



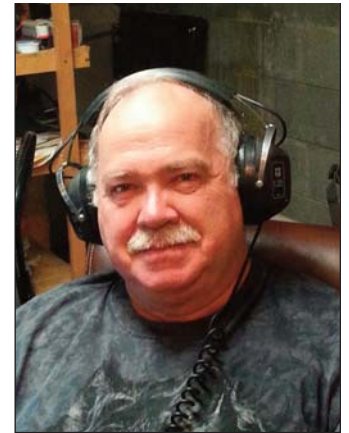
The
Wave Bender
July 2019
AWARD WINNING NEWSLETTER



WRARC PREZ PRO TEM

Hello everyone - By the time you read this most of you will have heard that I was elected to fill out the unfinished term of our previous president. WRARC has been through some unsettled times over the past several months, and I want to assure everyone that WRARC has not only got through them, but is still the same great club we have been since its inception.

All organizations go through growing pains. We have had some and have come away wiser and stronger for them. I accepted the nomination to fill the vacant spot with one condition, and that was with the understanding that I would fill the vacancy, but I WOULD NOT accept a nomination in November to serve another term. I was of the opinion that we do need new blood and new ideas to keep WRARC moving forward, and still believe that. I do agree that our incoming president for the full term in November should have a working knowledge of Amateur Radio and its basic mechanics.



This position is not easy, it requires dedication and some work, the President is the face of WRARC, not only does what he does affect WRARC, what he does not do also affects the way people perceive us. During my previous term, I strove to attend every function the club put on, attended every public service event, missing very few throughout the 2-years I was president. I believed that if the members had enough faith to elect me I would represent them to the best of my ability. I still believe that, we have a great club with fantastic members and I am proud to have the opportunity to again represent you for the next six months.

A couple issues have already been addressed, and I am happy to say we are enjoying the use of the repeater for our Friday night nets and club function again, and my personal thanks to Dave and Liz for providing it for our use. The Panerathon is on schedule again, and will be handled as we have done it for several years. So I am happy to tell you that things are already on the upswing, and I am seeing a bright future for WRARC and its members.

I do have some housekeeping issues that I will be dealing with over the next few months, and if anyone has questions or concerns that they would like to speak to me about, feel free to email me anytime, or call me at reasonable hours, and I will be happy to discuss them with you. My number is on the membership roster. Once again, I thank the members of WRARC for the opportunity to lead WRARC for the next six months, I will do my very best to prove your faith in me is not misplaced.

73 Bob, N8RCM



IN THIS ISSUE

What's coming up?	04
A Word from our Treasurer	06
Wise words from Darrin	07
Mahoning County ARES	08
Maybe This is You?	08
Amateur Radio and GIS Systems Uses	09
A note from the FD Chairman	10
Mysterious Moisture in the Mesosphere	11
Calendar	14
June Meeting	13

2019 Officers:

- President:** Bob Mitzelm N8RCM n8rcm@wrarc.net
- VP:** Maureen Stein, KD8NXS kd8nxs@wrarc.net
- Secretary:** Stan Adamski, KB3WPD kb3wpd@wrarc
- Treasurer:** Rose Marko, KD8TII kd8tii@wrarc.net
- Past President:** Bob Mitzel, N8RCM n8rcm@wrarc.net
- Trustees:**
 - Darrin Cannon, N8DMC n8dmc@wrarc.net
 - Roy Haren, KD8IJF kd8ijf@wrarc.net
 - Steve Fabry, KC8SOY kc8soy@wrarc.net

Appointed Positions:

- Social: Maureen Stein, KD8NXS
kd8nxs@wrarc.net
- Publicity: Joe Wojtowicz, W0JO
w0jo@wrarc.net
- Nets: Steve Fabry, KC8SOY
kc8soy@wrarc.net
- Classes/Testing: Chris Monske WF8U
kd8ely@gmail.com
- Newsletter/Web: Jane Avnet K8JAA
k8jaa@wrarc.net
- Historian: Rose Marko, KD8TII
kd8tii@wrarc.net
- Badges: Darrin Cannon, N8DMC
n8dmc@wrarc.net

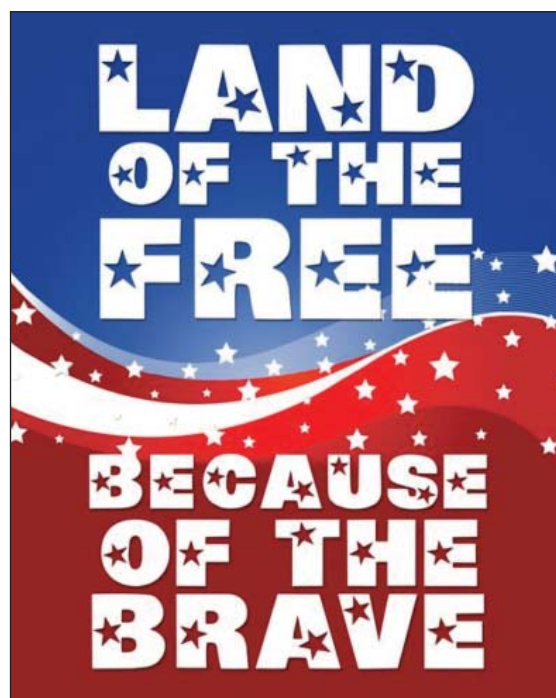
Officer's Meeting:

July, 12 2019, 7:00 P.M. At Eat 'n Park,
Austintown, Eat 'n Park,
5451 Mahoning Ave
All members welcome

Members Meeting:

July 16, Davidson's
3636 Canfield Rd., Cornersburgh

Speaker: Rose, KD8TII
Topic: How I got started in Ham Radio and WRARC



OTHER IMPORTANT WEB SITES

THE ARRL EXAM SEARCH PAGE
<[HTTP://WWW.ARRL.ORG/FIND-AN-AMATEUR-RADIO-LICENSE-EXAM-SESSION](http://www.arrl.org/find-an-amateur-radio-license-exam-session)>

OHIO SINGLE SIDEBAND NET
<[HTTP://WWW.OSSBN.ORG/INDEX.HTML](http://www.ossbn.org/index.html)>

ANTENNA HEIGHT ABOVE AVERAGE TERRAIN (HAAT) CALCULATOR
[HTTPS://WWW.FCC.GOV/MEDIA/RADIO/HAAT-CALCULATOR](https://www.fcc.gov/media/radio/haat-calculator)



<http://www.wrarc.net/>

FROM OUR VP

Greetings to everyone. As usual, time is flying by - July already!! This summer will be over before it even starts - LOL. That said, I wish everyone a happy and safe 4th of July.

Here we are on the heels of a very important general meeting. Congratulations to Bob Mitzel, N8RCM, on his election to fill the unexpired term of president. WRARC has undergone a very rough patch and some hard lessons were learned in the process. We have come through it all and are still strong. We are a good group and will grow from all this. We have general elections again in November of this year. The offices up for reelection are President, Secretary, Treasurer, and one Trustee. Bob will not be running for reelection as President. I urge everyone to consider coming forward for a nomination for one of these offices when the time comes. Everyone's talents, experiences, and abilities are needed for us to move forward and run well. YOU ALL are important to this whole group!



Many thanks go out to Liz, KD8DWV, and Dave, KC8WY, for reestablishing the use of the repeater for club events, including the Friday night nets and public service events. The first of these events is the Panerathon on Sunday, August 25. We are back on to do the event and the race organizers are very happy about that. Thank you to Roy, KD8IJF, for talking with them for WRARC. Much appreciated! More details will be coming out later. We started a sign up sheet around at the June meeting and it will go around again in July and August too. Our family is still likely to be going down to Fl. to care for our property there even though we are behind schedule. If you would like to work the event, but can't come to the next general meetings, you can contact Roy Haren, KD8IJF, to sign up as I sent the sign up sheet home with him after last night's meeting. Thank you ahead to all who participate.

Also, a nice thank you goes out to Rose, KD8TII, for coming forward to be our July meeting speaker. She will share with the group how she became involved in Ham Radio and WRARC - telling her story so to say. Anyone else who would like to speak at a meeting, either to share your story or to tell us about what you are doing with the hobby or are currently working on, please let me know. Everyone is welcome to do this. Each person's involvement is what makes a club run strong. Related to and on that thought, we are just a couple of days away from Field Day as I write this. I hope the weather will cooperate and I hope many of us will get out to help operate and work the bands.

We have a nice new cordless mic system to help out anyone who wants to speak at a meeting. Thanks to Steve, KC8SOY, and Darrin, N8DMC, for finding the good bargain and to those who generously donated toward the cost of the system for it to become club property.

I would like to share a nice message relayed to us by Betsy Kramer, Bob, KE8HHH's, wife. I hope she is OK with me sharing it as it was very nice to hear. She relayed this to us at the June Meeting last night and it came from someone that they know who participated in the recent "Dave's Race" handled by ARES with a lot of our members helping out. This person also participates in other races that we cover and that ARES covers. They want us to know that they are very happy to have us there, and know that they can turn to us if something happens. They are very appreciative that we are out there with them on the courses during the events. I wanted you all to know that what we do does indeed make a difference, not only to the race organizers, but the participants as well. In closing (finally), I will say stay dry as best you can. You can start building the ark any time now - LOL. 'Til next time . . .

73 Maureen, KD8NXS
WRARC/VP

**I wanted you all to know that what we do does indeed make a difference,
not only to the race organizers, but the participants as well.**

WHAT'S COMING UP?

- July 04 Happy Birthday USA
- July 09 Board Meeting - Austintown Eat 'n Park
Members welcome
- July 16 Ham Community Breakfast - Austintown Eat 'n Park
Members meeting 7:00 P.M.
- July 23 Ham Community Breakfast - Austintown Eat 'n Park
- Aug. 26 2019 Panerathon - Please Volunteer
- Oct. 13 2019 Youngstown Peace Race - Please Volunteer
- Oct. 27 2019 Youngstown Marathon - Please Volunteer



CONTACT WRARC ELMERS WITH YOUR QUESTIONS - QUESTIONS@WRARC.NET



Beatty, Dave KC8WY
 Fabry, Steve KC8SOY
 Haren, Roy KD8IJF
 Williams, Russ NR8W
 Wojtowicz, Joe W0JO

anything
 Yaesu FT8900, FT8800, Mobile
 ???
 Electrician, tele-data, Amateur Extra
 ICOM radios, D-Star

kc8wy@zoominternet.net
 kc8soy@yahoo.com
 harens@juno.com
 rwiliams@neo.rr.com
 w0jo@arrl.net

He who is afraid of asking, is afraid of learning

Used with permission

Articles from members for the Wave Bender are encouraged. They must be received by the editor by the 20th each month. Please send your articles to: k8jaa@arrl.net, and put WRARC on the subject line of your email. You may also send your articles to the editor: Jane Avnet, 1440 Skyhawk Pl., Wright City, MO 63390

Join us for the WRARC Friday night Net 9:00 P.M.
 KD8DWV - 145.270, PL -110.9
 Upcoming Net Control Operators

July This could be you

If your name has never been on this list
 Contact Steve, KC8SOY to take a turn at Net Control
 330-774-6346



WRARC Simplex Frequency 146.565

Mahoning County ARES® Nets

1st Monday 8.40 PM ET W8QLY Repeater - 146.745 (PL 110.9)

&

3rd Monday 8.40 PM ET W8QLY Repeater - 146.745 (PL 110.9)

ARES thanks MVARA for the use of their repeater



W8SGT is facilitating The Ohio HF net every Tuesday - 7:00 PM

The net is run from the State of Ohio EOC on the
 Ohio ARES Admin frequency 3875 kHz LSB
 moves to 7240 Khz after 20-min.

All are welcome to check in.

The Ohio ARES/OES Digital Emergency Net held every Tuesday at 8:00PM.
 held on 3585 kHz USB.

Please note all digital communications are Upper Side Band.

<http://www.http://ohden.org/> for net details. Net Manager Gary NJ8BB



Thanks & 73 to all of our members (and others) look forward (hopefully) to getting this newsletter every month, so keep sending those articles, jokes, and suggestions! sending those articles, jokes, and suggestions!
 Thanks goes out to this month's contributors; KD8TII, N8SY, W5YI, the ARRL, FaceBook, and the World-Wide Web.

A WORD FROM OUR TREASURER

Hello, everyone! I hope you had a safe and happy Fourth of July. I would like to start out by saying 'Thank You' to Dave and Liz Beatty for giving us back the use of their repeater for Friday Night Nets, and all the upcoming events. I, personally, would like to say, I'm sorry for not using the repeater for general use. Although I've been a member of WRARC for seven years, I'm still having problems learning how to use the radio other than for the Nets and being Net Control Operator for the events. That part comes easy to me.



At our June general meeting, we had only one person nominated for Interim President, that was Bob Mitzel. He was unanimously chosen by the members who attended and has taken over for our past president, Brian Lewis who resigned in May. Bob will be presiding over the meetings starting from last month's meeting, June 18th until December 31st. In which case the club hopes to elect a new president. Bob Does not wish to run for President at the end of the year. The Board Members are standing behind him and we wish him the best in whatever help he will need.

I would like to say thank you to Darrin for replacing me as photographer for the Field Day weekend event which was held June 22 and 23 at Elser Metro Airport in North Lima. I have some health issues which kept me from attending this year. I hope all went well, including the weather, and I hope everyone had a good time and smiled for the camera.

July is always a dead month for the club, but I am looking forward to the Panerathon on Sunday, August 25, 2019. We will be using the repeater for that event, and would like many more volunteers to help us this year. It is a big race and is spread out throughout the route, so we need all the help we can get.

Then there will be the two races in October, the Youngstown Peace Race held on Sunday, October 13th and The Youngstown Marathon two weeks later on Sunday, October 27th in that order. Please mark them on your calendars.

This month at the General Meeting will mark my debut as speaker. I volunteered to tell my story on How and When I Became a Ham Radio Operator. I hope we will have a big crowd because this is something that I believe others should think about doing themselves. I am proud to be a member of WRARC and I look forward to remaining with the club as long as it will be in existence.

I would like to end my article with a quote I read from one of our past members. It goes, "Never be afraid to learn something new, because when the work needs done, you could be the one what could do it." Thanks to all until next month.

73 Rose Marko. KD8TII
WRARC/Treasurer



**Semi-Monthly
Ham Community
Breakfast
Second and Fourth
Tuesdays
9:00 A.M.
Eat 'n Park Restaurant
in Austintown
Join Us!**

WISE WORDS FROM DARRIN

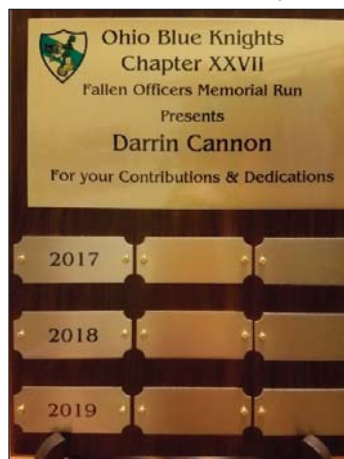
Hello from the Liquid Sunshine State of Ohio !!! Yes.. We had our fair share of rain I'd say...

Wanted to thank all those in attendance at last month's Meeting (June 18th) and I'm sure I'm not going to be the only one to Congratulate the unopposed interim President Bob Mitzel N8RCM.

I also wanted to thank those who donated, to help me pay for the new piece of club equipment we will now utilize as our audio sound system for not only hearing each other speak towards our members at the meetings, but also can be used at club events, such as field day etc. Since it is wireless and very portable.

Also, I'm not going to forget that Dave and Liz have allowed the club to use the repeater for the Friday night nets and club functions! Thank you both! Let us show them much appreciation by getting on and using it from time to time, as I always say.

CHECK THIS OUT!! - While outside my house, a police vehicle pulled into my driveway. Once I noticed which officer it was, I went and said hello to him. He was here for a reason actually, both Steve and myself, were presented with a really nice plaque of appreciation and participation from the Ohio Blue Knights Chapter XXVII, a police officer's motorcycle club. What a nice surprise! See the photos!



If you haven't already noticed via the meeting or on the repeater, our own member, Aiden W0TIS is VERY excited to be involved with this years' Field Day, as a matter of fact, he was our Safety Officer at the Field Day site, as well as our administrative aide towards ARRL for rules, regulations and contest entries. Thanks Aiden!

Congratulations to Corinne Kramer for passing her Technician license at Saturdays testing session during Field Day! Great job! Thanks to Contact VE Bob Mitzel - N8RCM, and VE/VEC in Training - Darrin Cannon - N8DMC, VE Roy Haren - KD8IJF, for helping with the test session.

Darrin Cannon, N8DMC
(330)720-4454
mailto:Darrincan@gmail.com

Darrin has put his pictures of Field Day up on FaceBook. As soon as I am able I will have some of the pictures in next month's newsletter for those of you who are not on FaceBook, sorry -ye ed



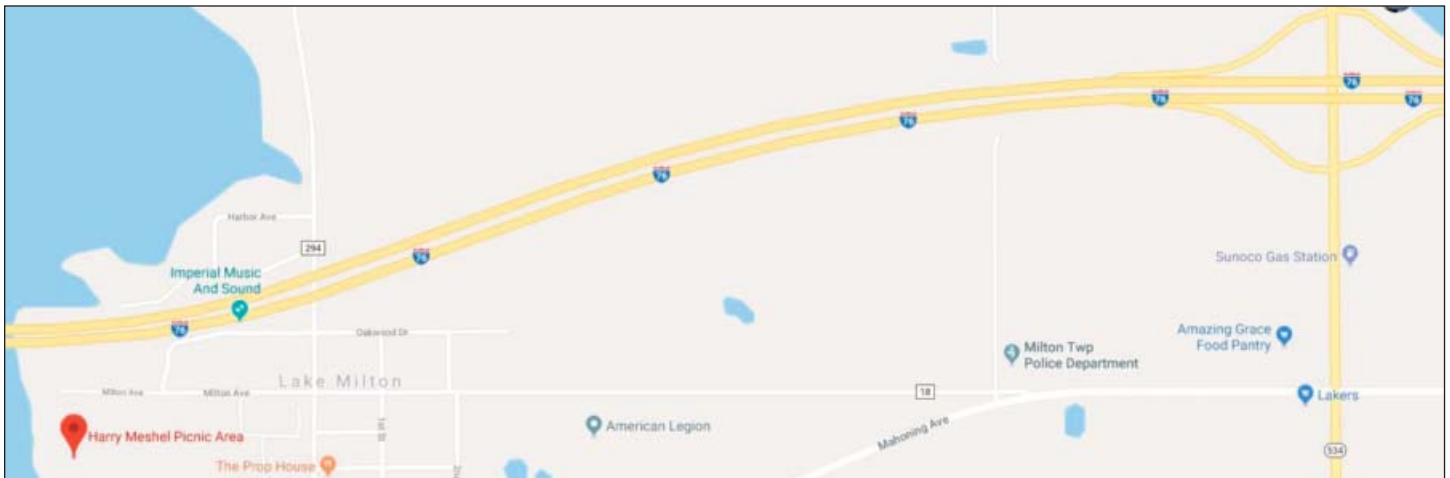
ARRL has produced a downloadable video, What is Amateur Radio?, to use at club meetings and public events. This could be an attractive addition for visitors to your ARRL Field Day site this weekend. The video runs just under 3 minutes. A PowerPoint version is also available.

MAHONING COUNTY ARES

July 13, 2019 is the next Mahoning County ARES event. We will be providing communications for the Lake Milton Triathlon at Lake Milton State Park. Similar to the event at West Branch in June, this event will cover a large area surrounding the park and we will need many operators. Typical duties are to man a location along the route and report back the progress of participants. Additionally we are a resource if participants run into medical problems. We expect this to also be a three to four hour event and will probably wrap up around noon. We will need operators on HT's and/or with mobile rigs. If you have an antenna, you can erect on a pole by your vehicle it will help with some of the weak areas. We will use simplex during the event. Current plan is to meet at the Harry Meshel picnic area. To reach the park from the Youngstown area, take I-76W to the OH-534 exit and turn left on 534S. 534S to Mahoning Ave (Rt 18). Right on Mahoning Ave (W) to Milton Ave. Milton Ave to the park. You will pass the Fire Department and a stop sign on Milton Ave.



73 Dave, KD8NZF



USE YOUR LICENSE TO SERVE THE COMMUNITY - VOLUNTEER

MAYBE THIS IS YOU?

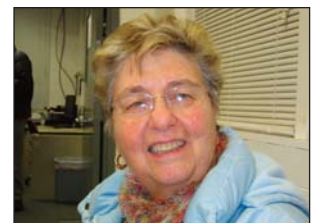
Could YOU be the one I'm looking for? This is the editor of YOUR Newsletter. We have plenty of room for YOUR article(s)! If something is of interest to you, odds are that we all will enjoy your thoughts and activities! Have a favorite radio? Have some reminiscing to do? Maybe you have a question for one of our Elmers. OR, a Tip or Trick you learned that would help one of YOUR WRARC friends. You are warmly invited to contribute! Don't worry about writing or formality - we can help you with that. Your article could go in this spot, or one bigger, next month!!



I'm always asking for input by members. The following questions may give you something to think about.

- What was your first station?
 - How old were you when you got interested?
 - How did ham radio shape your life?
 - Who was your First Elmer?
- and/or

-ed



AMATEUR RADIO AND GIS SYSTEMS USES



Hello All WRARC Members,

This is Kevin Stein KD8NXX I hope all is going well for each and every member of the Western Reserve Amateur Radio Club. I found something of interest on the internet regarding how Amateur Radio can be used in other fields. One such field that I was surprised to find had a link with Amateur Radio was the GIS field. GIS stands for Geographic Information Systems. These systems are computer software programs like Arc GIS Pro, Arc Map, and QGIS for example which collect and analyze geographic data such as weather, location, physical, and numerous other data types as well.

The GIS field has been growing since the 1970's. I personally find the link between Amateur Radio and the GIS field interesting because I am currently double majoring in Civil/ Environmental Engineering and GIS at YSU. So I was excited to learn that Amateur Radio can be used in conjunction with a field that I greatly enjoy.

For those who may not be familiar the GIS field enables mainly geographers, but other people too, who are people who study geography which is the study of the location and placements on things and phenomena like weather that all occur on the Earth our planet to perform things like analysis of locations within a region such as obtaining elevation data, knowing where specific weather patterns occur, make 3 dimensional models of cities, model rivers and streams, making many maps and so forth.

There are numerous things that you can do with GIS systems. However the most common application for GIS systems is map making as that is its most useful function. Amateur Radio as we know heavily relies on maps.

I found an article online written by fellow Ham Keith Sproul, WU2Z, that showed how GIS systems are being used for Amateur Radio applications like emergency communications, analyzing severe weather patterns and occurrences, building antennas, DX logging, map making for Amateur Radio, referencing locations, and being used for other emergency situation analyses that enable Amateur Radio operators to better serve the general public and save lives in emergency situations when they do happen.

It just showed and reinforced how Amateur Radio is useful for the general public and how the hobby can be used and overlap in professional fields. This too shows how useful the hobby can be. The GIS field can enhance Amateur Radio operations which is good for the hobby in general. So it may be a useful tool for more Hams to learn about as they perform operations in emergency situations which is why I thought that this article was useful to read.

I also found a powerpoint pdf file that also shows other applications that GIS systems can be used for Amateur Radio purposes. I will not go into further detail about these two things as I will provide links to them so that people can look them up and read them personally.

I hope club members will learn a lot about GIS systems from these two things and how they can be useful for the hobby. It shows how Amateur Radio can be useful for the engineering field as well.

GIS systems interestingly enough are used in other industries besides engineering like the film industry, the medical industry, and so forth. So they are a valuable tool that I feel more people should understand as they better the performance and our knowledge of operations that are done in many professional and amateur situations in everyday life. I hope people will begin to value these GIS systems and Amateur Radio in the future as we are truly experiencing more and more emergency situations like severe weather events, shootings, terrorist attacks, etc. I feel that GIS systems are needed more and more in these situations like Amateur Radio has been in recent years so we should better understand them if we are to use them correctly in future emergency situations.

GIS systems are just one of many tools that can be used for the hobby in the future as the hobby continually is relying more and more on computers which is the basis for modern GIS systems. Anyway, if you have any questions about the GIS field or programs and how they can be used for the hobby I would be happy to answer them just email them to me at kcstein@zoominternet.net.

Continued page 10

GIS SYSTEMS - CONTINUED FROM PAGE 9

Next given below are the two links for the article and the powerpoint that I mentioned in the article that I hope people will read, learn from and eventually consider to use for the hobby in the future. Lastly I wish the club membership future success in their individual pursuits and I also hope the club does well in the future. I may try to find other interesting articles that can be used for the WaveBender if I can. So I will do that if possible.

YSU has excellent weather and GIS courses through its geography department which I have taken myself which may be useful for the hobby. If you also have questions about these courses I can answer them as well. This is all I have to say about this topic as the things themselves will explain this topic in better detail which is why I am giving the links to them below. You should be able to find them if you type both links into googles search bar if not please let me know and I can email you a copy of both things if you give me an email address so I can give them to you if you wish. So farewell and good luck until a future article for the club newsletter.

73, Kevin Stein, KD8NXR

Links:

Article: <https://www.tapr.org/pdf/DCC1995-GIS-APRS-WU2Z.pdf>

Powerpoint: s3-eu-west-1.amazonaws.com/.../gis_finalll_print.pdf

A NOTE FROM THE FD CHAIRMAN



I hope everyone is well - With the amount of rain this year, we are setting records for 2019. This year's Field Day was coming fast, and the weather forecast was NO rain for the weekend. Everyone was getting excited just to have a weekend with no rain.

I want to thank all who came out to WRARC Field Day this year. Aiden, W0TIS, stepped up to the plate and volunteered for different jobs at Field Day. He is an excited young man to be at Field Day with his purchase of his first HF radio. I have lent him several different antennas to try out on HF for Field Day Best of luck Aiden, W0TIS, We hope you made a ton of contacts, and had a lot of fun at WRARC Field Day!

Do to the weather, Field Day 2019 was at Elser Metro Airport in North Lima, OH this year. Even with all of the rain we have had this year, the grounds at the airport were very firm.

We want to thank Liz and Dave for having the WRARC net back on the air with the 145.270 repeater. Our Friday, June 14 net with Aiden, W0TIS, as net control, had 28 check-ins. The QA after the net about FD, went till 9:50 P.M. Thanks again Liz and Dave for having us back.

73 Steve Fabry, KC8SOY
WRARC/2019 FD Chairman



USA
John Ricci, KT8TAT



Amateur Radio Operator "Amateur means we're simply professional volunteers" ARRL reflector

MYSTERIOUS MOISTURE IN THE MESOSPHERE

The 2019 season for noctilucent clouds (NLCs) has been remarkable, maybe the best ever, with NLCs appearing as far south as Los Angeles CA and Albuquerque NM. What's going on? Researchers aren't sure, but Lynn Harvey of the University of Colorado's Laboratory for Atmospheric and Space Physics has just found an important clue.

"The mesosphere is quite wet," she says. "Water vapor concentrations are at their highest levels for the past 12 years."

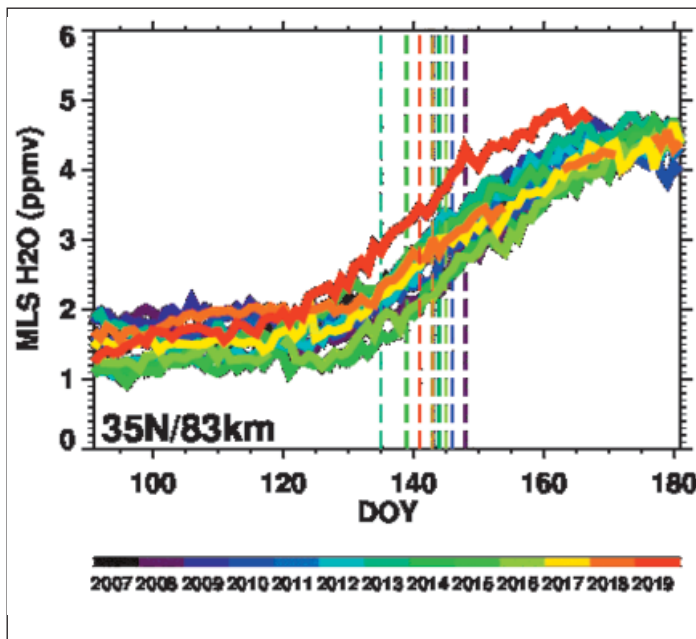


Noctilucent clouds over Piwnice, Poland, on June 18th. Credit: Piotr Majewski

Noctilucent clouds form when summertime wisps of water vapor rise to the top of the atmosphere. Water molecules stick to specks of meteor smoke, gathering into icy clouds that glow electric blue when they are hit by high altitude sunlight.

When noctilucent clouds began appearing at unusually low latitudes in early June, Harvey took a look at data from NASA's Microwave Limb Sounder--a satellite-based sensor that can measure water in the upper atmosphere.

Her results are shown in the animated plot below.



"The red line is 2019, while other colors trace previous years," explains Harvey. "The plot cycles from low to high latitudes," showing a wave of moisture in the mesosphere.

It's a veritable tidal wave. Water vapor concentrations at lower latitudes (35 to 45 N) have nearly doubled their normal values, providing a surplus of H₂O molecules for noctilucent clouds. Researchers aren't sure where the water is coming from, though.

"Planetary wave activity could be transporting cold air and high water vapor to the 'noctilucent zone,'" speculates James Russell of Hampton University's Center for Atmospheric Sciences. "We've seen this happen before during mid-latitude outbreaks of noctilucent clouds."

The solar cycle may be helping, too. Right now a deep Solar Minimum is underway. Ultraviolet radiation that

would normally destroy water in the mesosphere is at low ebb.



Noctilucent clouds over Riga, Latvia, on June 18th. Credit: Ivo Dinsbergs

The wave appears to be breaking. "As we enter the 3rd week of June, the water has stopped increasing," notes Harvey. "Poleward of 70N the water content has been dropping for a few weeks, and right around the north pole it's getting quite dry. At mid-latitudes (35-65N), water content is still high, but it's leveling off."

MESOSPHERE- CONTINUED FROM PAGE 11

No one knows what will happen next. Another wave could bring renewed sightings of NLCs at low latitudes. Or conditions could return to normal, restoring the clouds to their usual habitat near the Arctic Circle. Says Russell, "this all points to mysteries of the atmosphere that have not been solved." Stay tuned!



Junk – It's something you keep for years, and then throw away three weeks before you need it!

Children – You spend the first two years teaching them to walk and talk and the next 16 to sit down and shut up!

If robbers ever broke into my house to search for money, I'd laugh and search with them.



JUNE MEETING



July 2019

PREPAREDNESS LEADS TO READINESS - MATT W8DEC



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 ARES Net 8:30 PM 146.745 PL 110.9	2	3	4 	5 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	6
7 Build A Scarecrow Day	8	9 Ham Breakfast Eat'n Park Austintown 8:30 A.M. Board Meeting Eat'n Park Austintown 7:00 P.M.	10	11	12 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	13 Embrace Your Geekness Day
14	15 ARES Net 8:30 PM 146.745 PL 110.9	16 WRARC Meeting 7:00 P.M	17	18	19 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	20  WaveBender Input Due
21	22	23 Eat'n Park Austintown 8:30 A.M. Ham Community Breakfast	24	25	26 WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	27 Take Your Pants for a Walk Day
28	29	30	31 Mutt's Day		WRARC Net 9:00PM 145.270 Swap n' Shop Ask the Elmers	