

July 2025  
Vol IX Issue 7

# News Beacon

Medina County Amateur Radio Club  
*Celebrating 50 Years of Service 1975-2025*

## Prez's Preface

*"In the United States, the majority undertakes to supply a multitude of ready-made opinions for the use of individuals, who are thus relieved from the necessity of forming opinions of their own."*

- Alexis de Tocqueville

*"If everyone is thinking alike, then somebody isn't thinking."*

- General George S. Patton

[The following is the opinion of the editor, not necessarily of the MCARC...]

"Land of Liberty" is a phrase often associated with the United States, symbolizing the nation's ideals of freedom and independence. Originally it symbolized freedom and independence from British rule, but is often associated with freedom and independence of thought.

Thinking doesn't seem to be in vogue right now. With the likes of TikTok, Facebook, "X," newsprint, and cable shows, we have this social epidemic of "influencers," i.e., celebrities of various ilks, feeding on ego and power to provide "thoughts" to those unable to energize their own mental synapses.

Thankfully, the hobby of Amateur Radio can allow one to exercise creativity, a form of independence, in designing personal Ham shack setups, soldering Raspberry Pi enhancements, 3-D printing of equipment accoutrements, and building antennas, to name a few mental exercises.

Enjoy your liberty,

73, Jane@K8JGR.radio



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### Hmmmmmm...

*"Why did the battery break up with the charger? ?" ...*

*"... It wasn't feeling the spark anymore ."*



# June General Meeting Minutes

The monthly General Meeting of the Medina County Amateur Radio Club was held June 9, 2025 in-person, at the Medina County Career Center (JVS). The meeting was called to order by Pres. Jane K8JGR. The Pledge of Allegiance was recited at 7:01pm. The following eighteen (18) paid members attended, so quorum (9) was

Kirk WN8KDN	Ed K8NVR	Baji K8IIT	Dave N8JNX	Soloman VY2SK
Amy K2KSU	Dave NK0K	Diane KD8SSX	James KD8FHY	James KE8NOH
Gail KD8GGM	Doug KE8BBI	Jane K8JGR	Dudley WA1X	
John K8JEK	Gordon AI8Y	Steve KE8BJD	John Jr KF8CTA	

reached.

**Minutes:** Motion to suspend reading and to approve May General Meeting Minutes as published in the June newsletter: Amy K2KSU, Second: Jim KD8FHY. Approved.

**Treasurer's Report:** December Treasurer's Report for the Month of March was read by: Jane K8JGR. Motion to approve: Diane KD8SSX, Second: Dave N8JNX. Approved.

**President's Report:** \* The Medina Half Marathon was held on May 24. Thanks go out to a lot of our Club members for helping out and making this a safer race. \*The Twin Sizzler is being held on July 4th and Rene KD8SSW still needs more volunteers. Please help if you have time. \*Congratulations to Dudley WA1X, Ed K8NVR and Fred K8FH for first place score for Small Clubs in the 2024 ARRL December 160M CW Contest. Our MCARC operators again excelled with an improved score of 251165. We also had higher scores than fourteen Clubs in the Medium Size category.

**Membership:** Diane KD8SSX reported that membership is currently at 58.

**Repeaters:** \* Ed K8NVR reported that all is good with the repeaters.

**Newsletter:** Always looking for newsletter articles. Please submit to Jane@K8JGR.radio

**Adjournment:** Motion to adjourn: Diane KD8SSX, Second: Baji K8IIT. Approved. Meeting was adjourned at 7:30 pm.

**Technical presentation:** Baji K8IIT presented a talk on CHIRP..

*Respectfully submitted by Gail KD8GGM*



# ARRL Field Day 2025 Pics

## Valley City Mill Stream Park



### Club Meetings

Monthly, MCARC General Meetings are held at 7:00pm on the second Monday of each month at the Medina County Career Center (JVS), Room 246.

The Medina County Career Center (JVS), is located at: 1101 W Liberty Street, Medina, Ohio 44256

### Member Birthdays

07/19 Diane Snider KD8SSX  
07/22 Jody Fedor KE8GKO



## MCARC Calendar

July	7	7:30pm	Monday Night 2M Net
July	14	7:00pm	IN-PERSON GENERAL MEETING ( <a href="#">See page 8</a> )
July	21	7:30pm	Monday Night 2M Net
July	28	7:30pm	Monday Night 2M Net

## ARRL Ohio Hamfests

**07/19/2025 -** NOARSfest  
Location: Elyria, OH  
Sponsor: Northern Ohio Amateur Radio Society  
Website: <https://www.noars.net/hamfests/noarsfest/>

**07/20/2025 -** Van Wert Hamfest  
Location: Van Wert, OH  
Sponsor: Van Wert Amateur Radio Club  
Website: <http://w8fy.org>

## ARRL Radiosport Contests

**July 12-13** IARU HF World Championship

## Hams for Lunch (Formerly Called Old Timers' Lunch)

Attendance at the monthly "lunch and natter" has been fairly consistent. It is held on the **third Tuesday at 12:00 noon**, at the Royal Buffet, 3835 Pearl Rd, Medina, OH 44256, located at the SE corner of SR-42 & Fenn Road. You do not have to be a MCARC member or old to enjoy the camaraderie.



# Scientists Discover Strong, Unexpected Link Between Earth's Magnetic Field and Oxygen

Earth's magnetic field and oxygen levels have increased more or less in parallel over the past 540 million years, suggesting the two factors are linked in some way, researchers say.

Earth's magnetic field and oxygen levels are inextricably linked, new research suggests.

The strength of the geomagnetic field has gone up in lockstep with the percentage of oxygen in Earth's atmosphere over the past 540 million years, a new study finds — but it remains unclear if one of these influences the other, or whether other unknown factors explain the link.

"This is the first discovery we've ever had to establish the link between the geomagnetic field and the oxygen level," lead author Weijia Kuang, a senior scientist in the Geodesy and Geophysics Laboratory at NASA's Goddard Space Flight Center, told Live Science.

Earth's magnetic field and oxygen levels have increased more or less in parallel since the start of the Cambrian period (541 million to 485.4 million years ago), and both factors spiked between 330 million and 220 million years ago, the results indicate.

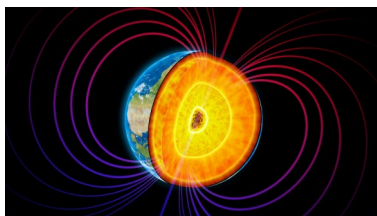
The research could help to narrow down requirements for life on other planets, Kuang and study co-author Ravi Kopparapu, a planetary scientist at the NASA Goddard Space Flight Center, said in a joint video interview.

It may be that the geomagnetic field controls oxygen levels, or vice versa — but there is another possible scenario, which is that both factors are related to a third geochemical or geophysical process that the researchers haven't yet pinpointed, Kuang said.

For the new study, scientists used two independent datasets spanning the past 540 million years. One of the datasets showed atmospheric oxygen, derived from multiple indicators such as the abundance in sediments of fossilized charcoal, which remains after wildfires and gives clues about how much oxygen was available at a given time. The other dataset showed the strength of the geomagnetic field, derived from magnetic information that is recorded in ancient rocks and sediments. The researchers plotted these datasets against each other and found there was a strong correlation between them.

If the geomagnetic field controls oxygen levels, its influence would likely be due to the protection it offers Earth's atmosphere against space weather. Previous research indicates that the geomagnetic field can prevent or reduce the escape or erosion of atmospheric molecules. The magnetic field also shields life on the planet, including plants that produce oxygen, from X-ray and extreme ultraviolet radiation.

If, in contrast, atmospheric oxygen levels dictate the strength of Earth's magnetic field, then plate tectonics would play a central role. Plate tectonics is the process that continuously recycles Earth's crust into the mantle, which is the planetary layer that covers Earth's liquid outer core.



Earth's magnetic field is generated by convection in the liquid outer core. (Image credit: Mopic/Shutterstock)

*Cont'd on next page...*

## Link Between Field and Oxygen levels ...cont'd

Earth's geomagnetic field originates from currents in the outer core, so it's possible that the recycling of crustal material and oxygen into the mantle could impact the lower mantle, which could then affect the geomagnetic field, Kuang said.

"Plate tectonics [...] will definitely impact the thermal and the dynamical conditions at the base of the mantle where it borders the liquid outer core," he said. "On the other hand, plate tectonics also impacts the cycling of chemicals and other elements from the interior to the surface, which certainly will impact oxygenation, or the production of oxygen."

It's more likely that the geomagnetic field affects oxygen levels, rather than the other way round, Kuang said. That's because scientists know the geomagnetic field originates deep inside the planet and propagates to Earth's surface and into space. "The other direction is less well understood," he said.

The third possible scenario is that another, separate process is pushing the geomagnetic field and oxygen levels in the same direction over time. The study's authors don't know what that process might be yet, but a spike that exists in both datasets may hold the answer.

### **'A very enticing mechanism'**

The spike coincides with the existence of the ancient supercontinent Pangaea, which formed about 320 million years ago and broke up about 195 million years ago. Due to the massive tectonic rearrangements involved, supercontinents might be the missing link between Earth's magnetic field and oxygen levels — but the evidence for this is still very tentative at this point, Kuang and Kopparapu cautioned.

"This is one of the conjectures we didn't really put out strongly in our paper, but it is something we think is a very enticing mechanism for us to pursue," Kuang said. The reason the researchers held back with this idea is that they have robust data for only one supercontinent — Pangaea — and not the ones that came before, he said.

"There seems to be some eye-sight correlation between oxygen and magnetic field and all the other supercontinents," Kopparapu said. "However, we don't have reliable data for oxygen [going farther back] than 540 million years, and so we are unable to make that kind of a conclusion for [farther back in time] and past supercontinents."

The researchers are already working on the next step, which is to search for other geophysical and geochemical factors that might link to the geomagnetic field and oxygen levels. For this, the authors say communication and collaboration between scientists is of paramount importance.

"One single mind cannot comprehend the whole system of the Earth," Kopparapu said. "We're like kids playing with Legos, with each of us having a separate Lego piece. We're trying to fit all of it together and see what's the big picture."

*LiveScience.com*: By Sascha Pare published June 13, 2025

## When It Comes to Auroras, Pink Is the New White, Astronaut Says

With the arrival of a visiting crew still delayed, science and maintenance work on board the International Space Station continued to fill the Expedition 73 crew's week, along with time for Earth observations and an interview for a podcast.

### Orbital observation

Is it a green aurora with pink stripes, or a white aurora with green stripes? That, apparently, became the question on the International Space Station, at least for Expedition 73 flight engineer and NASA astronaut Anne McClain.

"So, when I took this aurora [video], at first I thought that my settings were not correct because the aurora appeared white. I thought maybe the ISO was off, or I picked the wrong lens. Turns out, what I thought was white is actually light pink, and this led me down a path of learning," wrote McClain on Tuesday (June 17) in a social media update from orbit.

As McClain found out, the color of aurora depends on several different factors, including the molecule hitting Earth's atmosphere, the nature of the impact itself, the density of the atmosphere at the point the collision occurs and the altitude of the impact.

"Green is the most common aurora color, and it occurs when the electrons hit oxygen molecules between 60-150 miles [100-240 kilometers] altitude," wrote McClain. "If the solar particles hit oxygen but at a higher altitude, above 150 miles [240 kilometers], the resultant color is red. This only happens under intense solar storm activity because of the lower density of atomic oxygen at higher altitudes."

And as McClain discovered, the aurora she recorded "was very pink-hued!"



A still image from a video captured by Expedition 73 flight engineer Anne McClain shows a "very pink-hued" aurora due oxygen particles hitting Earth's atmosphere.

(Image credit: NASA/Anne McClain)



## Hamatuer Antix



*December 1962 Popular Electronics (p46)*

*MCARC will be holding Technical Sessions during most of our in-person General Meetings on the 2nd Monday of each month. IF THE DOORS ARE LOCKED PLEASE CALL JANE K8JGR AT 216-570-8500 AND WE WILL SEND SOMEONE DOWN TO LET YOU IN.*

## July 14th, 2025 General Meeting

Our next monthly **In-Person General Meeting** is **July 14th**, and will be held at **7:00pm**, at the **Medina County Career Center (JVS)**, Room 246. The Medina County Career Center (JVS), is located at: 1101 W Liberty Street, Medina, Ohio 44256.

Call Jane K8JGR 216-570-8500 if doors are locked and we will send someone down to let you in. State whether you are at the front or back of the building.

The **Technical Session** will be presented by **Doug KD8SST** on programming radios using **RT Systems**.



## Dits and Dahs

- **Our Monthly Meeting**

Will be held on **July 14th**, at **7:00pm**, at the Medina County Career Center (JVS), Room 246. The Medina County Career Center (JVS), is located at: 1101 W Liberty Street, Medina, Ohio 44256. IF THE DOORS ARE LOCKED PLEASE CALL JANE K8JGR AT 216-570-8500 AND WE WILL SEND SOMEONE DOWN TO LET YOU IN.

- **MCARC 2M Net**

Check in with your friends to the **MCARC 2M Net**, held on every Monday evening at 7:30pm, with the exception of the second Monday of the month when we have our in-person meeting. See page 10 for info.

- **Consider Volunteering as Trustee for MCARC**

As was mentioned last year, after nine years, Jane K8JGR is planning on stepping back a bit from MCARC duties in 2026. Please consider stepping up and compiling our News Beacon, honing your webmaster skills, exercising your leadership skills as Trustee, or plan to take meeting notes as Club Secretary since Gail KD8GGM is also stepping down. We are willing to help with the transition. MCARC has many talented members who would provide a fresh perspective on what direction the Medina County Amateur Radio Club should take in the next decade. Please contact [jane@K8JGR.radio](mailto:jane@K8JGR.radio) if you would like more information.

- **ARRL® Logbook of The World® Return to Service**

Per the ARRL, the Logbook of The World will return to service at 10:00 AM EDT on Wednesday, July 2, 2025. The improvements made no change in the visual appearance of LoTW but will provide enhanced performance and continued reliability of the system.

- **Member Award**

From October 2023 through October 2024 Dave Hibbard NK0K attend more meetings than his peers (read non-Trustees). At our last Trustee meeting, it was decided to award Dave with \$20.00 for his commitment to the MCARC. Congratulations!

- **Field Day 2025**

Our Club had a stellar Field Day last weekend at Valley City Mill Stream Park. Check out the pics on page 3. We had 35 people attend, including members, Ham friends and guests. Our operating stations were busy for ten hours straight, and more than 1000 contacts were made. A hearty “thank you” is extended to Fred K8FH, who through his munificence, provided all the equipment, computers, antennas and expertise.

- **Driver Wanted**

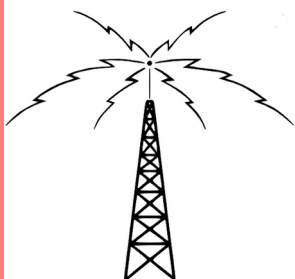
Jim Bodnar W8UQZ will attend our monthly meetings if someone is kind enough to drive him from/to his Brunswick home (close to SR-303). Please email [Jane@K8JGR.radio](mailto:Jane@K8JGR.radio) for Jim’s contact information.

- **Lost & Found**

Left behind at Field Day held at Mill Stream Park in Valley City: one pair of WZQH leather work gloves. Will bring to July 14 Member Meeting or contact [Jane@K8JGR.radio](mailto:Jane@K8JGR.radio).



## MCARC Repeaters



Call	Location	Function	Repeater Input	Repeater Output	CTCSS (PL)	Band
W8EOC	Medina (Central Tower)	RX	147.63	147.03	141.3 three beeps	2 Meter
W8EOC	Brunswick (North Tower)	RX	147.63	147.03	131.8 two beeps	2 Meter
W8EOC	Lafayette (South Tower)	TX & RX	147.63	147.03	88.5 one beep	2 Meter
W8EOC	Lafayette (South Tower)	RX	51.16		107.2	6 Meter
	Brunswick Hills (Pearl Rd)	TX		51.66		
W8EOC	Lafayette (South Tower)	Repeater TX & RX	223.26	224.86	77.0	1.25 Meter
W8EOC	Lafayette (South Tower)	Repeater TX & RX	449.925	444.925	131.8	70 CM

Note: You can get into our W8EOC 2-meter repeaters from the Brunswick input (**PL 131.8**), the South (Lafayette) input (PL 88.5), or the North (Medina) at 141.3.

*NOTE: Please set your radios as indicated above to enjoy our 7:30pm MCARC weekly Monday Net (except for 2nd Monday of month).*

### 2-Meter Net

Remember to join our 2-Meter nets on 147.030 Monday evenings at 7:30pm, except for the 2nd Monday of each month when we have our **In-person** meetings.

You do not have to be a member of MCARC to participate.

### MCARC Monday Night 2-Meter Net Control

07-Jul-2025	WT8O	14-Jul-2025	<i>Meeting</i>
21-Jul-2025	KD8SSX	28-Jul-2025	
04-Aug-2025	KD8SST	11-Aug-2025	<i>Meeting</i>

Contact Baji K8IIT, [k8iitm@gmail.com](mailto:k8iitm@gmail.com),  
if you would like to serve as NCO.  
NCO openings can be found at:

## MCARC Membership

Please become a member or renew your **Medina County Amateur Radio Club** membership. Dues are our primary source of income and are used to pay for the administrative costs of liability insurance, website domain registration fees, web hosting for [www.W8EOC.org](http://www.W8EOC.org), maintenance costs of repeater and towers along with passing on fun perks to you, our members. Our new/renewal Membership Form and information can be found on our website <http://w8eoc.org/membership>, or contact Diane KD8SSX at [d.snider19@yahoo.com](mailto:d.snider19@yahoo.com)

Then, mail your dues to Diane Snider, 8311 Norwalk Rd, Litchfield, OH 44253, or bring them to the next meeting.

*Please consider volunteering. We really would enjoy seeing fresh faces and hearing new ideas to keep the MCARC relevant and viable in 2025. Do you like designing or maintaining web-sites, organizing speakers for technical sessions, writing for the newsletter or teaching members new skills? Please let [Jane@K8JGR.radio](mailto:Jane@K8JGR.radio) know. Thank you.*

## Who's Who

**President:** Jane Reed K8JGR  
[jane@K8JGR.radio](mailto:jane@K8JGR.radio)

**VP:** Ed Eyerdom K8NVR

**Secretary:**  
Gail Helwig KD8GGM

**Treasurer:**  
Dave Swancer KE8APO

**W8EOC Repeaters:**  
Ed Eyerdom K8NVR  
Ken Koyan K8TV

**Sunshine:**  
Diane Snider KD8SSX

**Trustees:**  
Doug McClure KD8SST  
Dave Oravec N8JNX  
Diane Snider KD8SSX  
Amy Panchumarti K2KSU  
Steven Stein KE8BJD

**Newsletter:**  
Jane Reed K8JGR

**Field Day:**  
Fred Helwig K8FH

**Membership:**  
Diane Snider KD8SSX

**Program:**  
Ed Eyerdom K8NVR

**Website:**  
Jane Reed K8JGR

**Net Scheduling:**  
Baji Panchumarti K8IIT

**Social Events:**  
Gail Helwig KD8GGM

**Skywarn:**  
Tracey Liston W8TWL

**ARES:**  
Bob Mueller K8MD

**RACES:**  
Dave Rickon NF80



MCARC on the World Wide Web

**[www.W8EOC.org](http://www.W8EOC.org)**

## About Our Organization

The Medina Two Meter Group (M2M) Inc. DBA: the **Medina County Amateur Radio Club** is a nonprofit, ARRL Special Service registered, Amateur Radio organization based in Medina County, Ohio dedicated to communication, public service, education and fellowship. Our roots go back to 1932 in Medina County.

Many of our members are also involved with Skywarn, ARES, RACES, and assist with emergency communication or community events such as bicycle and foot races.

We usually meet on the second Monday of each month at the Medina County Career (JVS) Center, upstairs Room 246.



Medina Two Meter Group (M2M) Inc.  
DBA:  
**Medina County Amateur Radio Club**  
  
1254 Hadcock Road  
Brunswick, Ohio 44212  
  
Admin@W8EOC.org

PLEASE  
PLACE  
STAMP  
HERE

TO: