



Murray State University Amateur Radio Club

Address: MSUARC
2580 University Station
Murray, Kentucky 42071

Website: www.k4msu.com

MSU ARC Meeting – May 7, 2024

The meeting was called to order by President, John Coyle, W4PJC, at 7:00 p.m.

In opening remarks John noted a correction to an earlier shared date for the Princeton Tailgate event. The corrected date is June 1. He also congratulated George James, KY4GMJ, and Donald Edwards, K4MKY, on swiftly finding the foxes and winning the Fox Hunt.

Roll Call & Question of the Night: Name, call sign and how many years licensed.

Programs:

Bill Call, KJ4W, provided an important Ham Bit – Choosing An Emergency Frequency (For local VHF-UHF FM Use). His specific bullet points were:

- The Primary MSUARC local emergency channel is the 2-meter 146.940 MHz repeater (-offset, 91.5Hz CTCSS tone)
- If the repeater isn't functional, try the 443.800MHz repeater (+offset, 91.5Hz CTCSS tone)
 - Someone who has good base-station capabilities should monitor the 94 repeater *on reverse* to listen to new stations calling on the primary channel. Then direct them to the 443.800MHz repeater or whatever alternative is chosen.
- If both repeaters are not functional, or as an alternate if circumstances suggest, then instead use a simplex channel. NCO must be well-located.
 - One choice is 146.940MHz simplex if the repeater is down. Use 91.5Hz *ENCODE* in case some listeners have tone squelch enabled on the repeater channel. Periodically announce that the repeater is off and 146.940 simplex is being used.
 - Another choice is to direct users to another simplex channel such as 146.550MHz (no tone). Someone should monitor 146.940 and reverse to advise new stations.
- In some circumstances, especially if comm support is mostly needed on the east side of the county, use the 147.240MHz Hamlin repeater (+offset, 91.5Hz tone). Someone should monitor 146.940 to advise new stations.

Randall Winchester, WD4HVA, presented the results of his HamSCI grant-funded eclipse study of the effects of the eclipse on the Ionosphere

- What is HamSCI?
 - Ham Science
 - Founded to use hams/ radios to gather data for research
 - Uses software to gather and share the data received
 - Ham radio Contributes directly to the advancement of the radio art
 - They grant and fund scientific research
- What does HamSCI Focus on?
 - What affects propagation of signals? (And a few other things but that's a key focus.)
 - Others can use the data (students, teachers) in scientific publications – data sharing and analysis
 - Help scientists receive grants
 - 2023/2024 eclipses



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- Personal space weather stations - Grape I,II, III
- Measurement of travelling ionospheric disturbances
- Frequency measurement festivals
- Amateur radio response to solar flares and geomagnetic storms
- Swarm-E/e-POP
- “MSU ARC is actively contributing to real science!”
- What is a GRAPE?
 - Great Radio Amateur Propagation Experiment
 - We use GRPEII Space Weather Station here
 - Equipment provided at no cost
 - Asked to keep it going as long as possible
 - Currently at Randall’s house
 - Over 30 GRAPEIIs deployed before the eclipse
 - Equipment still belongs to hamSCI
- What did MSUARC contribute?
 - Randall contributed his time toward seeking the grant and following through with the research and documentation
 - Had to shut down winlink temporarily
 - The equipment is with Randall because data will continue to be used
 - Will ask for the hard drive to be returned at some point
- What were the results?
 - Do eclipses cause change in the upper atmosphere?
 - Measure doppler shift of fixed stations at other fixed points
 - Looking for doppler shifts of 1 or 2 HZ
 - Ionosphere did shift (S-Curve response)
 - Graphical representation shows this
 - Our data near totality had a very noticeable doppler shift!
- Thanks to Bill for installing the GPS antenna and running coax
- Thanks to Randall for doing so much work and for securing the grant

Vice President’s Report: Diana Mishica, K4IRU, wants more hambit suggestions from club members for her to schedule in future meetings. She is good with programs through the end of August.

Secretary’s Report: Bill Call, KJ4W, moved that the April meeting minutes be accepted as submitted. Todd Hackathorn, W4GV, seconded the motion. Motion was carried. The club thanked Corbie Orten, KO4ARX, for serving so long as club secretary with her term ending last month.

Advisor’s Report: Jana Hackathorn, KN4MWE, spoke for Michael Inman, K4MWI. Some junk mail has been received but nothing important. Mike won’t have official duties until August.

- Randall Winchester, WD4HVA, suggested having Mike promote the HamSCI project. Jana said she could help with that.

QSL Manager’s Report: Debbie Barton, W8IBT, No report.



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Treasurer's Report: Bill Call, KJ4W, reports that he made one deposit for \$175. No disbursements have been paid since the last meeting. The bank balance is \$3955.85. As of Tuesday at noon, 72 members have paid 2024 club dues. We will accept 2024 dues at any time through the end of the year, but only those who have paid 2024 dues may hold office, make motions, or vote at meetings.

Systems' Report: Bill Call, KJ4W, reports that the 443.800 repeater controller's crosspoint switch IC failed again on April 23. Fortunately, he had ordered two of the chips when it failed a couple of months ago, but before he installed the new one, he checked the controller's power supply voltage and found that it was a little high. So he modified the power supply to reduce the voltage and then installed the new IC and so far it is working fine. He ordered some more ICs from China just in case something else is going on. He had to restart the computers used for both HF Winlink and 2m Winlink after they stopped once again during the month, which is a common situation. The three Club repeaters, the two APRS digipeaters, and the two Winlink systems are all working okay at the moment as far as he knows.

VE Report: Bill Call, KJ4W, noted that we did not have a VE session after the April meeting. One will be provided after today's meeting if needed.

CERT Report: Josh Kerr, WV4O, reported that there have been no CERT activations in the last month. He reminded everyone of the VOAD working group that will be meeting on May 20, 2024 at 6:30pm in the courthouse annex. Anyone who is interested in helping out may attend the meeting. Josh also mentioned that the KY Emergency Management is planning on doing a communications exercise on June 4 and will be utilizing HAM radio operators to pass Simplex messages. He will provide more information on that as it becomes available.

PAARS Report: Tracy McKinney, W4IRT, noted that the Hams and Coffee events were suspended for May and June due to Memorial Day and Field Day.

Net Manager Report: John Coyle, W4PJC, presented the April 2024 Net Report as Net Manager, Chuck Williams, K4CHW, is not present tonight

- 5 Sessions
 - 126 stations
 - 238 minutes
 - 499.8 operator hours
- Details
 - 4/1 27 stations for 61 minutes
 - 4/8 31 stations for 57 minutes
 - 4/18 21 stations for 40 minutes
 - 4/22 28 stations for 46 minutes
 - 4/29 18 stations for 34 minutes
- SKYWARN Net
 - 4/18 8 stations for 35 minutes
 - 4.67 operator hours



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Web Manager Report: Josh Kerr, WV40, has nothing new to report tonight.

Field Day Report: Rich Palmer, KM4JZX, was not in attendance so Josh Kerr, WV40, noted that the planning committee met yesterday. Rich will pull the power trailer to the arboretum Friday before Field Day starts so it's ready to use on Saturday. He will likely set up all the other antennae and then the trailer last. The Field Day equipment will be tested on June 15 before Field Day. Steven Dabbs, KN4IRN, has a laptop with him tonight and will also bring it to the next meeting to help people to sign up for time slots and the pot luck.

Special Events:

- **Kentucky QSO Party:** June 1
 - Will the club be participating?
 - Randall asked for a show of hands to indicate interest
 - May want to participate earlier/later in the day for those wishing to participate in the Princeton Field Day event
 - Bill will check on room availability
- **Princeton Tailgate:** June 1
- **2024 ARRL Field Day:** June 22-23 at the MSU Arboretum
- **KYPOTA:** August 10th, 2024
 - The main location will be at Cherokee Park/Kenlake State Park using callsign K4MSU.
 - Additional locations as in years past will be at:
 - Colson Overlook in LBL using callsign K4Y
 - Columbus-Belmont State Park using callsign K4E
 - KY Dam Village using callsign W4GZ
 - Tracy McKinney, W4IRT, will assume coordination in September 2024 and will present on the event at the August meeting.
- **Huntsville Ham Fest:** August 17-18
- **Fall Fox Hunt:** Tentatively September 28

Old Business: There was no old business to discuss at this time.

New Business: There was no new business to discuss at this time.

New Members: Donna Pursifull, K4DPE, reported that there were no new member applications.

Jana Hackathorn, KN4MWE, moved to adjourn the meeting; Debbie Barton, W81BT, seconded the motion. Meeting was adjourned at 8:05pm.

Attendance: 25 people



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Tracy McKinney, W4IRT

Josh Kerr, WV40

Steven Dabbs, KN4IRN

Bill Call, KJ40

Debbie Barton, W81BT

Denis Barton, WB8SKP

Bob Aldrich, WD80WA

Charlie Isele, N1CDK

Don Edwards, K4MKY

Bob Atkinson, K90IM

Teresa Ray, no callsign

Diana Mishica, K4IRU

Brenda Call, WA4IJU

Joe Wray, WD4GXI

Jack Ellis, K9JLE

Corbie Orten, KO4ARX

Paul Hendrix, KJ4BCH

Jessica Hendrix, KQ4FDS

Mitchell Moss, KN4KYU

Randall Winchester, WD4HVA

Ward Adams, KQ4OPJ

Todd Hackathorn W4GV

Jana Hackathorn, KN4MWE

Donna Pursifull, K4DPE

Respectfully submitted,

Donna Pursifull, K4DPE, Secretary