



# SIGNAL



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form of unintended consequences, particularly on interference to professional instruments such as radars to sense the background atmospheric environments. Dealing with these interferences is the subject of some of our work.

## THE VIEW FROM THE VICE PRESIDENT'S SHACK

de **PHIL ERICKSON W1PJE**

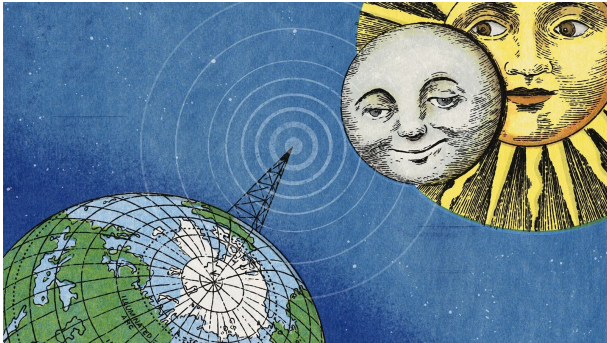
The life of an upper atmospheric researcher is a busy one - as you read this, I will be presenting information at an Italian conference on some recent observations we've done using the large Millstone Hill system. The studies have to do with the increasing amount of 'stuff' at near-Earth orbits, particularly the 500 - 600 km altitude lane (recall the International Space Station flies at 360 km altitude). All this 'stuff' is the subject of a commercial revolution in use. No longer the domain only of governments, Starlink, OneWeb, and many other companies are furiously vying for this space as the next frontier of communication. But explosive growth has its challenges in the



*Image credit: Bournemouth Natural Science Society*

Why am I bringing this up? Because it has to do with what you pursue in the hobby. The growth in use of near-Earth space, and its increasing interference with traditional remote sensing, demands that we can't just rely on the instruments we have (and their potentially degraded performance thanks to all that space activity). We need to use everything we have on the table to pursue better observations of how our planet's near space behaves and varies as natural phenomena disturb it, and how the objects humans put into that space react. The basic science of

space weather, as it's known, will within the next decade or two demand - not just encourage - observations from all possible avenues.



*Image credit: Emmanuel Lafont*

One of the avenues that NVARC members and friends are involved with, including myself, is the HamSCI collective (<https://hamsci.org>). The collective is engaging amateur operators like you and me to make careful observations during controlled experiments of what they see and hear as they conduct digital and analog QSOs. HamSCI is keenly interested in observing phenomena such as the unexpected opening and closing of bands at HF, the solar maximum and its effects on say 10 meter communications, and the wild gyrations in ionospheric paths that result from eclipses: nature's largest experiment, vastly different from each day's sunset and sunrise in its speed.

HamSCI has from its inception involved NVARC, and the club has appeared on the national scene as a result. I'm on the steering board. The HamSCI-led project to measure precise variations in the time signals emitted by WWV and CHU at HF frequencies has a very active collective (New England Grape, with Bill AB1XB and others) using a low-cost board to make these measurements at home.

There are projects listed on the HamSCI website that you the curious radio amateur can get involved with. I mentioned

eclipses above, and there are two large ones happening very soon. October 14 of this year will see an annular (non-total) eclipse go across the southwest and exit the US over Texas. The big one will follow on April 8, 2024: a total eclipse going right up the eastern seaboard and passing over Mount Katahdin in Maine. Massachusetts will be 90% eclipsed during this one, and the opportunity does not repeat until 2044! All of these eclipses will have effects on HF propagation paths, as NVARC saw by its participation in the August 2017 "Great American Eclipse". (See previous Signals for details.)

So I'd encourage anyone in NVARC with a bit of time and a curious mind to tune into this great collective amateur-professional scientific endeavor. HamSCI has a number of articles emerging in the press now that you can read to find out more and how to help. Here's a great one that came out this week with a good overview:

<https://www.bbc.com/future/article/20231005-eclipses-do-odd-things-to-radio-waves-to-learn-more-an-army-of-american-amateurs-will-broadcast-during-the-next-ones>

And here's the 'how you can help' page for upcoming eclipses (plenty of time to get involved for April 8, 2024!):

<https://hamsci.org/eclipse>

The QSO parties labeled as the "Festivals of Eclipse Ionospheric Science" are particularly worth checking out.

I know NVARC members have not only technical chops but a deep curiosity for the natural world in the pursuit of this complex, multifaceted hobby. Why not add a new dimension to your knowledge by joining in? See you on the bands.

# *The HamSCI Festivals of Eclipse Ionospheric Science will occur October 14, 2023 and April 8, 2024.*

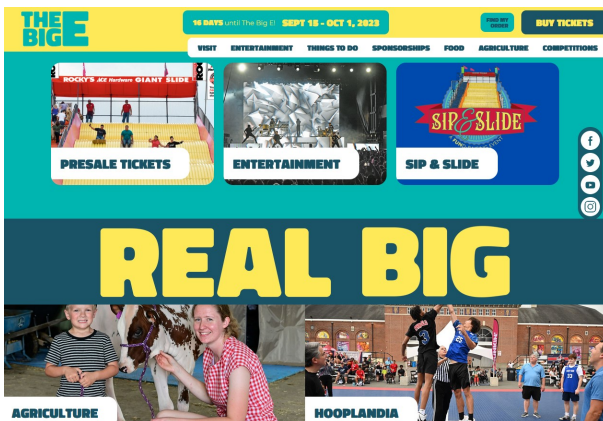
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## BIG E WRAP UP

de BRUCE K1BG

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The Big E is a 17-day New England fair that took place between September 15th and October 1st this year. It attracts attendees from all over New England and

northern NJ and eastern NY. The fair takes place in West Springfield, MA. Last year the Big E had over 1.6 million attendees from all over the northeast!

As in 2022, Amateur Radio had a booth in the “Better Living Center” which is the largest building in the fair and attracts the most visitors. The goal of the Ham Radio Booth is to introduce ham radio to the public and show that it is still relevant in today’s world.

For the first time, NVARC participated as a club. Early on the morning of September 24 th , I was joined by Adam –

KC1RVK, Bill – K1NS, Phil – W1PJE, and Fred – KB1RGT. We carpooled to West Springfield to take the 10AM to 4PM shift. Volunteers enjoyed free Big-E passes and were reimbursed for parking.

After arriving, we were provided instructions for setting up and running the booth. We hung the NVARC banner and started engaging with people. As people came to the booth, we talked about different aspects of amateur radio, what it has to offer, and how to get involved. There were sign up sheets for people interested in classes or more information. And we had a sign in sheets for licensed hams who just “dropped in” to see what we were doing.

The weather wasn’t the best outdoors, so we probably had a few more people at the booth than a sunny day would have provided. But had it been sunny, a lot more people might have attended in the first place.

I personally enjoyed engaging with people and getting to know my fellow club members a little bit better. Our replacements in the afternoon (the Worcester Polytech ARC) replaced us in the afternoon, and we were able to leave a few minutes early. All-in-all it was a pretty interesting, relaxed day, and I’m looking forward to volunteering again next year.

## NVARC NEEDS YOU

de **BRUCE K1BG**

As you may or may not be aware, NVARC is in desperate need of volunteers these days. A vibrant club needs membership participation if it’s going to succeed.

Since our April meeting, our club has been without a president to lead club meetings and board meetings.

While Ralph, KD1SM had been webmaster since the web started some 20 years ago, he could use some help. Our web presence could use some modernizing and an overhaul.

NVARC could use an activities manager to organize and promote regular activities, like a POTA (parks on the air) activation or Saturday morning after breakfast

shack visits. How about a “convoy” to ARRL Headquarters in Newington, CT?

I’ve been filling in as net manager for the Monday night nets, but work requirements have been getting in the way lately. Got half an hour on a Monday night when you can fill in?

NVARC has had several “kit-building nights”, where we would pick a commercially available kit and build it as a group activity.

NVARC used to have a monthly “tech night” where a technical topic was picked and explored in depth. This differed from our meeting night in that it was a hands-on approach to investigate a particular

topic. I was asked about bringing back tech night recently, but without a volunteer it's not going to happen.

The list goes on. All activities that interest many club members, and probably a few that interest YOU. Interested in volunteer-

ing a few hours a month? Pick something that you want to do, and let the board of directors know, either at the next meeting or at the next board meeting.

Thanking you in advance – Bruce, K1BG

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## NVARC MEMBER BENEFITS

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### OUTGOING QSL BUREAU CARD SUBMISSION

NVARC will pay the fee and postage for members' outgoing cards; you need to provide proof of ARRL membership.

### POWERPOLE CONNECTORS

NVARC purchases 30 amp PowerPole connectors and re-sells them to members at a reduced cost. \$5.00 for 10 connectors; each connector consists of one red and one black housing and two contact pins.

### NVARC EMAIL REFLECTOR



## THE TREASURER'S REPORT

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Income for July, August, and September 2023 was \$76 in membership fees. Expenses were \$24.00 for the outgoing QSL Bureau, \$200 for the annual liability insurance premium (actually paid in June), \$113 for the Post Office box, and \$2.75 for PayPal fees, leaving a net expense of \$263.75 for the period.

We recorded no income or expenses for May 2023

Current balances:

General fund	\$3,006.53
Community fund	\$6,628.25

As of 5 October we have 42 members who are current with their dues and 41 renewals outstanding. Renewal months are in the member list on [www.n1nc.org](http://www.n1nc.org) in the Member's area; check yours on <https://www.n1nc.org/Members/Roster> or you may also email me. Thank you to those of you who mail your renewals or use PayPal without a reminder.

If you are joining ARRL or renewing your membership please consider letting Ralph send in the paperwork for you. The Club will buy the stamp and will get a commission from ARRL. Contact Ralph for further information if you need it.

de Ralph, KD1SM

## NVARC's 2 METER NET

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The NVARC Information Net is held Monday nights at 7:30pm, Eastern time on the 2m Pepperell repeater, N1MNX: 147.345MHz +100.

The repeater has been recently repaired by James, N8VIM - check it out!

## NVARC BOARD MEETING

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*October 5, 2023*

Attendees:

Bruce, K1BG, John, K1JEB,  
James, N8VIM, Ralph KD1SM,  
Vlad, W1MTI.

Call to Order: 7:35pm

Bruce Blain K1BG has sent out an email explaining the new rules concerning the dues. If you pay your dues before one year after the due date then you retain all privileges as a member. If you pay your dues after one year from when the dues are due, then you will be considered a new member. After one year after your dues are not paid then you lose your club membership and club privileges. However you can still come to the club meetings.

ARRL renewals and new membership applications can be made through the club. The advantage is that ARRL will give the club a cash reward to the club.

This month's speaker will be Steve NA1T to talk about the Anderson Power Pole connectors.

Board members brought up some "I dead for" activities such as Tech Night, POTA and SOTA. Need volunteers to run these projects/activities.

Adjournment: 8:10pm

de John, K1JEB

## NVARC GENERAL MEETINGS

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NVARC General Meetings are scheduled for the third Thursday of the month at 2430 UTC (7:30pm, Eastern Time), except for July and August, when no General Meetings are held. When held, meet-

ings are at the Pepperell Community center.

## NEXT GENERAL MEETING

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Steve Davidson, NA1T, will give a talk on "Anderson Power Pole Connectors".

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## *Strays*

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IS A MEDIOCRE  
HAM RADIO CONTACT



CALLED A  
Q-SO-SO?

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# Contest Calendar

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## OCTOBER

- 14 [Argentina National 7 MHz Contest](#)
- 20/21 [Telephone Pioneers QSO Party](#)
- 21/22 [JARTS WW RTTY Contest](#)
- 21/22 [YBDXPI FT8 Contest](#)
- 28/29 [CQ Worldwide DX Contest, SSB](#)

## NOVEMBER

- 1 [Silent Key Memorial Contest](#)
- 4 [YB Banggai DX Contest](#)
- 4/6 [ARRL Sweepstakes Contest, CW](#)
- 11/12 [10-10 Int. Fall Contest, Digital](#)
- 12 [FIRAC-CONTEST](#)
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Nashoba Valley  
Amateur Radio Club

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<http://www.n1nc.org/>  
[www.youtube.com/@nvarc](http://www.youtube.com/@nvarc)

**President:** Vacant

**Vice President:** Phil Erickson, W1PJE

**Secretary:** John Bielefeld, K1JEB

**Treasurer:** Ralph Swick, KD1SM

**Board Members:**

Bruce Blain, K1BG, 2022-2025

Robert J. McArthur, K1QT, 2023-2026

James Hein, N8VIM 2021-2024

Property Master: John Griswold, KK1X

Librarian: Peter Nordberg, N1ZRG

N1NC Trustee: Bruce Blain, K1BG

Join NVARC! Annual  
membership dues are \$15;  
\$20 for a family.

NVARC general meetings are scheduled for the third  
Thursday of the month at 7:30pm, Eastern Time.  
NVARC thanks Medtronic, Inc for providing the  
teleconferencing services under their employee  
volunteer support program for non-profit  
organizations.

Contact us on the N1MNX repeater.

442.900(+), 100Hz

147.345(+), 100Hz

53.890(-), 100Hz

This newsletter is published monthly. Submissions,  
corrections and inquiries should be directed to the  
newsletter editor: [editor@n1nc.org](mailto:editor@n1nc.org)

Articles and graphics in most PC-compatible formats  
are OK.

Editor: Vladimir A. Goncharov, W1MTI

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## Have YOU Paid Your NVARC Dues?



See: <http://www.n1nc.org/MembersRoste>  
for your renewal month.

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