



The Repeater

Next Club Meeting

Saturday Dec 7 2019,
6:30 PM

N5EG QTH, 3950 Southview Ter.
Medford, OR

Program: Holiday Pot Luck Dinner

Volume 2019, Issue 12

December 2019

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President
 Vice President
 Treasurer
 Secretary
 Newsletter & Membership

Club Notes

Congratulations on club officers for being re-elected. The office of President is vacant as no one would volunteer. The board may need to address this during a future board meeting.

Be sure to make plans for the club's annual holiday Pot-Luck dinner on December 7th. This is a time to socialize, eat, and talk about ham radio in general.

Secretary's Report

Secretary's Report

RVARC Nov. 7, 2019 Meeting Minutes

7:03pm Meeting called to order by Vice-President Scott Cummings, NA7OM. Attendance was 28 people.

Don Bennett, KG7BP, said that at the Oct. 26 license test 5 new Technicians and 2 new Generals were added to our number.

Allen Taylor, K7GT, reported on the October 5-6 California QSO Party where they gathered at Bob Welch's QTH (W6AQU) near Montague, CA. With an SFI of 63, phone reception was poor, but with the CW crew alongside, around 98000 points were accumulated. The food & fuel bill came to \$208, so Scott, NA7OM, made a motion for the club to approve the expense, Tom, N5EG, seconded, and the vote was a unanimous yes.

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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, Cont'd.

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On the subject of club officer elections, Scott, NA7OM, John, KF7UMK, & Mike, WB6FFC, all agreed to run for VP, Secy. & Treasurer again. No one volunteered to run for President so that office is vacant. The volunteers were deemed elected by acclamation. We need a volunteer to stand for President, and help realize their visions for the future of the club.

The Treasurer reported a bank balance of \$4714.00 plus \$132.20 in petty cash, along with tonight's six newly paid 2020 memberships. Club insurance has been paid, as well as the \$150 donation to the ARRL Spectrum Defense Fund.

(Just a reminder that further info on amateur radio interests is available at www.arrl.org/news, including news like:

11/18/2019 | WRC-19 Grinds On Into Third Week

11/21/2019 | ARRL Self-Guided Emergency Communication Course EC-001-S is Now Available On Demand

11/25/2019 | ARRL to Oppose Proposal to Eliminate 3.3 – 3.5 GHz Amateur Allocation

11/26/2019 | WSJT-X Development Group Announces Second Bug-Fix Release, WSJT-X Version 2.1.2)

7:23pm Break for visiting and snacks.

7:55pm Main presentation on Tangerine SDR by Tom McDermott, N5EG.

Tonight's talk is on the development of a new modular SDR by HAMSCI, TAPR, and others, in conjunction with HAMSCI's Personal Space Weather Station project.

The lead HAMSCI organizer is Dr. Nathaniel Frissell, W2NAF, a professor at Scranton University (previously of the New Jersey Institute of Technology, Center for Solar-Terrestrial Research).

Tucson Amateur Packet Radio (TAPR) is designing and building the hardware.

The PSWS - Personal Space Weather Station is a set of specific TangerineSDR modules plus firmware, a 3-axis magnetometer, a local host computer + storage + software, and a central server (run by scientists) to collect and manage data.

For now the PSWS plan is:

- Two Low Cost HF (0.1 - 30 MHz) receivers with reasonable dynamic range.
- Up to 8 bands per receiver. NF \leq 10 dB.
- Ability to calibrate receiver amplitude.
- Tight phase coherence between receiver channels
- Ability to do interferometry.
- High accuracy time-stamping of samples & high frequency accuracy. Objective: ± 50 nanoseconds during normal GPS reception.
- 3-axis magnetic field measurements:

The TangerineSDR modules consist of:

- the Data Engine - FPGA based
- the RF Modules - a collection of receivers, transmitters, and transceivers.
- the Clock modules - a collection spanning low-cost to high-performance.

TangerineSDR target applications are:

- HamSCI Personal Space Weather Station (PSWS)
- Phase 4 Satellite Ground Station (P4G)
- Academic uses to teach SDR and FPGA techniques
- Amateur Communications SDR
- Experimenters' (Amateur and non-Amateur) SDR
- Remote Ham Radio & others.

Other Uses for TangerineSDR:

- HF directional antenna beamforming.
- Widely spaced receivers with accurate

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Secretary's Report, Cont'd.

(Continued from page 2)

timestamping can form a synthetic antenna with narrow angular resolution.

- TDOA- Time difference of arrival. HF direction finding based on time-of-arrival at the receivers.
- Multichannel WSPR, FT-8, other signals.

Future modules possible: Transmitter module, Microwave module, Perhaps phase 4 satellite ground station.

As hams building a Personal SW Station, what do we want to do?

- Know the best frequencies for working DX
- Understand the RFI Environment
- Communicate better during emergencies

For the Scientists:

- Better sample the environment
- Better understand near-Earth Space

The 3-axis magnetometers are PNI RM3100
www.pnicorp.com/product/rm3100-breakout-board/ \$20

Mentioned were John Ackermann, N8UR, in reference to Cesium Standard clocks, Tom Clark, K3IO(W3IWI) for very long baseline interferometry, and Scott Cowling, WA2DFI, for SDR info.

Links:

Video of TangerineSDR mockup, shown by Scotty, WA2DFI at the 2019 DCC in Detroit:

www.youtube.com/watch?v=81MlplpB7Mo

hamsci.org/basic-project/personal-space-weather-station

tangerinesdr.com

8:30pm end talk, start questions

8:40pm other comments

Weldon Bauman, KJ6IOD, has a contact for a quantity of surplus DirectTV dishes, probably without the electronics, in case anyone wants to use them for modifying into slot antennas, etc. If interested, contact him at 458-229-0093.

Scott, NA7OM, mentioned an interest in understanding switching-mode power supplies, which are so light and compact compared to the older linear ones, as long as the RFI levels can be controlled well. Also, an idea of contacting the RCC ham radio club to see about collaborations.

Meeting Adjourned at 9pm.

John, KF7UMK

RIP solar cycle 24. Where's cycle 25?

Our club secretary John Armstrong mentions in an addendum to his meeting minutes:

I "forgot to mention that, in relation to the CA QSO Party comment of an SFI = 63, the attached historical plot really puts into perspective how miserable the propagation is for this timeframe and perhaps the coming few years."

The lowest solar flux recorded is 64.4 in 1954, (64.2 was recorded in 1906, but instrumentation may not have been accurate back then). We have been hugging the mid 60's for the last few months. Therefore, things are looking up! (as historically they probably can't be looking down).

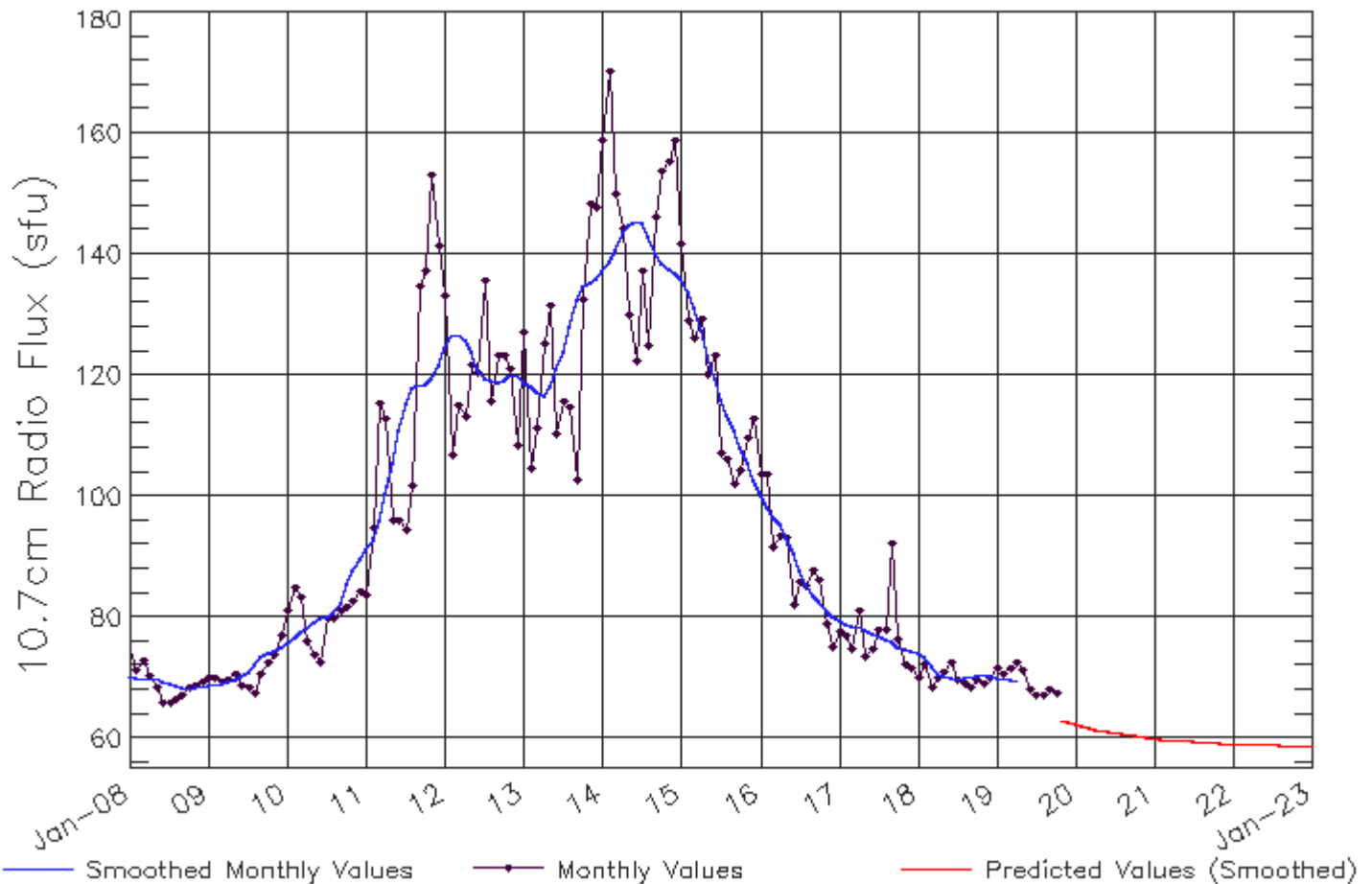
Sunspots from cycle 25 have been seen recently. These are reversed-polarity compared to cycle 24, and at high solar latitudes. Cycle 24 spots are near the equator.

During the changeover from one cycle to the next a few of both types of sunspots can usually be seen at the same time.

Between cycles 23 and 24 there were a number of prediction made of cycle 24. Unfortunately there was a huge dispersion of predictions, and models that had proven highly precise looking backwards yielded completely wrong results.

Moral: be skeptical about new predictions!

ISES Solar Cycle F10.7cm Radio Flux Progression
Observed data through Oct 2019



ARRL Field Day 2019 Results

The ARRL 2019 Field Day results have been published on their webpage, and are printed in the December issue. 2019 was another poor year in terms of the sunspot cycle, and stations on the west coast are affected more than most other areas of the country due to geography.

10 meters did not open from the west coast to the east coast, and conditions on 20 meters were as struggle as most folks vacated 10 and 15 and moved to 20 meters resulting in huge crowds, coupled with poor propagation. 20 meters closed in the late afternoon / early evening forcing our operations to 40 meters. We had a modest run on 15 meter phone to the Mid-west early Saturday afternoon.

Our multi-club effort at K7D resulted in a good score in comparison to other west coast and northwestern division outings. We had the top score for 3A in Oregon. We placed 4th in Oregon amongst all categories, and 3rd in the Northwestern Division among 3A entries.

The location at Agate Lake worked out very well. It is easy for most members to access, relatively uncrowded, and has minimal permit requirements. The weather this year was perfect, with temperatures in the 70's and 80's and abundant sunshine.

Note what appears to be an error in the data: WV7CTR and WA7CTR have identical scores, so one is likely a typo.

#	Call	Score	Category	QSOs	Power Mult	GOTA Call	Section	Partici-pants	Club
1	K7D	3,990	3A	968	2		OR	24	Rogue Valley ARC / CARE
2	W7Q	3,460	3A	744	2	WB7QIW	OR	25	Hoodview ARC
3	W7ORE	2,372	3A	369	2		OR	10	Radio Operators Assn Of Dallas
4	WV7CTR	2,042	3A	303	2	KE7GBK	OR	8	
5	WA7CTR	2,042	3A	303	2	KE7GBK	OR	8	Coast to Range ARC
6	W7AU	1,584	3A	309	2		OR	9	Terrie Hill & Friends
7	W7SAA	1,584	3A	193	2	K7JLT	OR	24	Salem ARC
8	WA7LO	1,540	3A	145	2		OR	14	Lake Oswego ARES
9	W7RAG	922	3A	65	2		OR	10	RA of the Gorge

Oregon, 3A

ARRL Field Day 2019 Results

#	Call	Score	Category	QSOs	Power Mult	GOTA Call	Section	Participants	Club
1	W7PIG	4,296	3A	849	2	K7UDG	WWA	84	Stanwood-Camano ARC
2	W7AIA	4,126	3A	1,204	2	N7HR	WWA	123	Clark Co ARC
3	K7D	3,990	3A	968	2		OR	24	Rogue Valley ARC / CARE
4	W7FLY	3,878	3A	898	2		WWA	12	BEARS North Soc
5	W7Q	3,460	3A	744	2	WB7QIW	OR	25	Hoodview ARC
6	W7PU	2,994	3A	589	2		WWA	3	All ARC
7	W7AVM	2,948	3A	450	2		WWA	34	Island Co ARC
8	K7TM	2,878	3A	565	2		ID	3	N Idaho Renegades
9	NT7H	2,582	3A	461	2		WWA	22	Olympia ARS
10	NC7G	2,418	3A	352	2	WA7ST	WWA	22	Highline ARC
11	W7ORE	2,372	3A	369	2		OR	10	Radio Operators Assn Of Dallas
12	K7G	2,326	3A	342	2	AG7HA	MT	45	Yellowstone RC
13	W7VMI	2,184	3A	378	2		WWA	40	Vashon Maury Islands RC
14	W7DP	2,098	3A	275	2		EWA	12	Walla Walla Valley ARC
15	WA7CTR	2,042	3A	303	2	KE7GBK	OR	8	Coast to Range ARC
16	WV7CTR	2,042	3A	303	2	KE7GBK	OR	8	
17	W7SAA	1,584	3A	193	2	K7JLT	OR	24	Salem ARC
18	W7AU	1,584	3A	309	2		OR	9	Terrie Hill & Friends
19	WA7LO	1,540	3A	145	2		OR	14	Lake Oswego ARES
20	W7AAO	1,516	3A	163	2		WWA	10	Pierce Co ARES
21	W7BI	1,216	3A	152	2	K7ISQ	WWA	40	Issaquah ARC & Bellevue & Is-
22	K7CST	1,104	3A	119	2		WWA	4	Puget Sound Fire CST
23	W7RAG	922	3A	65	2		OR	10	RA of the Gorge
24	KJ7ARB	874	3A	49	2		MT	10	N Yellowstone ARC
25	N7JCT	754	3A	58	2	N7JCT	ID	3	

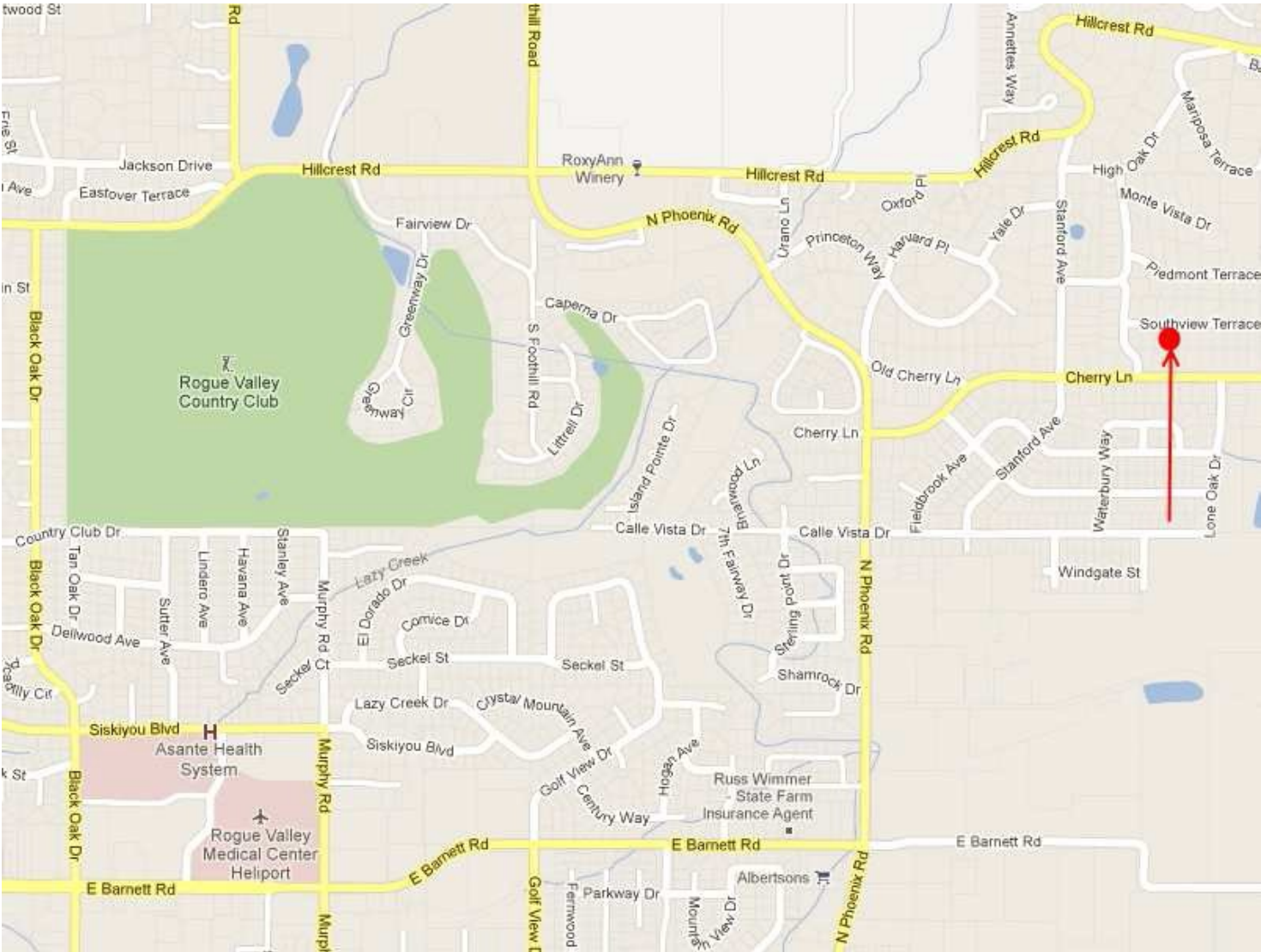
Northwestern Division, 3A

This Month's Programs

1. Holiday Party—3950 Southview Ter., Medford (see map below)

- Program:** - We will have a pot-luck dinner starting at 6:30 PM. Suggested items to bring are organized by last name (to reduce overlap on items). If you have your heart set on bringing something else instead, please do !

Last name beginning with:	Suggested food item to bring
A through F	Appetizer or finger food
G through M	Hot dish, vegetables, or bread
N through Z	Desert, fruit, or beverage



December 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 • CARE Net	3 • 2M SSB Net	4 • 2M SSB Net	5 • ARES Net	6	7 • RVARC Holiday Party
8 • CP ERC Net	9 • CARE Net	10 • 2M SSB Net	11 • JC-ARES Meeting • 2M SSB Net	12 • Rogue Hack Lab • ARES Net	13	14
15 • CARE Party • CP ERC Net	16 • CARE Net	17 • 2M SSB Net	18 • 2M SSB Net	19 • ARES Net	20	21
22 • CP ERC Net	23 • CARE Net	24 • 2M SSB Net	25 • Christmas Day	26 • ARES Net	27	28
29 • CP ERC Net	30 • CARE Net	31 • 2M SSB Net				

Events

Meetings

- **RVARC** Saturday, December 7th — 6:00 PM, Holiday Pot Luck Dinner—see front page.
- **Rogue Hack Lab** Thursday December 12th — 6:30 PM, Medford Library
- **CARE** Sunday, December 15th — 2:00-6:00 PM — Belleview Grange, Ashland
- **JC-ARES** Wednesday, December 18th — 6:00 PM — Jackson County Search & Rescue, 620 Antelope Rd., White City

Nets

- **JC-ARES** Thursdays 7:30 PM - K7JAX Mt. Baldy Repeater 146.840 (-) [PL 123.0]
- **CARE** Mondays 7:00 PM—. KB7SKB Jacksonville Repeater 147.100 (-) [PL 136.5], open, directed net, visitors welcome
- **2 Meter SSB** Tuesdays 7:00PM and Wednesdays 10:00 AM—144.200 USB
- **Central Point Emergency Radio Communications** Sundays 8:30 PM— KB7QMV Medford Repeater 145.410 (-) [PL none]. Move to simplex net on 147.585 MHz when finished. Directed net.
- **Siskiyou County ARC** Thursdays 7:00 PM—Net K6SIS Repeater 146.79 (-) [PL 100.0]

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 1940 Stevens Rd.
Eagle Point OR 97524-6523

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

For Sale / Wanted

We have had to shut down our Sell / Swap webpage due to malicious attacks using postings and comments.

Please send any For Sale / Swap postings to the newsletter editor for posting in this newsletter.

2019 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 2019 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 2019: No remaining test sessions in 2019

(note these dates are tentative until confirmed by FD#5)

Contact: Don Bennett, Email: kg7bp@arrl.net 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 2019: No remaining test sessions in 2019

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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