



W3UU NEWSLETTER

— FEBRUARY 2022 —

Club Officers:

PRESIDENT:

Robert Saber, K3RTS
k3rts@w3uu.org

VICE PRESIDENT:

Emily Ulrich, K3ESU
k3esu@w3uu.org

SECRETARY:

Frank Aponte, KC3NRK
kc3nrk@frankaponte.com

TREASURER:

David Dormer, KC3MG
DDDormer@gmail.com

LICENSE TRUSTEE:

David Dormer, KC3MG
DDDormer@gmail.com

EQUIPMENT TRUSTEE:

Terry Snyder, WB3BKN
WB3BKN@djterry.com

Committees:

WEBMASTER: W3UU.ORG

Michael Drawbaugh, KD3MAD
webmaster@w3uu.org

EMCOMM:

Robert Saber, K3RTS
k3rts@w3uu.org

MEMBERSHIP:

Tim Lehman, W4NKC
w4nkc.hv@gmail.com

NEWSLETTER EDITOR:

Curt Sanders, K3URT
HRAC.Newsletter@gmail.com

ELMER TIME COORDINATOR:

Joe Hannon, W3JPH
johannon.jh@gmail.com

HAMFESTS & REPEATER:

Terry Snyder, WB3BKN
WB3BKN@djterry.com

NET OPERATIONS:

David Dormer, KC3MG
DDDormer@gmail.com

VE TEAM LEADER:

Steven Gobat, KA3PDQ
ka3pdq@juno.com

NEXT MEETING is HRAC HAMFEAST, Wednesday, 9 February, 6 p.m. at Peachtree Restaurant, 251 N. Progress Ave., Harrisburg, PA 17109. A short business meeting followed by dinner and entertainment for members only. All are welcome, but you must be a paid-up 2022 member to enjoy the door prizes.

Plan on attending the annual HRAC Annual Hamfeast. Enjoy dinner with fellow club members. **Terry, WB3BKN** will emcee the evening after conclusion of a brief club meeting.

◆ The 2021 Ham of the Year Award will be announced.

◆ Door prizes will be given away.

Entree options:

- Baked Haddock: topped with lemon butter or vegetable sauce.*
- Roast Beef served with filling and gravy.*
- Roast Turkey served with filling and gravy.*
- Four Piece Broasted Chicken.*

* Served with two vegetables.

- Chicken Parmesan served over spaghetti with house salad.

- Vegetable choices: mixed vegetables, French fries, mashed potatoes, coleslaw, cranberry salad, pickled red beets or house salad.
- Choice of non-alcoholic beverage.
- Dessert will be provided by the club.

◆ Cost is \$18.99 +tax plus 20% gratuity per person (\$22.79). **Everyone is responsible for their own meal.**

Come and enjoy an evening of great food, fellowship and entertainment.

NOTE From The President:

Plans are underway for **Field Day**, June 25-26, and **Firecracker Hamfest**, July 2nd. The special event that we held at Memorial Lake State Park commemorating **September 11th** last year was well attended and we are thinking of repeating it again. In the past we have held special events at Pine Grove Furnace, the Appalachian Trail on Route 225, and the Millersburg Ferry to name a few. Please bring ideas to the meetings or email them to me. This is your club.

— Bob, K3RTS



The Harrisburg Radio Amateurs Club Inc., [HRAC] formed 1 July 1946, as an association of individuals commonly interested in amateur radio, based in Harrisburg, Pennsylvania. It is an ARRL affiliate club.

At the end of World War II, many veterans returned to the Harrisburg area trained and used radio communications in the military. It soon became a common factor among local hobby enthusiasts. Fifty-eight charter members developed the original constitution and bylaws for the club. In 1960, HRAC became a non-profit corporation in Pennsylvania.

The club continues to promote amateur radio in the area in many ways. HRAC is involved with young people by helping with scouting's JOTA activities and promoting amateur radio with school clubs and organizations.

Since 1949, members have provided communications for the American Red Cross in Harrisburg for Dauphin County and Pennsylvania Emergency Management. In addition, we conduct periodic training sessions for emergency responders.

HRAC has three hamfests throughout the year: July's **Firecracker Hamfest** /Eastern Pa Section Convention is always the Saturday before the first Sunday in July. During the convention, you may hear special event station W3UU from the hamfest tailgating area. We set up and operate W3UU to demonstrate amateur radio and invite operators to join in and make contacts. Second: **Oktoberfest**. Third: the well attended **WinterFest** in January is an indoor tailgate fest. ■

HRAC CLUB CALENDAR 2022:

February:9th, club meeting; Hamfeast at Peachtree Restaurant.
.....19th, license testing (see below).

March:9th, club meeting.

April:13th, club meeting.
.....16th, license testing (see below).

May:11th, club meeting.

Please consider stepping up to make a presentation during one of the meetings' "Elmer Time." Everyone has expertise in something and can bring something to the table. Do more than consider, DO it. ■

— Club station W3UU —

Repeater Frequency:

146.760 MHz, minus .600 MHz offset

Repeater CTCSS Tone: 100.0 Hz (Encode/Decode)

Weekly Net: Wednesdays at 1900L (except meeting nights)

Website: W3UU.org

FaceBook: www.facebook.com/Harrisburg-Radio-Amateurs-Club-208171495915056/

DA FINE PRINT: The *W3UU Newsletter* of the Harrisburg Radio Amateurs Club Inc. (HRAC) is published monthly and is © 2022: All Rights Reserved. Every effort is made to ensure that the newsletter is free from error or omissions. The HRAC, it's respective Officers or agents, shall not accept responsibility for offenses (e.g. injury, loss, or damage) occasioned to any person acting or refraining from action as a result of material in this newsletter, whether the offenses in any way are due to any negligent act or omission, breach of duty or default on the part of the HRAC, or representative agents.

Content may be freely used with proper source citation and is of reasonable "fair use" per 17 US Code § 107.

Please NOTE: underlined words in the newsletter are "hot" linked to emails and external websites. HRAC is not responsible for their content or performance. URL's were verified a few days prior to publication. ■

LICENSE TESTING:

Affiliated with the Laurel Volunteer Examiners (VE), HRAC conducts testing in February, April, June, August, October, December, and other announced times. Sessions begin at 0900L at the announced location. Steven, KA3PDQ, is the Team Leader.

We *require*:

- pre-registration for exams to ensure that we have the level of staffing necessary to conduct an exam.
- your FCC Federal Registration Number (FRN)
- a valid email address *in advance* of registering for an upcoming exam.

Registration form and information is at the club's website: www.w3uu.org/license-exams/. (Registrations can be made online up to the Friday before test date.) ■

The next test session is scheduled for Saturday, 19 FEBRUARY 2022, at the Harrisburg Vietnam Veterans of America, 8000 Derry St., Harrisburg, PA promptly beginning at 0900L.

W3UU The Harrisburg Radio Amateurs Club, Inc.

President – Bob, K3RTS, Vice-President – Emily, K3ESU



Meeting Minutes 12 January, 2022

The January 12, 2022 meeting of the Harrisburg Radio Amateur's Club, Inc. was called to order at 1906 HRS by the President, Robert (K3RTS).

The January meeting of the HRAC was held at the Vietnam Veterans Association Building, 8000 Derry St, Harrisburg, PA 17111. Due to the continuing COVID-19 pandemic, those in attendance took the recommended precautions.

The members introduced themselves.

Secretary's Report – The minutes of the December 8, 2021 were published in the newsletter. Tim (W4NKC) made a motion to accept the minutes as published. Chuck (KA1YSR) seconded, the motion passed.

Treasurer's Report – No report this month.

License Trustee Report – No changes from last month.

Equipment Trustee Report – Terry (WB3BKN) reported that there are no changes from last month.

Repeater Committee – Terry (WB3BKN) reported that he was notified that the controller had been repaired, but has not yet been connected.

Laurel VE Committee – Tim (W4NKC) reported that the next exam session is scheduled for February 19, 2022 at 8000 Derry St at 900 HRS (9:00AM). Testing is free, but preregistration is required.

Membership Committee – Tim (W4NKC) reported that there are 66 Club Members with 42 being ARRL members. With more than 50% of HRAC members being ARRL members, we can remain an affiliated club. Tim will be contacting members that are not yet paid up on dues for 2022.

Newsletter Committee – Kurt (K3URT) reported to the group that the submission deadline for the February newsletter is **February 2, 2022**. Please send articles to HRAC.Newsletter@gmail.com

Web Page Committee – No report this month.

Emergency Communications – Robert (K3RTS) reported that Winlink Thursday Training sessions restart on January 20th.

Elmer Time – Joe (W3JPH) presented tonight on the antennas and other equipment he uses as an activator for Parks on the Air (POTA) activities. Thank you Joe. Dave (KC3MD) is slated to present Part 2 of 160 meter antenna systems before the March 2022 meeting.

DXCC Committee – GLEN (K3SWZ) reported that there are no changes from last month.

Hamfest Committee – Successful Winterfest on January 8, 2022 with about 110 attendees. The next Hamfest will be the Firecracker Hamfest on July 2, 2022. The Firecracker Hamfest will also be the PA State ARRL Convention.

Ham Feast – Ham Feast will be held on February 9, 2022 at 1800 HRS (6:00PM) at the Peachtree Restaurant and Lounge, 251 N Progress Ave, Harrisburg, PA 17109.

Field Day – Winter Field Day will be held on January 29-30, 2022. Field Day will be held on June 25-26, 2022.

Old Business – None

New Business – None

For the Good of the Club – Steve Gobat (KA3PDQ) is stepping down from active participation in HRAC. Thank you for your years of service, Steve!

Adjournment – With no further business, the meeting was adjourned at 1926 HRS. Motion to adjourn Chuck (KA1YSR), Seconded by Tim (W4NKC).

Respectfully Submitted,

[Frank Aponte, KC3RNK]

The Meeting Minutes is a document of HRAC, Inc. Therefore, all content is unabridged from the original except for font and page adjusted fitted format. Corrections to the Minutes are made at the next club meeting by vote of the membership by approval/disapproval. — Ed.

Webmaster Report – January 2022 Club Meeting

Updated frequently:
www.w3uu.org
 Please visit often! ed.

Dear HRAC Club Members,

Since December 2021 meeting, we started to experience more down time coasting into the end of the year as other priorities pulled us away and an unfortunate bout with COVID. We managed to keep the website functional under normal operations for the month, but not much more given staffing conditions.

Looking forward into 2022, we will be continuing normal operations as mentioned above while focusing on more enhancements to the website. Those to be included, but not limited to are SSL Security Certificate for Website; Photo Album and increasing the amount of content for Elmer time and other educational interest in amateur radio in general. All in due time. If you are interested in submitting content or assisting with the maintenance of content, please contact kd3mad@w3uu.org.

Also, if any officer, staff member or club member is interested in a W3UU email address, there are still many slots available. The would be issued in order of priority. Officers first, staff members 2nd and club members 3rd. Example would be kd3mad@w3uu.org. You can contact your new Club President Bob at k3rts@w3uu.org and new Club Vice President Emily at k3esu@w3uu.org.

As always, please continue to provide feedback and suggestions for information and content. This is the club's website, so membership is highly encouraged to share feedback with Michael KD3MAD at kd3mad@w3uu.org.

We continue to be an active hub for VE Testing. This month's **License Exam Request Forms:** **4**

Website Statistics for the Month December 8, 2021 – January 11, 2022 (A FAIRLY SUCCESSFUL STATS MONTH)

Contact Us Submissions	Successful Outreach	Notes
3	3	Two (2) forms were submitted by members with great ideas on how to enhance the website in 2022, as well as one (1) Help HRAC submission for Winterfest. All contacts resulted in ongoing communications with members. No non-members this month.

Number of Impressions	Number of Click-Throughs	Average Rank per Search
3,160 (up 1,010 or 68%)	246 (7.8% Click Rate)	31.3

Top 5 Performing Pages by Search	Number of Impressions	Number of Click-Throughs
Home Page	606	129
Hamfest Landing Page	534	90
Newsletters	62	6
Skywarn	28	3
Central PA Simplex Exercise (Archive Post)	3	3

Top 5 Performing Searches	Number of Impressions	Number of Click-Throughs
w3uu	37	21
harrisburg hamfest	18	13
hamfest pa 2021	12	1
pa qso party	118	0
qsl card printers	81	0

Items are ranked in order of Click-Throughs. Other notable impressions from searches include: "amateur full swap"; "ham radio swap shop"; "hanover hamfest"; "fema region 3" and "ham radio swap shop"

This report is hereby respectfully submitted.

Michael A. Drawbaugh (KD3MAD)
 Webmaster, Harrisburg Radio Amateurs' Club

CONTESTING

• **Contest Calendar February 2022 (over 130):**

www.contestcalendar.com/contestcal.html

Most popular February contests:

- ✓ 10-10 International Winter SSB (5-6)
- ✓ CQ WW RTTY WPX (12-13)
- ✓ PODXS 070 Valentine Sprint (14)
- ✓ ARRL School Roundup (14-18)
- ✓ ARRL International DX, CW (19-20)
- ✓ CQ 160-Meter, SSB (25-27)

• **One-By-One special events (27):**

www.1x1callsigns.org

• **Contester Scores:**

www.3830scores.com/index.php

• **ARRL Contest Calendar:**

www.arrl.org/contest-calendar ■



THE SCORES are in from the **65th PA QSO Party** held in October 2021.

The below OMs are **HRAC** members.

Dauphin County:

- **KC3EUU, Steve**, SOLP-SSB.
- **WB3JIS, Mark**, SOLP-SSB.
- **K3URT, Curt**, first in SOLP-M and top county score, 16th in the state for class.
- **KB3YRC, Richard**, SOLP-SSB.

Cumberland County:

- **W3KB, Keith**, first in SOLP-M and top county score and making a new county record. Third in the state in class.
- **NC3O, John**, first SOLP-SSB.
- **KB3PQT, Frank**, SOLP-SSB.

LEGEND:

SOLP = Single Operator Low Power;
SSB = Single SideBand only;
M = Mixed modes (SSB and CW).

QSO Stats: over 280 logs submitted with over 136,000 QSOs.

For more details, go to:
paqso.org/party-results.html

Want to try your skills at a friendly but competitive contest? The **66th PA QSO Party** is 8-9 October 2022 — always the second entire weekend in October. ■

HRAC CLUB & MEMBER NEWS

Elmer Time - January

Joe, W3JPH, presented for the January meeting. **Dave, KC3MG**, scheduled initially, will return in the March meeting to complete his 160m antenna and transmission line presentation.

Joe presented a well-informed talk on POTA activities and the various antennas he has used in the last few years. His favorite a simple, convenience, mag-mount antenna on his truck using an MFJ Hamstick. His other favorite is the SOTA Beam Band Hopper II. Another antenna configuration was with the Wolf River coil. ■

PA QSO Party Results

(See CONTESTING to your left) ■



WHP Radio Show

Terry, WB3BKN, was a six-minute guest on *Taking Care Of Business* show by Michael Parks, 7-8 a.m. on WHP Radio 580, Saturday, 22 January. Terry talked about TV antennas for those thinking about having an alternative way of receiving local stations rather than via cable. Mr. Parks also proposed the idea of having Terry back in the future, possibly with **R. J. Harris, W3HP**, to talk about amateur radio. ■

Stay in touch with the ARRL Eastern Pennsylvania Section Manager

George Miller, W3GWM.

URL: <https://epa-arrl.org>

Email: w3gwm@arrl.org



In January's EPA news, George makes several announcements:

- ARRL has received \$500,000 in grant money for clubs who apply for it.
- EPS Section Emergency Coordinator, Bob Wilson, W3BIG, compiles repeaters and frequencies used in EPA for EMCOMM.
- EPA Youth Coordinator Drew McLuckie, W3ZW, has contacted clubs about youth recruitment.
- George lamented the decline of 75 and 40-meter bands' OM behavior:

"People are failing to ID, but that's because their conversations are so offensive, they don't want to be identified. Please avoid politics and other potentially offensive subjects over the air. 40 meters and 75 meters have gotten so bad with the 'Good Ol' Boys Clubs.' I don't ever use those bands when demonstrating ham radio to friends. I'm ashamed of what might be heard."

- George continues to meet via Zoom whenever possible.

For more information and details, go to the EPA website cited above. ■

Larry William Herring, 73, WR3J, SK.

OM Larry, originally from Adams County, Pennsylvania, passed away 27 December 2021. Born in 1948 in Gettysburg, he had returned from 50 years in Texas to Pikesville, Maryland. He obtained his ticket in high school, worked in the electronics field, and was a VE and mentor to many. Because of illness, his license expired September 2021.

Full obituary at the [Gettysburg Times](#). ■

LOCAL AREA NETS

(ALL TIMES ARE LOCAL):

■ MONDAYS

- ✓ 1900: @145.110 MHz, 131.8 Hz Tone, FM, W3ND, Dauphin County ARES/RACES Training Net.
- ✓ 2000: @146.970 MHz, 123.0 Hz Tone, FM, W3HZU Keystone VHF Club net, York.
- ✓ 2030: @145.430 MHz, 67 Hz Tone, FM, N3TWT South Mountain Radio Association net, Mt. Holly Springs.

■ TUESDAYS

- ✓ 1900: @146.970 MHz, 123.0 Hz Tone, FM, W3HZU Keystone VHF Club Digital Net.
- ✓ 2000: @147.315 MHz, 82.5 Hz Tone, FM, K3LV, Lebanon Valley Society of Radio Amateurs, Emergency Net.
- ✓ 2100: @145.230 MHz, 114.8 Hz Tone, FM, K3IR Southern Pennsylvania Radio Club net.

■ WEDNESDAYS

- ✓ 1900: @146.76 MHz, 100.0 Hz Tone, FM, **Harrisburg Radio Amateurs Club** Information net, W3UU, every Wednesday except club meeting, second Wednesday.
- ✓ **NEW** 1930: @146.865 MHz, 123.0 Hz Tone, FM, Red Lion, W3ZGD, Hilltop Transmitter Association "Spikes and Frogs" railroad hobbyist net.
- ✓ 2000: 28.400 MHz, simplex net, USB, Cumberland Amateur Radio Club (except 3rd Wednesday)
- ✓ 2100: @145.110 MHz, 131.8 Hz Tone, FM, W3ND, Central Pennsylvania SkyWarn™ net

■ THURSDAYS

- ✓ 2030: @145.270 MHz, 74.4 Hz Tone, FM, N3TWT, FM Allstar Echolink net.
- ✓ 2100: @145.390 MHz, 118.8 Hz Tone, FM, W3AD Lancaster Transmitting Society net.

■ FRIDAYS

■ SATURDAYS

- ✓ 2030: 146.580 MHz, simplex, FM, Lancaster Co.

■ SUNDAYS

- ✓ 0730: 3.583 MHz, PA-NBEMS, Thor22 and MFSK32.
- ✓ 0800: 3.9935 MHz, PEMA statewide Auxiliary Communication Service, LSB (first Sunday of the month only).
- ✓ 0830: 3.9935 MHz, Central Pennsylvania Auxiliary Communication Service, LSB.
- ✓ 1900: 146.490 MHz, simplex net, FM, Cumberland Amateur Radio Club
- ✓ 2000: @146.640 MHz, 85.5 Hz Tone, FM, AA3RG Appalachian Amateur Radio Group net.
- ✓ 2030: @147.120 MHz, 100.0 Hz Tone; FM, W3ACH Cumberland Valley Amateur Radio Club net.

■ DAILY

- ✓ 1900: 3.585 MHz, CW, Pennsylvania Traffic Net.
- ✓ 1945: @147.015 MHz, 118.8 Hz Tone, FM, W3RRR Lancaster County Welfare Net; Red Rose Repeater Association.

® = repeater. Members: Add or update your favorite regional net!

HAM HISTORY

February 1922: 100 Years Ago — Harrisburg Radio Club

PLAN RADIO CONCERT
At the meeting of the Harrisburg Radio Club last night plans were formulated for a public radio concert to be given in this city in the near future. Famous singers will be heard and other concerts brought to Harrisburg by means of wireless.

— Harrisburg Telegraph, 4 February 1922, p. 4.

Radio Concert to Be Given Here March 13

For the first time in the history of Harrisburg, a musical program, broadcasted from KDKA station at East Pittsburgh, will be received and amplified at a concert to be held in Fahnestock Hall Monday evening, March 13, at 7.30 o'clock. The concert is being given under the auspices of the Harrisburg Radio Club and tickets have been placed on sale at the homes of Charles Krause, of 1912 Market street; W. L. Gardner, 1612 North Fourth street and R. M. Pfeffer, of Lemoyne.

In addition to the regular radio telephone concert the entertainment will be featured by a series of electrical stunts with high frequency electricity.

— Harrisburg Telegraph, 25 February 1922, p. 7.

Hmm... maybe Elmer Time should be called "...a series of electrical stunts..." 😊

Newsletter submission guidelines —

Deadline: For the MARCH issue is end of business day WEDNESDAY, 2 MARCH — sorry, no exceptions!

- ✓ Articles, photographs, graphics are welcome! *Limited assistance can be provided.*
- ✓ Cite the source. Permission must be obtained from the author using copyrighted material except "fair use" extracts.
- ✓ Please proof-read your finalized narrative before submitting. As a practice, the editor will "quote" rather than "correct."
- ✓ Submit to the email address: HRAC.Newsletter@gmail.com

— LICENSE STUDY INFORMATION —

Technician and General Classes: Lancaster County Public Service Training Center

Tech: Apr 9-10 Aug 20-21
Oct 15-16

General: Oct 29-30

Contact:

Ralph Brandt, K3HIQ
1705 Misty Dr
York PA 17408-4237
C 717-885-3063 • H 717-792-1017
ralph.brandt@comcast.net ■

Zoom Extra License Training Class At National Electronics Museum

Free weekly, live, **Extra Class** Licensing course on Zoom beginning Thursday, January 20 through Thursday, March 31 (11 sessions). Sessions will start at 6:30, and run 3 hours. These are the classes sponsored by the National Electronics Museum that they have been holding for years. Those wishing to sign up should email roland.anders@comcast.net — www.w3vpr.org/extraclass ■

Free Ham Radio For Beginners

Presented By: Bosler Memorial Library, 158 W. High St., Carlisle, in **Cumberland County, PA.**

When? 5 February thru 5 March 2022, (recurring weekly on Saturday.)

Time: 2:00 PM to 3:15 PM

Price: free.

Registration:

<https://tinyurl.com/rckx7dxv>

Presenter: Robin, W3KAT. ■

If you know anyone currently studying for the Technician Exam and wanting to benefit from the current test pool, please have them take the test before July 1st this year! The last scheduled HRAC VE testing session with the OLD Technician Pool will be **18 June 2022.**

Get That Ticket — de K3URT

Winter is not over, and if you are homebound and don't want to go out in the weather, here are some on-line sites you can utilize in your study for a new or upgrade ticket.

Paid:

- ♦ hamradiolicenseexam.com
- ♦ hamradioprep.com
- ♦ hamstudy.org

Free:

- ♦ hamexam.org
- ♦ qrz.com/hamtest/
- ♦ radioqth.net/exams
- ♦ aa9pw.com
- ♦ www.arrl.org/question-pools
- ♦ learn.arrl.org (drill down to All Courses and take Dave Casler's Amateur Radio License Course Technician Class)
- ♦ eHam.net/exams/
- ♦ www.kb6nu.com/study-guides/
- ♦ hamradioschool.com

Tips to Passing:

1. Learn the material, don't memorize it.
2. Study in a class or with someone.
3. Go with your gut. Your first choice usually is the correct answer.
4. If using online practice testing, use only after Tip #1 and then take the actual test in person when consistently passing 90% or better.
5. Yes, you must study! Many fail from overconfidence and unpreparedness.
6. Apply the Thomas Edison principle: "Genius is one percent inspiration and ninety-nine percent perspiration."
7. Set a goal or timeframe when you want to accomplish your test.

Don't spread your studies over too long of a time, but be seriously committed to a time frame.

8. Set aside a quality 15-60 minutes per day for study.
9. Failing a test is only preparation for the next one — don't get discouraged! Don't compare yourself to others — individuals learn differently.
10. If you pass the test, go for the next level ASAP or ask the VE to take the test in the same session! You may be surprised!

"Learners retain approximately:

- 90% of what they learn when they teach someone else/use immediately.
- 75% of what they learn when they practice what they learned.
- 50% of what they learn when engaged in a group discussion.
- 30% of what they learn when they see a demonstration.
- 20% of what they learn from audio-visual.
- 10% of what they learn when they've learned from reading.
- 5% of what they learn when they've learned from lecture."

—Sean D'Souza, "How To Retain 90% Of Everything You Learn." www.psychotactics.com/art-retain-learning/

— These are amalgamated suggestions from various sources and experiences, and not an endorsement by HRAC, the author or any VEC. ■

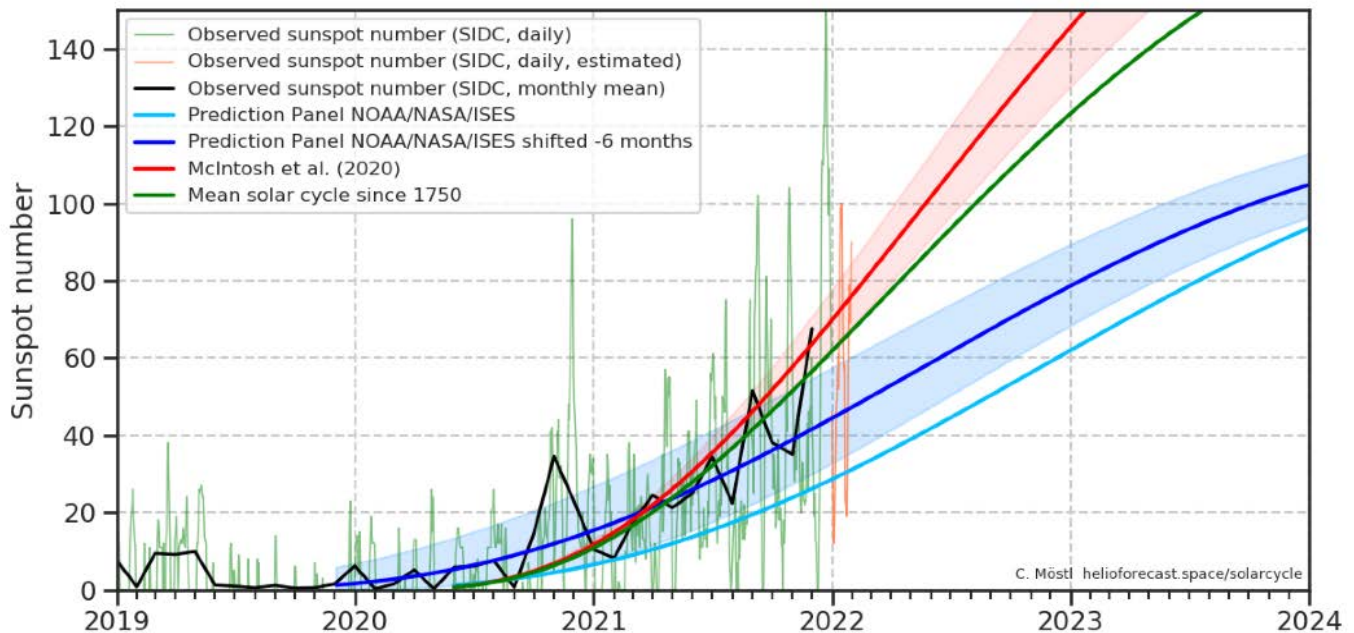
SWAP & SHOP SPOT

Per the affirmation of the membership, June 2021 meeting, members may post, **one-time** non-commercial advertisement of items relating to amateur radio, computers, and electronics. "Wanted" advertisements are permitted. Submission of photos are strongly encouraged.

Also, please see posts on the HRAC website and FaceBook™.

HRAC is not responsible for any typographical or other errors. While we endeavor to connect interested parties, all transactions are made exclusively between the buyer and seller. HRAC disclaims all responsibility for any issues arising out of the use of, or reliance upon, this information. ■

NEWS • COMMUNIQUE • MESSAGES • DISPATCHES • QST • REPORTS • TALK

Progression of solar cycle 25: red pill v blue pill

“We plot here the predictions for the sunspot numbers for solar cycle 25, from the NOAA/NASA/ISES panel and from a paper by [Scott W.] McIntosh *et al.* (2020). Based on these forecasts, we have calculated the solar storm impact rates at planets and spacecraft.” —[helioforecast-space/solarcycle](https://helioforecast.space/solarcycle)

It appears the McIntosh model is a more predictive hypothesis than the NOAA lines based on real data. Let's hope McIntosh's analysis is the better one!

The **red** path is McIntosh's prediction and the **blue** is the NOAA prediction. The **black** line is the actual data collected.

SOURCE: McIntosh, S.W., Chapman,

S., Leamon, R.J. *et al.* Overlapping Magnetic Activity Cycles and the Sunspot Number: Forecasting Sunspot Cycle 25 Amplitude. *Sol Phys* 295, 163 (2020). doi.org/10.1007/s11207-020-01723-y

[Thanks, **Glenn, K3SWZ**, for bringing this to our attention.] ■



FIRECRACKER HAMFEST:
2 JULY 2022

APPLICATION for MEMBERSHIP or RENEWAL

**MAIL TO:**

Tim Lehman (W4NKC)
PO Box 453
Hummelstown, PA 17036-0453
717-982-8550

— Make checks payable to HRAC —

YOU CAN ALSO USE PayPal for payment of dues. The club's account is: HRACW3UU@GMAIL.COM The payee will appear as Dave Dormer, our treasurer. If using PayPal, please list the call sign(s) for which you are paying dues and the number of years you are paying in the "note" section of the payment page. Also, if there are any changes to your personal information please either put it in the note section or email the updates to: W4NKC.HV@gmail.com

Membership per year is [] \$15.00, [] \$7.50 if over 65 years of age.

Family Membership per year is [] \$25.00 (Hams must reside in the same household.)

— Membership ends December 31st of the year. —

NAME _____ CALL _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE _____ E-MAIL* _____

ARRL Member? [] Y [] N YEAR FIRST LICENSED: _____

SIGNATURE _____ Date _____



I agree to abide by the by-laws and guidelines of the membership of The Harrisburg Radio Amateur's Club, Inc.

If you recently obtained your first license through our Harrisburg Volunteer Examiner Team, bring your application and CSCE to a club meeting and we will waive the membership dues for your first year of membership!

*** Please note:** the newsletter is only sent in portable document format (PDF), via email, so **a valid, updated email address is important !!!**

Join the Gang!