MARANews

December 2020
Volume 59 Issue 11

http://www.w1mv.org https://www.facebook.com/w1mvmara/

https://twitter.com/search?q=Massasoit%20Amateur%20Radio%20Association&src=typd

Reminder Rick will be

Next meeting is January 19th, 2021 at 7:00pm. Informal meet and greet starts at 6:30pm. Talk-in is on 147.180+

Membership

The website has been updated with our current roster of paid members. If there are corrections, please drop an email to maranews@w1mv.org

Presidents Notes

MARA Facebook page: Our Massasoit Amateur Radio Association Facebook page with club events, meetings, photos, etc. are occasionally updated so that it may be another resource for us on which to spark interest in our club, amateur radio and keep members informed of what we are doing outside of our club meetings and in our community. If you go to the "about" tab on our page you can find our http://www.w1mv.org/ web page for our present and past newsletters and other club information. Please send Phil N1XTB n1xtb@powersrvcs.com or Wendy KC1GTR kc1gtr.mara.@gmail.com any articles or photos you would like to see in our MARA newsletter, W1MV-MARA Website and Facebook page. Jeff N1ZZN has created a link to twitter to help get the word out even more!

Secretary's Notes – Just Newsletter this issue.

HAM RADIO LOCAL AREA NETS

Any additions or corrections contact John – N1UMJ at: N1UMJ@arrl.net.
All Frequencies are in MHz and 6 Meters (50.0 MHz and up.) are FM Mode unless otherwise noted.

Sunday:

8:30 AM WA1NPO – WARPSN Net, Whitman ARC Rptr, 147.225 +, PL 67.0 8:45 AM
New England phone net, 3.945 +/--- LSB

Daily:

7:00 PM NE Cracker Barrel Net, Matt – W1AEM, NCO, 3.921.00 MHz LSB Pilgrim Amateur Wireless Assoc. 10 Meter Net
7:00 PM 28.375.0 USB Cape & Island Traffic Net, Mon. Tue. Thur.
7:00 PM Plymouth N1ZIZ Rptr, 146.685 – PL 131.8
7:30 PM Falmouth N1YHS Rptr, 147.375 + PL 110.9 Genesis ARC CW Training Net
8:00 PM Eastern MA 2 Mtr Traffic Net, Boston W1BOS Rptr, 145.230 – PL 88.5
8:00 PM Norfolk County Radio Association Net, , Walpole Rptr, 146.895 – PL 123.0

Monday:

6:00 AM Cape and Islands Weather Net, M-S, Dennis K1PBO Rptr, 146.955 – PL 88.5
8:00 PM Fairhaven Weather Net, SEMARA Rptr, 147.000 + PL 67.0
8:00 PM Norfolk County Emergency Preparedness Net, Walpole Rptr, 146.895 – PL 123.0
8:30 PM New England DMR net, DMR---MARC repeaters talk group 3181 New England Falmouth ARA Net, Falmouth K1RK Rptr, 146.655 – PL 88.5
9:00 PM Boston ARC Rag Chew Net, Boston W1BOS Rptr, 145.230 – PL 88.5

Tuesday:

7:30 PM Plymouth N1ZIZ Rptr, 146.685 – PL 131.8
8:00 PM Fairhaven Weather Net, SEMARA Rptr, 147.000 + PL 67.0
8:00 PM Massasoit ARA Net, , Bridgewater W1MV Rptr, 147.180 + PL 67.0 (Except 3rd Tue!) Genesis ARC 2 Mtr Rag---Chew Net,
8:00 PM Norwood Amateur Radio Club Net, Norwood Rptr, 147.210 + PL 100.0 220 MHz Day! Try to find a 220 Repeater near you and give a call out!

Wednesday:

7:00 PM Blackstone Valley ARC, 2 Mtr Simplex Net, 146.565
8:00 PM Cape and Islands ARES Net, Dennis K1PBO Rptr, 146.955 – PL 88.5
8:00 PM Fairhaven Weather Net, SEMARA Rptr, 147.000 + PL 67.0
8:00 PM Whitman ARC 10 Meter Rag---Chew Net, 28.333.0 USB - Except 1st Wed!
9:00 PM Waltham Wranglers Swap Net., Waltham W1MHL Rptr , 146.64 – PL 136.5

Thursday:

7:00 PM Genesis ARC CW Training Net, Plymouth N1ZIZ Rptr, 146.685 – PL 131.8 10 Mtr
8:00 PM Fairhaven Weather Net, SEMARA Rptr, 147.000 + PL 67.0
8:00 PM General Class Rag---Chew Net, 29.470.0 FM
8:30 PM Sturdy Mem. Hosp. ARC ARES Practice Net, K1SMH Rptr, 147.195 + PL 127.3 900 MHz

Friday:

8:00 PM Fairhaven Weather Net, SEMARA Rptr, 147.000 + PL 67.0

Saturday:

8:00 PM South Shore Skywarn Net, Bridgewater W1MV Rptr, 147.180 + PL 67.0

VKEMCOMM Echolink Conference node: 270177/IRLP 9508 (due to *WX---TALK* Echolink conference node: 7203/IRLP 9219 outage) Refer to: http://www.voipwx.net/

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Massasoit Amateur Radio Association Executive Board

President - Allen Hiltz - WA1BEE
Vice President Jeff Lehmann - N1ZZN
Secretary Wendy White – KC1GTR
Treasurer: Phil McNamara N1XTB
Call Sign Trustee: Phil McNamara N1XTB

2M Repeater	147.180+ (Tone 67.0)
440 Repeater	444.550+ (Tone 88.5)
APRS Node	Node 144.39 W1MV-1
Packet BBS	145.09 N1XTB-4
Packet Node Brockton	145.09 W1JOE-7 (BROCK)
MARA Web Page	http://www.w1mv.org/
Facebook	https://www.facebook.com/w1mvmara/
Newsletter Editor	kc1gtr.mara@gmail.com
ARC Web Page	http://www.wa1npo.org
Qsl via	www.eqsl.cc
Skywarn	http://wx1box.org and www.powersrvcs.org/w1gmf/skywarn.htm
Mailing Address	P.O. Box 428 Bridgewater, MA 02324

Monthly meetings are held the 3rd Tuesday of each month, for time being, on the Tuesday Night net at 8:00pm on 147.180+

Our **Meetings-On-The-Air** are held all other Tuesday evenings at 8PM on 147.180+ and includes the Westlink News Report with the latest news about happenings in the world of Amateur Radio.

The **South Shore Skywarn Net** is held every Saturday evening at 8PM local time on 147.180+ and is open to all hams.

VE Exams are held the 2nd Saturday of every month, in Braintree contact Steve Cohen, W1OD via email w1od@arrl.net. Walk-ins are no longer permitted. We will be hosting VE exams at 8:45 at the Watson building. If you know of anyone planning to take an exam, please have them drop a note to Steve to confirm a reservation.

http://www.hamradiolicenseexam.com/index.html

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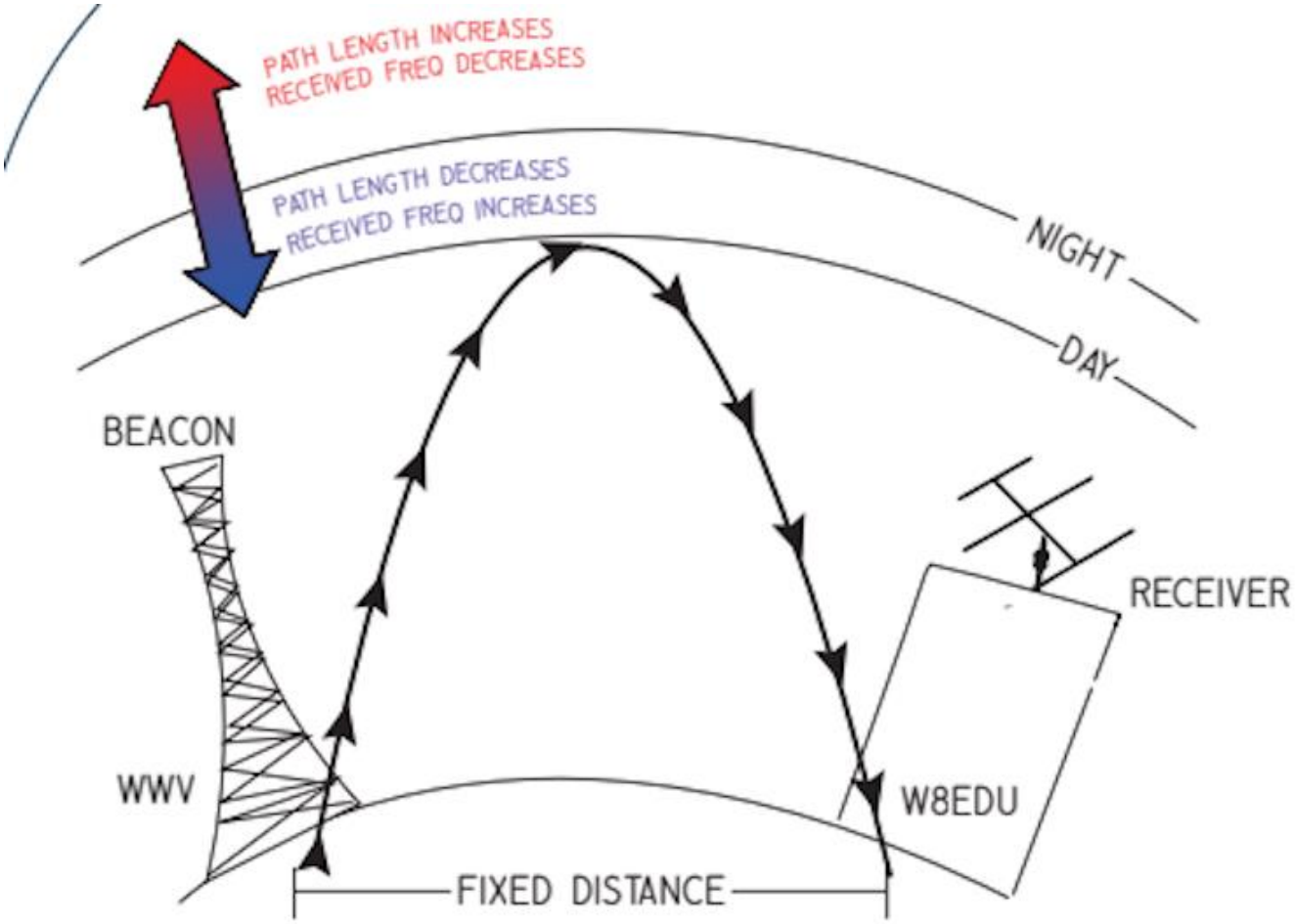
What's New?

Gathering Eclipse Data Via Ham Radio

by: Bryan Cockfield

November 30, 2020



A solar eclipse is coming up in just a few weeks, and although with its path of totality near the southern tip of South America means that not many people will be able to see it first-hand, there is an opportunity to get involved with it even at an extreme distance. PhD candidate [Kristina] and the organization HamSCI are trying to learn a little bit more about the effects of an eclipse on radio communications, and all that is required to help is a receiver capable of listening in the 10 MHz range during the time of the eclipse.

It is well-known that certain radio waves can propagate further depending on the time of day due to changes in many factors such as the state of the ionosphere and the amount of solar activity. What is not known is specifically *how* the paths can vary over the course of the day. During the eclipse the sun's interference is minimized, and its impact can be more directly measured in a more controlled experiment. By tuning into particular time stations and recording data during the eclipse, it's possible to see how exactly the eclipse impacts propagation of these signals. [Kristina] hopes to take all the data gathered during the event to observe the doppler effect that is expected to occur.

The project requires a large amount of volunteers to listen in to the time stations during the eclipse (even if it is not visible to them) and there are only a few more days before this eclipse happens. If you have the required hardware, which is essentially just a receiver capable of receiving upper-sideband signals in 10 MHz range, it may be worthwhile to give this a shot. If not, there may be some time to cobble together an SDR that can listen in (even an RTL-SDR set up for 10 MHz will work) provided you can use it to record the required samples. It's definitely a time that ham radio could embrace the hacker community.

Posted in Radio HacksTagged 10 mhz, beacon, doppler shift, eclipse, ham, radio, receiver, solar, time station, volunteer

For all of you DXer's out there: Courtesty of Southgate Amateur Radio Club

Ultra-Marathon

Pete, MM0TWX, Founder and CEO of the True Blue DXers Club (TBDXC), sent out the following press release: "300 pre-registered with six weeks to go"

Dear fellow DXers,
We want to wholeheartedly thank all those who have pre-registered
for the 2021 Ultra-Marathon "Bands Alive" organized by the True Blue
DXers Club.

The level of interest and enthusiasm for this initiative is very high - so many have written saying that they find the format exciting and they cannot wait for the start of the operations on January 1st, 2021. Also, the Sun seems to be gracing us with a very good start of cycle 25, and this bodes extremely well for good levels of activity next year.

Although having very nearly 300 people already pre-registered for this event is a major success, we think we all can do even better! I would like to appeal again to all of you to do what you can to raise the profile of this event even further. Talk to your friends, talk to your local Club, write to the DX editor of your national Ham Radio magazine, write a post on a discussion forum - any of these simple actions can result in more people participating. And remember: more people = more fun = bands more alive than ever! All you have to do is to point people to (www.tbdxc.net/marathon), where they will find all the information they need.

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I also wanted to give you feedback on a promise I had made in my first email. I did indeed contact about a dozen manufacturers of radio-related products and accessories, asking for a sponsorship, in the form of a product or a discount voucher, for a prize to go to the winners of the CW and SSB categories. 9 of these had the courtesy of replying, wishing us luck with the initiative, but saying that - owing to the difficult economic situation - they cannot afford a sponsorship at the moment. At least they responded, which I really appreciated and is more than many would have done... I still hope to be able to motivate potential sponsors to contribute next year, especially if we can show participation numbers in the high hundreds.

Meanwhile, everybody please stay safe, enjoy DXing and stay tuned for the next and last Marathon update before we actually begin. And don't forget to do your part for promotion! :-)

73 to all, **Pete, MM0TWX**,
TBDXC Founder and CEO

Taking a look back…

Spray-On Antennas Could Be the Wave of the Future, University Researchers Believe

10/02/2018 

Researchers at Drexel University's College of Engineering **report** a breakthrough in nanomaterials technology that promises to make installing an antenna as easy as applying sunblock or bug spray. The University reported the research in a *DrexelNOW* article, "Drexel's Spray-On Antennas Could Be the Tech Connector of the Future." The advance could mean wearable and invisible antennas that could find their place in the next generation of the Internet of things (IoT), and even have Amateur Radio applications.

"The ability to spray an antenna on a flexible substrate or make it optically transparent means that we could have a lot of new places to set up networks," said Drexel Wireless Systems Laboratory Director and engineering professor Kapil Dandekar, a co-author of the research published recently in *Science Advances*.

"This technology could enable the truly seamless integration of antennas with everyday objects which will be critical for the emerging Internet of things," Dandekar said.

In their paper, Dandekar and his colleagues laid out a method for spraying invisibly thin antennas made from a type of two-dimensional metallic material called MXene — a conductive, two-dimensional titanium carbide material — which can be dissolved in water to create an ink or paint. They said the exceptional conductivity of the material enables it to be employed as an RF radiator even when applied in a very thin, nearly invisible coating. The MXene antennas perform as well as those now being used in mobile devices, wireless routers, and other devices, the Drexel

researchers said. In addition, the MXene materials were shown to be 50 times better than graphene and 300 times better than silver ink antennas in terms of preserving the quality of RF transmission.

“Current fabrication methods of metals cannot make antennas thin enough and applicable to any surface, in spite of decades of research and development to improve the performance of metal antennas,” said Yury Gogotsi, director of the A.J. Drexel Nanomaterials Institute, who initiated and led the project PhD. “We were looking for two-dimensional nanomaterials, which have sheet thickness about 100,000 times thinner than a human hair; just a few atoms across and can self-assemble into conductive films upon deposition on any surface. Therefore, we selected MXene as a candidate for ultra-thin antennas.”

“The MXene antenna not only outperformed the macro and micro world of metal antennas, we went beyond the performance of available nanomaterial antennas, while keeping the antenna thickness very low,” said Babak Anasori, a research assistant professor in the A.J. Drexel Nanomaterials Institute. “The thinnest antenna was as thin as 62 nanometers — about a thousand times thinner than a sheet of paper — and it was almost transparent.”

Unlike existing nanomaterial fabrication methods that require several steps, the Drexel research team’s spray-on antennas can be fabricated in a single step by airbrush spraying a water-based MXene ink, Anasori said. — *Thanks to* DrexelNow

Happy Holidays everyone, stay strong and stay safe.