

The Rochester VHF Group

The VHF



Journal

Volume 70, Issue 4

December 2016

The next regular meeting of the Rochester VHF Group will be Friday, December 9th at 7:30 PM located at Exelon Emergency Operations Facility in Macedon /Gananda. Doors open at 7PM Map and directions on last page.

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Topic: Show and Tell

RVHFG's Beacons

Band	MHz
6m	50.078
2m	144.298
1.25m	222.050
70cm	432.300
23cm	1296.257

Beacons Hosted at AWA Museum

W2UTH 6 meter Skimmer

<http://www.reversebeacon.net/dxsd1/dxsd1.php?f=0&c=W2UTH&t=de>

The Chairman Speaks!

Dave Haliday K2DH

Hello again, fellow VHF+ "addicts". First off, I'd like to wish everyone in the RVHFG Happy Holidays! It's that season of the year and of course we're all busy with family and holiday plans, probably leaving less time for amateur radio than we'd like. At least that's the case with me. If you get time off from your work or family gatherings over the Christmas and New Year's holidays, try to make some time to get on the bands. I wouldn't be surprised to find a 6m opening in the next few weeks- it's a common occurrence at this time of year and can be very pleasant and rewarding with good DX.

Our 6m amplifier project is slowly progressing. We had a good meeting last month in which we collectively came up with some good ideas for mounting, packaging, and interfacing the module. I'm sure Jarred will supply more details in his column in this issue of the Journal

Continued...

Published by Rochester VHF Group PO BOX 92122 Rochester, NY 14692 Editor: Tom Jennings, KV2X

The VHF Journal is published by the Rochester VHF Group monthly except June-August. The subscription price is included in the membership dues. If you elect to receive the PDF version by downloading it from our website, dues are US\$10 per year. In this case, you will be notified by email the day it is available for download. If you choose to receive the hardcopy Journal by Postal delivery, the dues are US\$15.00 per year. Articles and comments should be submitted to journal@rvhfg.com

The Chairman Speaks!

Continued... We WERE planning to have the prototype ready for power testing at this month's meeting and I'm thinking (based on emails I've seen) that we may not be doing that this month- we're little behind schedule.

About three weeks ago, Freddie WA2GFZ, Jack WX3P, Duncan K2OEQ and I put the original 5 bands of club beacons back on the air from the AWA. They sound great! All are being heard well and we've even gotten reception reports from as far away as FN03 and FN25! The microwave band beacons are still being worked on in my shack. I received the crystal for the 5760 LO and have had it aging for a couple of weeks. It's very stable and so the next part of the project is to integrate all the microwave pieces/parts into the box which holds them and then get them on the air. As a note, the 2, 3, 5, and 10GHz beacons will all be at around .298 in their respective bands- the same as the 2m beacon, as they use a sample of the 144.298 beacon signal as the IF for the transmitters. So for example, we'll be at 2304.298, 3456.298, 5760.298, and 10368.298 once they're on the air.

I've been working on redesigning and repackaging my own 222MHz transverter. Due to a lucky find of some surplus parts, it'll be in a very nice package and run 100W. I may bring it to the December meeting to show and tell. It works well- I'm waiting for a DC-DC converter I bought on eBay to take 12v up to 28v for the PA and then it will be complete. As I type this, I'm listening to the 222 and 1296 beacons- 222 is at about S7 and 1296 about S3.

We are still looking at a meeting location solution. I won't say more than this, but there's a possibility that we may have the problem solved. I hope that there will be more to report at this month's meeting.

As I reported last month, trusteeship of the RVHFG club call (W2UTH) has been transferred to me. I received the license from the FCC the day of the November meeting and put it in the care of our Secretary/Treasurer Freddie WA2GFZ.

One more thing- I'm sure most (if not all) of you have heard about the Amateur Radio Parity Act bill currently making its way through Congress. It has passed the House and needs approval in the Senate. The complicater to this is that the current session of the Senate will end very soon and it hasn't come up for a vote there yet. If it doesn't before the session ends, the whole thing has to start all over again from the beginning!!! PLEASE- even if the benefit the bill would provide doesn't affect you, PLEASE send a letter or email to both of our Senators- Schumer and Gillebrand. It's very easy- go to the ARRL's website- there's a spot there to enable you to automatically send form emails to both of them without any real effort on your part. PLEASE do this- the antenna you get permitted to put up by approval of this bill may be your own someday!!!

That's enough of my ramblings for this month. Again, everyone have a safe and wonderful holiday season! I hope to see you at the meeting and to catch you in a 6m opening this month!

Meanwhile, back to the current 6m opening for me! CU on the bands 73,

Dave Hallidy K2DH

Secretary Report

Freddie Sulyma, WB2GFZ

Rochester VHF Group Meeting Minutes for 11 November 2016.

Dave (K2DH) called the meeting to order at 1933L. Dave welcomed everybody and all present introduced themselves. Dave asked for a motioned that meeting minutes and treasurer's report be accepted as written in November's journal. Tom (KV2X) motion to accept and Dave (AE2DM) seconded.

Attending:

Jarred (KF2MR), Freddie (WB2GFZ), Steve (KA1CNF), Dave (AE2DM), Bob (W2CNS), Dave (K2DH), Bill (K2TER), Jim (WB2YJH), Duncan (K2OEQ), Ken (N8KH) & Harry (W2HRY), Tom & Betty (KV2X), Dean (WB2QCJ), Charles (K2LDU).

Old Business:

- Dave (K2DH) reported that 5 bands are ready to be placed in service and that microwave bands will be placed in service at a later time. Freddie (WB2GFZ) to establish a time with AWA personnel to enter AWA facility and install the 5 Beacons. Additionally, Dave gave thanks to Al (K2MPE) for donating his 6M Squalo antenna to support the 6M Beacon.
- Dave (K2DH), the Trustee for W2UTH club license indicated that the license was renewed and expires in 12/09/26
- Dave (K2DH) reported that Al (K2MPE) donated a 6M Squalo antenna.
- Dave asked for ideas for a meeting place in March, April & May. The Ginna Emergency Operations Facility will not be available for those months.
- Jarred (KF2MR) talked about our Affiliation with the ARRL and spoke of efforts to complete Affiliation for January's Contest.
- The Club's sponsorship for a contest Plaque is being considered and will be brought back up at a later time.
- Club sponsored Contest incentives are being considered and Jarred (KF2MR) requested suggestions.

New Business:

- Duncan (K2OEQ) brought in Microwave parts from AWA to exchange for donations. Duncan also indicated that 11/12/16 was a follow up Grand Opening at the AWA at 1 to 5PM.

Program:

At the November 11th meeting of the RVHF Group, we had a unique experience reviewing parts selection and design options for the 400W 6m amplifier project. It developed into an active and practical discussion. The attendees shared the following topics: B+ supplies, cooling and component placement.

Rochester VHF Group Treasurer's Report (11/7/16)

CHECKING/CASH ACCOUNT

Previous Balance (PP = \$43.41, Cash = \$590.83Cash, \$1485.25 Checking): \$ 2119.49

Note: PayPal was high by \$2.00 last month due to PayPal's cut for their service. Corrected above to \$43.41 (Not \$45.41).

Dues: Note: Jack Plum (WX3P) has paid via PayPal last summer.

Charles (K2LDU), Dean (WB2QCJ) \$ 20.00

David (KA2OQZ) via PayPal. (\$9.41) \$ 9.41

Expenses:RVHFG's Post Office Box \$70 (Chk # 1066) \$ 70.00

Beacon Repair Parts (Dave Hallidy, Chk# 1067, \$156.92, Not Yet Cashed)

Note: \$ 52.82 was transferred from PayPal to the Club's Checking 11/17/16. Not yet reflected in account.

Current Balance (PP = \$52.82, Cash = \$610.83Cash, \$1415.25 Checking): \$ 2078.90 *Respectfully*

submitted,

Freddie Sulyma, WB2GFZ, Treasurer

Vice Chairman's Report

By Jarred Jackson, KF2MR November passed quickly and now

December is upon us. My "shack" is an absolute mess and is currently being used for storage as we have cleaned up the rest of the house in anticipation of more frequent visits from family and friends this time of year. My workbench is filled with toys that I hope

Santa's elves will soon wrap so I can get back to building stuff. While there is a lot going on this time of year, I can't help but to think of everything I would like to get done before the January contest.

January 21st seems a long way off, but I know better than that by now. A recent storm knocked over my rover mast and antennas causing quite a bit of damage. But repairs will be made and I intend to be active on 10 bands this January. Our meeting on January 13th will be all about the contest and strategies we can use to maximize our cumulative club score. If you recall we had a great 2016 contest with 22 logs submitted which totaled about 129,000 points.

In 2017, we are looking for our first "Hall of Fame" members for the January contest. At the December meeting, I will propose Hall of Fame categories for Single Operator, Rover, and Specialty operators. Single Operators and Rovers will be considered primarily based on raw score while the Specialty category will consider effort, improvement, and score among all of those submitting to the ARRL and identifying RVHFG as their club.

Speaking of the December meeting, we had to change plans slightly and move our "Show and Tell" to this month. This is a very open program where you can bring an interesting piece of equipment, a project you have been working on, or perhaps some software that may be of interest to others. "Work in Progress" items are encouraged as well as finished projects (if there is such a thing as finished!). There is no need to prepare any sort of presentation, but please be prepared to spend a minute or two with an explanation or demonstration. We will have our 6m amplifier to show as a "work in progress" along with some of the new components we selected at the last meeting. I will bring some of my microwave gear I have put together over this past year. We will meet at the Exelon Emergency Operations Facility in Macedon/Gananda. See the map in the back of the journal for location information. Doors open at 7pm.

Club Project Update – 6m Amplifier

By Jarred Jackson, KF2MR



During the November meeting, RVHFG members worked through design and construction options for the 6m amplifier project. Harry (W2HRY) and Jim (WB2YJH) work through power supply mounting options. Duncan, K2OEQ checks out the amplifier module while Tom, KV2X looks on. We disassembled the prototype and explored options for getting this project closer to its final form.

Another team working on an option for amplifier protection and control elected to give the W6PQL control board a try. This option will make for a more robust amplifier, but will need some additional design work for integration.



The Rochester DVA Association

Cordially invites you to our

*Annual Holiday
Dinner*

20 December 2016

Rick's Prime Rib House

898 Buffalo Road

Rochester, NY 14624

Cocktails: _____ 6:00pm

Dinner: _____ 7:00pm

Dinner Selections - \$30

Prime Rib

Chicken French

Orange Roughy

Dinner, Hor d'oeuvres, Dessert, Coffee Included

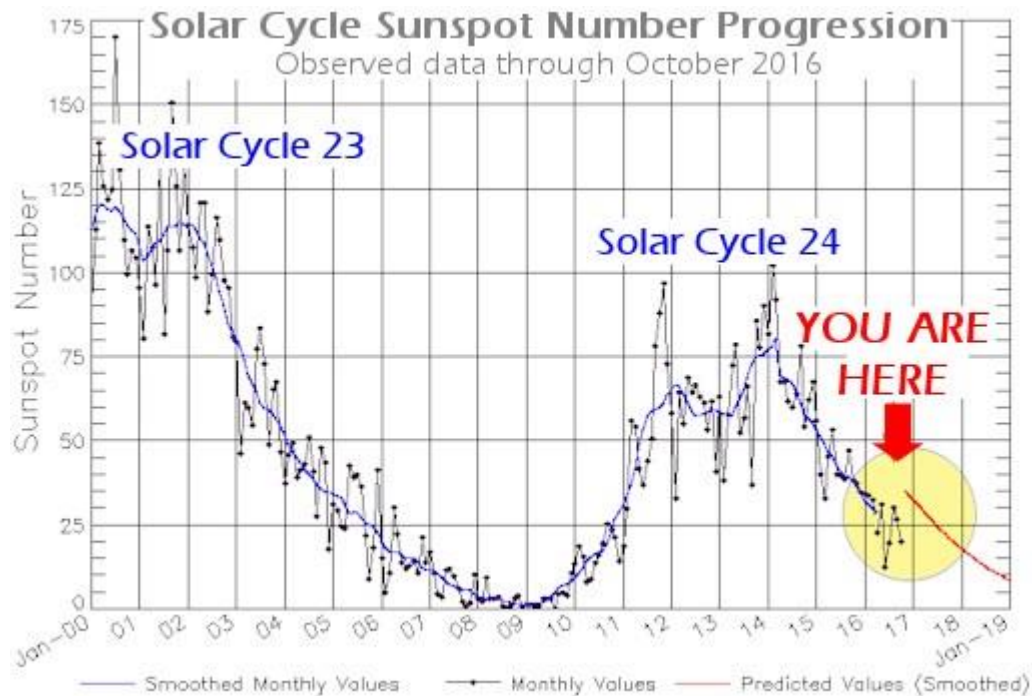
Cash Bar

Reservations and dinner selection by December 9th to
RDXABANQUET@RDXA.COM

Gayle - N2TWI

SUNSPOT CYCLE AT LOWEST LEVEL IN 5 YEARS

The sun has looked remarkably blank lately, with few dark cores interrupting the featureless solar disk. This is a sign that Solar Minimum is coming. Indeed, sunspot counts have just reached their lowest level since 2011. With respect to the sunspot cycle, you are here:



The solar cycle is like a pendulum, swinging back and forth between periods of high and low sunspot number every 11 years. These data from NOAA show that the pendulum is swinging toward low sunspot numbers even faster than expected. (The red line is the forecast; black dots are actual measurements.). Given the current progression, forecasters expect the cycle to bottom out with a deep Solar Minimum in 2019-2020.

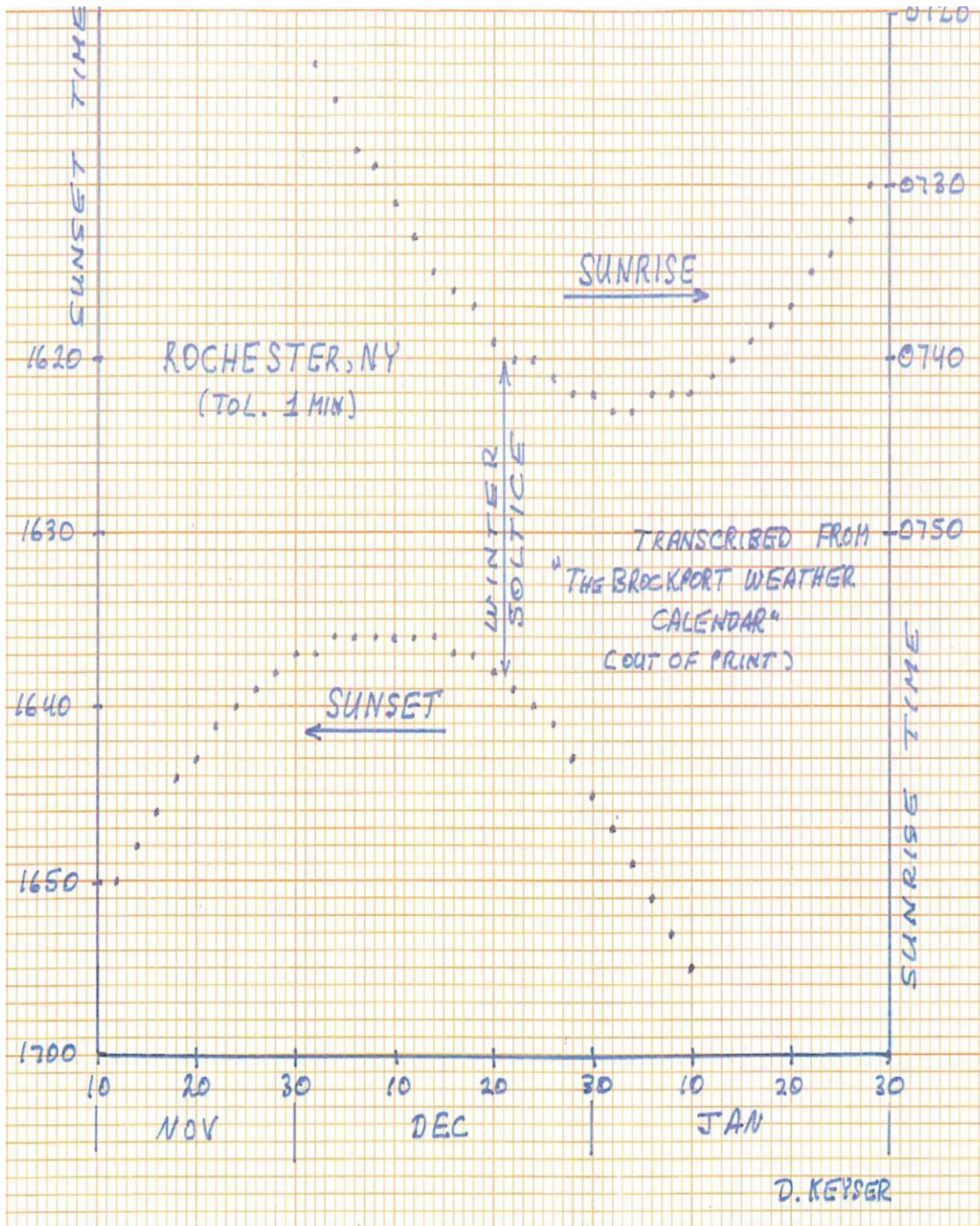
Solar Minimum is widely misunderstood. Many people think it brings a period of dull quiet. In fact, space weather changes in interesting ways. For instance, as the extreme ultraviolet output of the sun decreases, the upper atmosphere of Earth cools and collapses. This allows space junk to accumulate around our planet. In addition, [the heliosphere](#) shrinks, bringing interstellar space closer to Earth; galactic cosmic rays penetrate the inner solar system *and our atmosphere* with relative ease. (More on this below.) Meanwhile, geomagnetic storms and auroras will continue--caused mainly by solar wind streams instead of CMEs. Indeed, Solar Minimum is coming, but it will not be dull.

COSMIC RAYS CONTINUE TO INTENSIFY: As the sunspot cycle declines, we expect cosmic rays to increase. Is this actually happening? The answer is "yes." Spaceweather.com and the students of Earth to Sky Calculus have been monitoring radiation levels in the stratosphere with frequent [high-altitude balloon flights](#) over California. (<http://onlinelibrary.wiley.com/doi/10.1002/2016SW001410/abstract>)

From <http://spaceweather.com/>

Winter Solstice Plot

Dean Keiser WB2QCJ



2017 VHF+ Contest Calendar

Event	Date	Local Time	Notes
January VHF Contest	1/21– 1/22	1400 Saturday until 2259 Sunday	http://www.arrl.org/january-vhf

Classified Listings

No listings this month.

Meeting Location and Directions

Meeting Location

Exelon / Ginna Emergency Operations Facility
1255 Research Forest
Macedon NY 14502

