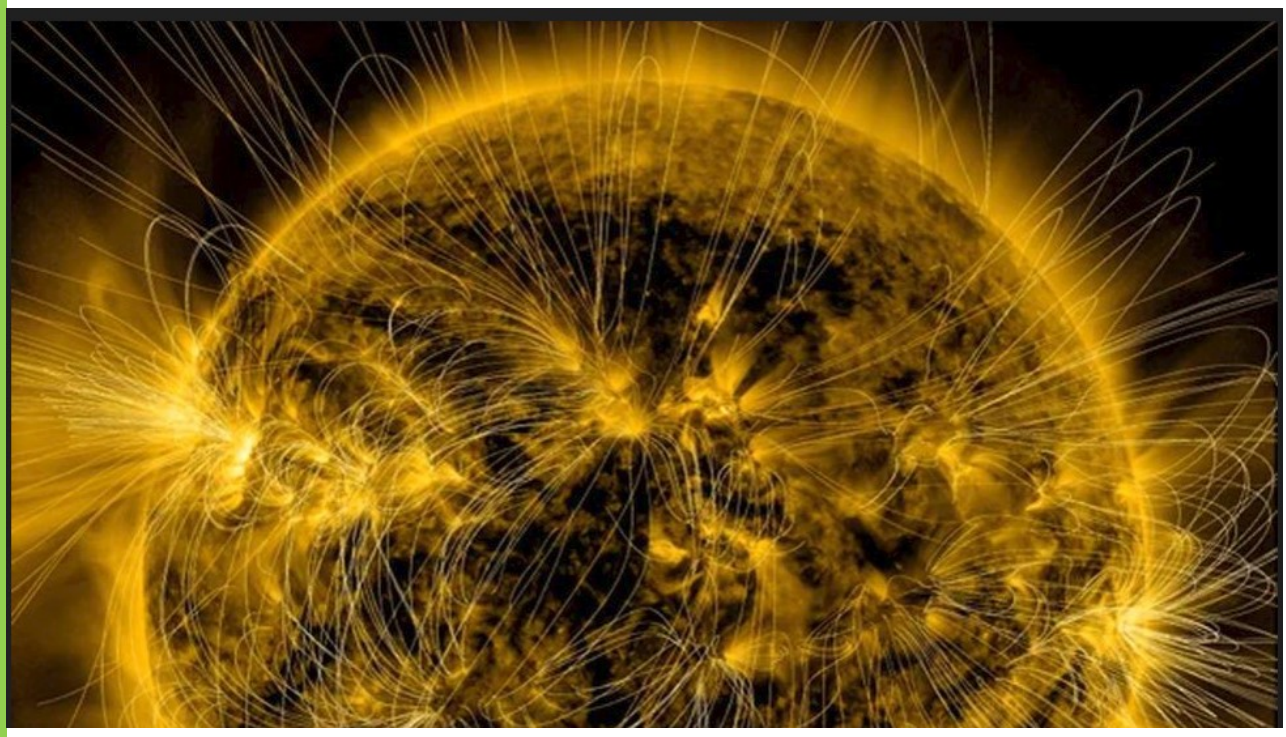
On Oct. 25, 2023 NOAA's Space Weather Prediction Center (SWPC) issued a "revised prediction[3]" for Solar Cycle 25 and acknowledged that the 2019 prediction panel's initial estimations were "no longer reliable enough for SWPC's customers," such as private space exploration and satellite companies. The new update states that "solar activity will increase more quickly and peak at a higher level" than initially predicted and that solar maximum will likely begin between January and October next year.



This graph shows the number of monthly sunspot number (blue line) compared with the predicted sunspot number from the 2019 prediction (red line). The number of observed sunspots was clearly much higher than expected. (Image credit: NOAA/ISES)

Of Interest to All

The sun is constantly in flux. Roughly every 11 years, our home star cycles from a period of tranquility, known as solar minimum, to a peak of solar activity known as solar maximum — when dark sunspots cover the sun and frequently spit out powerful solar storms. The star then transitions back to solar minimum before the next solar cycle begins.

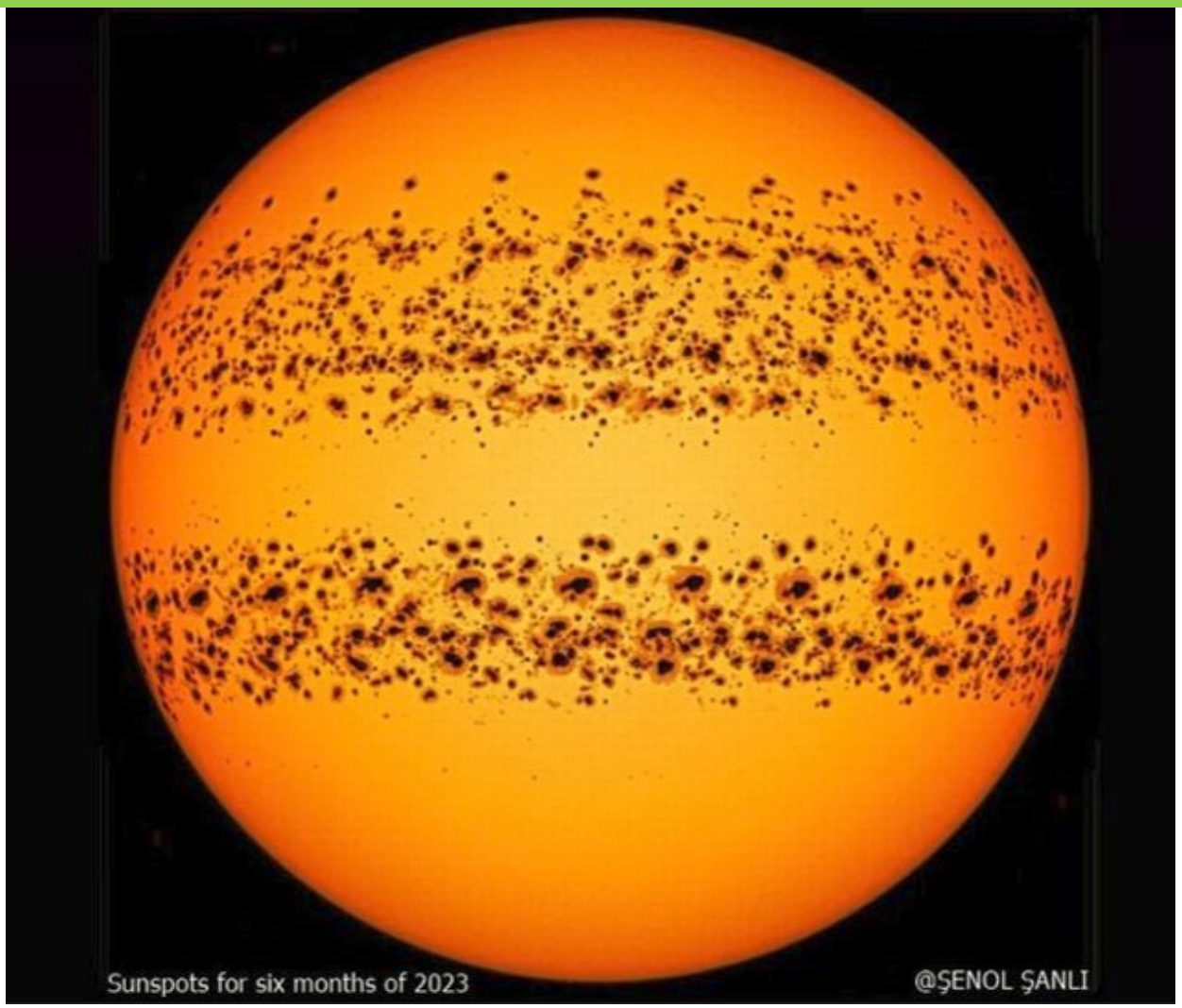


In the lead up to the solar maximum the sun's magnetic field lines get tangled up, which generates more sunspots, solar flares and coronal mass ejections. (Image credit: NASA/SDO/AIA/LMSAL)

A more active peak in solar activity could create disruptions on Earth: If large solar storms smash into our planet they can cause radio blackouts, damage power infrastructure, irradiate airline passengers and astronauts and knock out GPS and internet satellites - some of which could actually fall from the sky.

A more active solar maximum therefore poses a "larger hazard for these critical technologies and services," NOAA representatives wrote in their updated forecast.

Of Interest to All



A composite of all the sunspots to appear on the sun in the first half of 2023.

(Image credit: Şenol Şanlı)

As ham radio operators have discovered over the past 12 months, the high-frequency bands have very much come alive with increasingly stronger DX signals from around the world. As evident from the revised predictions, Cycle 25 will be much more active than Cycle 24 and looks to peak about six months earlier than was predicted back in 2019 by the expert panel.

In October 2022, the BVARA Presentation explored the sources of day-to-day propagation change based on work done by Carl Luetzelschwab, K9LA as presented on his web site at https://k9la.us/ This web site is worth many bookmarks if you wish to really understand factors affecting our HF propagation conditions.

With so many factors at play, at times, one cannot help feel that we may be decades away from accurate forecasting for the next 24 hours by band, by time of day, and by global location. Below is a summarization of the major causes of propagation change. Stay tuned and don't forget to call: "CQ. CQ" even if the band seems dead. You just might be surprised!

Causes of Propagation Change

Solar ionizing radiation	Solar wind/geomagnetic activity/electrodynamics	Neutral atmosphere
Solar flares	Day-to-day 'low level' variability	Solar and lunar tides
Solar rotation (27 day) variations	Substorms	Acoustic and gravity waves
Formation and decay of active regions	Magnetic storms	Planetary waves
Seasonal variation of Sun's declination	IMF/Solar wind sector structure	Quasi-biennial oscillation
Annual variation of Sun-Earth distance	Energetic particle precipitation	Lower atmosphere coupling
Solar cycle variation (11 and 22 yrs)	Fountain effect at low latitudes	Surface phenomena (earthquakes)
Longer period solar epochs	Magnetospheric electric fields	Surface phenomena (volcanoes)
	Plasma convection at high latitudes	
	Field-aligned plasma flows	
	Electric fields from lightning	

Table 1 Three General Categories Causing Day-to-Day Variability

Data Analysis:

F2 Data 34 Years,13 Stations, Various Latitudes, Geographic/Geomagnetic Relationships Monthly Values of foF2

3% 13% 15%

Conclusion:

Daily variability of daytime F region over 13 stations was 20%

A poor correlation between daily sunspot number and solar flux and the daily ionospheric parameters.

References

https://www.livescience.com/space/the-sun/scientists-finally-acknowledge-that-they-got-their-solar-cycle-predictions-wrong-and-that-we-are-fast-approaching-the-suns-explosive-peak We gratefully acknowledge the excellent and engaging articles in LiveScience web site for their broad scope of articles but with a writing style that beckons to visit frequently. Look to https://www.livescience.com/ for subscription information.

https://www.weather.gov/news/190504-sun-activity-in-solar-cycle The 2019 expert panel prediction in 2019

https://www.swpc.noaa.gov/news/noaa-forecasts-quicker-stronger-peak-solar-activity October 25th, 2023 announces the revised prediction together with a quicker, monthly forecast update methodology

https://k9la.us/ An excellent source of propagation information by Carl Luetzelschwab, K9LA

Rich – K3SOM

Bits and Pieces

Hello all,

I went through the "Old Ham Cupboard" the other day. I was looking for something other than a radio related item of course. I have so much radio stuff! I forgot what I have. I am doing a disservice to the fellow Hams that gifted these radio things to me (some have silent keyed). It was a kind of cold slap in my face. I am responding in a positive way by being inspired… I want to get some of these things out, put'em on my radio table and start using them. How about you? I figure if I have radio stuff collecting dust, you most likely do too. Don't let me be the only one to admit to this. I am serious! Don't wait for tomorrow. Get inspired today! I want to encourage you to get into your radio cupboard/closet and get some of that stuff out and use it.

This month's BVARA Club meeting will be the last one for the year. It promises to be quite interesting. I will get to see and hear what manner of radio stuff you have been up to.

We are going to have our annual Christmas Party in December. Please plan to attend. I am going to be so sappy this holiday season because I have so much to be thankful for! I hope you are thankful for your blessings too. Before long, Christmas will be here. Lets not rush things now, Thanksgiving is first. I am so looking forward to savoring each moment of this celebration! I hope you make great memories with your family and friends this year, I plan to.

When I was looking for a photo for the cover page, I found a great photo of a leafy winter scene. I just wanted to share it with you. I decided not to put it on the cover so I put it here. I really liked this photo. I think you will too.

That will do it for me this month, so until next month.

Please, aways, be safe and enjoy our radio hobby.

Clear on your final, but I will be monitoring.

73 KC3BXC

Radio Sport

Contest Corral — November 2023

Check for updates and a downloadable PDF version online at www.arrl.org/contest-calendar.
Refer to the contest websites for full rules, scoring information, operating periods or time limits, and log submission information.

Start - Finish Date-Time				Bands	Contest Name	Mode	Exchange	Sponsor's Website
1	0600	1	0859	3.5,7	Silent Key Memorial Contest	CW	RST, SK call sign you wish to recognize	www.skmc.hu
1	2000	1	2100	3.5	UKEICC 80-Meter Contest	Ph	6-char grid square	www.ukeicc.com
2	0000	3	0300	7	Walk for the Bacon QRP Contest	CW	13 WPM max; RST, SPC, name, mbr/pwr	qrpcontest.com
2	1800	2	2200	28	NRAU 10-Meter Activity Contest	CW,Ph,Dig	RS(T), 6-char grid square	nrau.net
2	2000	2	2200	1.8-28,50	SKCC Sprint Europe	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
4	0000	4	2359	7,28	YB Banggai DX Contest	Ph	RS, age of operator	banggaidxcontest.com
4	0600	4	1800	3.5-28	IPARC Contest, CW	CW	RST, serial, IPA, US state (if USA)	www.iparc.de
4	2100	6	0300	1.8-28	ARRL Sweepstakes Contest, CW	CW	Serial, precedence, your call, check, ARRL/RAC Section	www.arrl.org/sweepstakes
5	0600	5	1800	3.5-28	IPARC Contest, SSB	Ph	RST, serial, IPA, US state (if USA)	www.iparc.de
5	0800	5	1200	Any	EANET Sprint	CW,Ph,Dig	RS(T)	fediea.org
5	1400	5	1700	3.5-28	High Speed Club CW Contest	CW	RST, mbr or "NM"	www.highspeedclub.org
6	2000	6	2130	3.5	RSGB 80-Meter Autumn Series, Data	Dig	RST, serial	www.rsgbcc.org
7	0200	7	0400	3.5-28	ARS Spartan Sprint	CW	RST, SPC, pwr	arsqrp.blogspot.com
9	1900	9	2000	3.5,7	EACW Meeting	CW	RST, mbr, nickname, EA province or DXCC prefix	www.eacwspain.es
11	0000	11	2359	3.5-28	FISTS Saturday Sprint	CW	RST, name, mbr or "0," SPC	fistsna.org
11	0000	12	2359	3.5-28	WAE DX Contest, RTTY	Dig	RST, serial	www.darc.de
11	0000	13	2359	1.8-7	PODXS 070 Club Triple Play Low Band Sprint	Dig	RST, SPC	www.podxs070.com
11	0001	12	2359	28	10-10 Int'l Fall Contest, Digital	Dig	Name, mbr or "0," SPC	www.ten-ten.org
11	0300	12	0900	50,70,144, 432,1296	SARL VHF/UHF Analogue Contest	Ph	RS(T), 6-char grid sqare	www.sarl.org.za
11	0700	12	1300	1.8-28	JIDX Phone Contest	Ph	RST, JA prefecture number or CQ zone	www.jidx.org
11	1200	12	1200	1.8-28	OK/OM DX Contest, CW	CW	RST, 3-letter OK/OM district code or serial	okomdx.crk.cz
11	1200	12	2359	1.8-28,50	SKCC Weekend Sprintathon	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
11	1900	13	0500	1.8-28,50, 144,432	CQ-WE Contest	CW,Ph,Dig	Name, location code, years of service	w8zpf.com/cqwe
11	2300	20	0300	1.8-14	AWA Bruce Kelley 1929 QSO Party	CW	RST, name, QTH, equipment year/type/pwr	antiquewireless.org
12	0000	12	0400	3.5-14	North American SSB Sprint Contest	Ph	Other's call, your call, serial, name, SPC	ssbsprint.com/rules
12	0700	12	1700	3.5-28	FIRAC HF Contest	Ph	RS(T), serial	www.firac.de
13	0100	13	0300	1.8-28	4 States QRP Group Second Sunday Sprint	CW,Ph	RS(T), SPC, mbr or pwr	www.4sqrp.com
14	1900	14	2000	3.5	DARC FT4 Contest	FT4	RST, 4-char grid square	www.darc.de
15	2000	15	2030	3.5	RSGB 80-Meter Autumn Series, SSB	Ph	RS, serial	www.rsgbcc.org
16	0000	17	0300	14	Walk for the Bacon QRP Contest	CW	13 WPM max; RST, SPC, name, mbr/pwr	qrpcontest.com
16	0130	16	0330	3.5-14	NAQCC CW Sprint	CW	RST, SPC, mbr or pwr	naqcc.info
16	1900	16	2000	3.5-14	NTC QSO Party	CW	25 WPM max; RST, mbr or "NM"	pi4ntc.nl
18	1200	19	1200	3.5-28	LZ DX Contest	CW,Ph	RS(T), 2-letter LZ district or ITU zone	lzdx.bfra.org
18	1600	18	2359	1.8	All Austrian 160-Meter Contest	CW	RST, serial, OE district code (if OE)	www.oevsv.at
18	1700	18	2359	1.8	REF 160-Meter Contest	CW	RST, serial, department code	concours.r-e-f.org
18	1800	19	2100	3.5,7, 21,28	South American Integration Contest CW	CW	CWSP members: RST, "M"; QRP: RST, "QRP"; YL: RST, "YL"; all others: RST, ITU zone no.	sacw.cwsp.com.br
18	1900	18	2059	1.8-28,50	Feld Hell Sprint	Dig	RST, mbr, SPC, grid	sites.google.com/site/feldhellclub
18	1900	18	2300	1.8	RSGB 1.8 MHz Contest	CW	RST, serial, UK district code (if UK)	www.rsgbcc.org
18	2100	20	0300	1.8-28	ARRL Sweepstakes Contest, SSB	Ph	Serial, precedence, your call, check, ARRL/RAC Section	www.arrl.org/sweepstakes
19	0000	19	2359	3.5-28	FISTS Sunday Sprint	CW	RST, SPC, name, mbr or "0"	fistsna.org
19	1300	19	1700	3.5,7	Homebrew and Oldtime Equipment Party	CW	RST, serial, class	www.qrpcc.de
19	2300	20	0100	1.8-28	Run for the Bacon QRP Contest	CW	RST, SPC, mbr or pwr	qrpcontest.com
22	0000	22	0200	1.8-28,50	SKCC Sprint	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
23	2000	23	2130	3.5	RSGB 80-Meter Autumn Series, CW	CW	RST, serial	www.rsgbcc.org
25	0000	26	2359	50-1296	ARRL EME Contest	CW,Ph,Dig	Signal report	www.arrl.org/eme-contest
25	0000	26	2359	1.8-28	CQ Worldwide DX Contest, CW	CW	RST, CQ zone	www.cqww.com
27	2000	27	2130	3.5-14	RSGB FT4 Contest	FT4	Signal report	www.rsgbcc.org
29	2000	29	2100	3.5	UKEICC 80-Meter Contest	CW	6-char grid square	www.ukeicc.com