



The Repeater

Next Club Meeting

Thursday
May 4, 2017, 7:00 PM

Red Cross Building,
60 Hawthorne St., Medford, OR
Across from Hawthorne Park

Program: Echosounding the lonosphere with SDR

Volume 2017, Issue 5

May 2017

Scott Cummings	NA7OM	kd7ehb@yahoo.com	President
Mike Bach	WB6FFC (541) 830-3346	eaglepoint.or@juno.com	Vice President
Bob Deuel	K2GLO (541) 482-8752	k2glo@ikasystems.com	Treasurer
Allan Taylor	K7GT (541) 855-2054	k7gt@arri.net	Secretary
Tom McDermott	N5EG (541) 734-4675	n5eg@tapr.org	Newsletter & Membership
Club Web Page:		http://w7dta.org	

Club Notes

Our club Vice President, Mike Bach, is working on a location for Field Day 2017. Right now it looks like ScienceWorks in Ashland (where we had Field Day last year) is available again this year.

There appears to be general consensus that we will have a joint Field Day with the CARE club.

The site is nice—well mowed lawn, flat terrain at the site, reasonable RF location, electrically quiet (last year), parking lot available, publically accessible.

The Repeater is the official newsletter of the Rogue Valley Amateur Radio Club, Inc. It is published 10 times a year—once per month excluding July and August.

Secretary's Report

April 2017 RVARC meeting called to order at 7PM. Several visitors and potential members were introduced:

- Duane Franklin ex-W7ZVO
- Steve Sutfin K7DNA
- Jesse Reed KD7AUA
- Joel Reed no call (yet)

Our evening's presenters:

- Crystal Bosbach N5LEQ
- Steve Bosbach KW5V

Mike Bach gave an update on the status of Field Day 2017. The preferred location will be, again, ScienceWorks. A representative from the C.A.R.E. club (Darrell N7CZX) has asked that the two groups join forces for FD this year. It was generally accepted without a formal process. The point person with C.A.R.E. is Chris Duncan and Mike will work out details with him. In the discussion, it

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Secretary's Report, Continued.

(Continued from page 1)

was asked how much was actually spent on FD 2016. BoB K2GLO looked up the expenses and came up with a total of \$106, amazingly low.

Mike Bach announced that there will be a Multi-operator effort for 7QP this year. The 1X1 call K7D has been arranged and it will be held either at Agate Lake or at the QTH of John Laybourne W8WOM, TBA. Mike solicited CW ops.

The presentation for the evening was regarding the Jackson County ARES group (JCARES), given by Steve NW5V. Several pictures of their training activities and of their comm. van were shown. He encouraged RVARC members to support JCARES by checking in to the Thursday evening net (7:00PM 146.84 123) or choosing to become a participating member.

Much conversation was had both at coffee break and after the presentation.

The club held a silent auction. Most all of the club's equipment was sold. Mike and Tom each were able to clean out a little more room in their closets at home.

Submitted by Allan Taylor K7GT

HF Radio Blackout April 2 and 3rd 2017

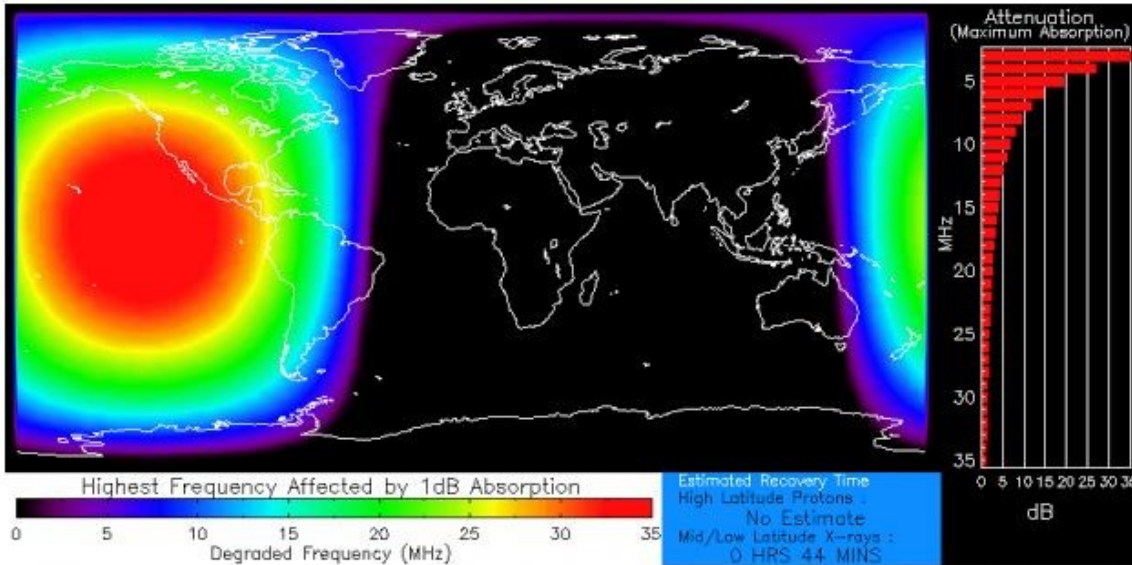
Medford had a nearly complete HF radio blackout on April 2, 2017. This was due to an X-ray flare from the sun. The figure below shows the HF absorption at 2034 UTC (1:34 PM PDT).

Normally X-ray induced absorption occurs at lower frequencies, with higher X-ray flux causing progressively higher frequencies to

be impacted. In the April 2 event, there was some absorption higher than the 10 meter band, which degraded HF the most on the part of the earth underneath the sub-solar point facing the sun.

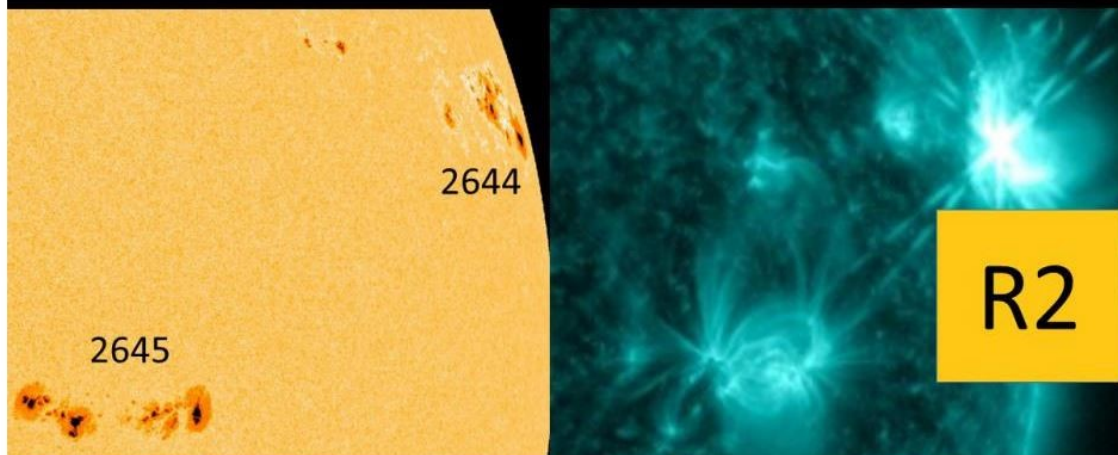
Typically X-ray induced absorption lasts a few minutes to an hour or two.

There was another event the next day, April 3, the second figure shows the solar disk at that time.



R2 RADIO BLACKOUT AT 1429 UTC, 3 APRIL 2017

Region 2644 produced M5 X-ray flare
(R2-Moderate Radio Blackout) at 1429 UTC, 3 April



This Month's Programs

1. Echosounding the Ionosphere with SDR

- **Program:** - Tom McDermott, N5EG. Tom will describe a relatively simple equipment set-up based on Software Defined Radio (SDR) that he used to measure the virtual height and velocity of the Ionospheric F layer above Medford with 6 watts on 80 meters.

This was presented at 2015 DCC, published in the 2015 ARRL/TAPR DCC proceedings, and published in January 2017 QEX magazine.

Biography: Tom is newsletter editor for RVARC and a techie.

Programs Planned for 2017 (subject to change):

- **June:** Field Day - Mike Bach, WB6FFC
- **July:** No meeting
- **August:** No meeting
- **September:** RVARC Swap Meet
- **October:** American Woodpecker (Over the Horizon Radar) - Scott NA7OM
- **November:** TBA
- **December:** TBA

Multiple Transmitter CW & SSB

Last month we published an article on multiple simultaneous transmitters during a contest. This month, Allan Taylor sent along a posting made by Jim Brown K9YC on the Northern California Contest Club (NCCC) reflector about how he reduces antenna interactions for multi-operator contests (such as field Day).

Subject: [NCCC] Killing Some Antenna Interactions

“While designing antenna setups for our contesting trailer, (k9yc.com/7QP.pdf) I've learned something VERY interesting and useful. The desired setup has a 40M dipole and a C3SS tribander rigged to the pneumatic mast, spaced about 5 ft. from each other. If the dipole is open circuit at the feedpoint, there is strong interaction with the 20M above it (2 dB lower gain and a narrower pattern), but if the feedpoint is shorted, interaction is minimal.

That short can be provided by a shorted stub that's a halfwave on 20M placed N half waves from the feedpoint, where N is a whole number. And that's exactly what we're doing when optimizing the position of our harmonic stub on the 40M dipole -- when optimally placed, it's N halfwaves from the feedpoint!

In the screen grab from NEC (link below) k9yc.com/20MYagi-40MDipoleInteraction-1.png the primary (black) trace is a 3-el Yagi (from the Antenna Book CD), the blue trace is the same antenna with the shorted stub one wavelength down the line, and the green trace is with the 40M antenna open circuit. We can't see the black trace because the blue trace lies almost exactly on top of it -- the shorted stub is 0.1 dB down from the Yagi alone. The effectiveness of this technique depends on the loss between the stub and the feedpoint. Loss for the coax in the model is 0.4 dB/100 ft at 10 MHz, which is typical of BuryFlex, LMR400, etc.

In the model, the 40M dipole and the driven element of the Yagi are parallel to each other. If they were at some relatively small angle (5-40 degrees), the result would be to skew the pattern. As the angle between the gets close to 90 degrees the interaction goes away.

This technique will work for any band where the victim antenna is operating on the second or fourth harmonic of the interfering antenna and the interfering antenna is resonant on the lower band. It doesn't matter whether the victim antenna is a monobander or a tribander.

73, Jim K9YC”

For Sale / On site / May 27

Dan Curtis, N6WN will have a Ham-Electronics-Tool Sale,

Saturday, May 27
9:00 AM to Noon
3585 Griffin Creek Road, Medford.

Come see:

- Solar panels, a pop-up, cables, pneumatic antenna launcher, and more.
- Big tools like a band saw, table saw, miter saw, drill press, hand-made saw horses, lathe stand and much more.

Email with questions: ki6ssq@arrl.org.

Free QST magazines to a good home

Van Sias, K7VS has 20 years of pristine condition QST magazines, from 1990 through 2009. He is offering them for free. Please call Van at 541-779-0723 if you are interested.

Coos County Hamfest—July 15

The Coos County Radio Club will hold their annual Hamfest and Swapmeet at the North Bend High School on Saturday, July 15th 2017 from 10:00 AM to 2:00 PM.

The High School is located at 2323 Pacific Ave., North Bend, Oregon. There will also be a test session, snack bar, and door prizes.

Talk-In:

- On the 146.61 repeater (146.01 in / 146.61 out, PL 110.9),
- Or on the 147.28 repeater (147.88 in / 147.28 out PL 146.2).

Admission is \$4.00, swapmeet tables are \$15.00. For details, contact Joe Burkleo WA7AJW at 541-396-4926, or joeburkleo@hotmail.com. Mail address is: Coos County Radio Club, PO BOX 698 Coos Bay, Oregon 97420.

The Hamfest flyer is available at:

<http://www.coosradioclub.net/Documents/2017HamfestFlyer.pdf>

May 2017

Sun Mon Tue Wed Thu Fri Sat

	1	2	3	4	5	6 • 7QP (+INQP, DEQP, NEQP)
7	8	9	10	11 • RVARC Club Meeting	12	13
14	15	16	17	18 • Rogue Hack Lab • ARES Net	19	20
21	22	23	24	25 • ARES Net	26	27 • CQ WW WPX CW
28 • CQ WW WPX CW	29	30	31			

Events

- Thursday, May 4th 7:00 PM RVARC Club Meeting - Red Cross Medford
- Thursday May 11th — 6:30 PM Rogue Hack Lab, Medford Library
- Thursdays 7:30 PM - ARES Net. K7RVM repeater 147.000 (+) [PL 123.0]
- Next Newsletter: May Issue. Deadline for input: May 18th.
- 7th Area QSO Party 7QP— May 6, 6:00 AM to Midnight PDT <http://ws7n.net/7QP/new/Page.asp?content=rules>
- Indiana, Delaware, and New England QSO parties are the same day as 7QP.
- CQ Worldwide WPX CW—May 27 and 28 UTC (starts May 26 PDT). <http://www.cqwp.com/rules.htm>

RVARC Membership

RVARC membership dues run from January 1 through December 31. Please bring cash or a check payable to RVARC to a club meeting, or mail (checks only) to:

RVARC Membership
c/o 1058 Linda Ave.
Ashland OR 97520

Regular Member:	\$20.00
Senior Member (62 and over):	\$15.00
Family Member:	\$20.00
Student Member:	\$10.00

For Sale / Wanted

Check out the RVARC club SellSwap webpage. You can post for-sale items, wanted items, browse for-sale and wanted items.

The page is moderated.

<http://w7dta.org/sellswap>

2017 Amateur Radio Examinations

In the Rogue Valley, amateur radio exams are provided by the RVARC and the SOARC. New exam participants need to provide identification, while upgrading amateurs need to **provide a copy of their current license** as well as show identification. The exam fee for 2017 remains \$15.00. All license candidates must provide a picture ID. Upgrading amateurs must also provide a photocopy of their current license to send in with their application. To search for other exam locations, see:

<http://www.arrl.org/arrlvec/examsearch.phtml> or our club webpage: <http://w7dta.org>

Medford—Phoenix, OR

Time: Saturdays, Registration 8:30 AM. Exam session at 9:00 AM. Walk-ins welcome.

Location: Fire District 5 HQ. 5811 South Pacific Highway, Phoenix, Oregon 97535

Dates 2017: Jun 17 Oct 28

Contact: Don Bennett, Email: kg7bp@rfwarrior.com Phone: (541) 973-3625

Grants Pass

Time: Fridays Registration 6:00 PM. Exam session at 6:30 PM. Walk-ins welcome.

Location: Fruitdale Grange. 1440 Parkdale Dr., Grants Pass OR 97527-5288

Dates 2017: May 19 Aug 18 Nov 19

Contact: John Stubbe, K7VSU, email: jstubbe7@gmail.com Phone: (541) 218-2244

Roseburg, Bend, Redding, Brookings, Crescent City — Please see our club webpage, <http://w7dta.org> for updates as we receive schedules for these cities.

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