The April 9th club meeting will be held on the air by club President Denney N6HV using the Sulphur Mountain Repeater, on 145.200 MHz with a minus offset and a PL of 127.3 Hz. A Zoom meeting will follow the on-the-air net. Clem KM6OKZ will present "UV-C LED Reactor". Please check our website, K6MEP.org, for any announcements.

Reese West KQ6TT continues to pen his "Thoughts from the West" column in our Keyer; this month's article is entitled "A QUICK LOOK AT THE TWO SLIT EXPERIMENT". He enjoys receiving feedback about his columns; if you send your comments to the editor (KM6RSS@gmail.com) I'll see that he receives them.

Our president, Denney N6HV, is forming a Field Day 2021 committee to explore the various opportunities for us to have a "COVID-19 rules and regulations approved" Field Day. That may mean limiting the number of participants in a given tent, wearing masks for one and all (even those who have had the complete number of vaccinations and time to form antibodies), and other CDC and WHO-recommended measures. Last year many of us joined with several local clubs (VCARS, etc.), participated in several organizational (Zoom) meetings and developed a safe but enjoyable scoring and sharing activity. A net was available for support and Stu AG6AG, along with others, provided help with transceiver and all things ham. Many of our club members set their "all time points records" (FT8 to the rescue).

Club Officers	And Keyer	Contributors
President	Denney Pistole	N6HV
Vice-President	Clem Alberts	KM6OKZ
Secretary	Open	
Treasurer	John Gartman	W6JPG
Board Member	Stewart Stone	KG6BOV
Board Member	Robert Shank	KM6RSS
Board Member	Richard Abbey	WB6AEW
Photographer	Denney Pistole	N6HV
Facilities	Richard Abbey	WB6AEW
Keyer Editor	Robert Shank	KM6RSS
Webmaster	Robert Shank	KM6RSS
Domain	Phil Cohen	WA6BUZ
Membership	Open	
License Trustee	Stewart Stone	KG6BOV
QSL Manager	Ben Holmes	K6QV
Safety Officer	Open	
Local Area Net	Wayne Woodhams	N6WIX
Columnist	Reese West	KQ6TT
ACS/ARES	Rob Hanson	W6RH
SB Section	John Kitchens	NS6X
PVARC/MESH	Paul /Orv	WD6EBY/W6BI

The Inside Story

The ***KEYER*** is published monthly by K6MEP, the Ventura County Amateur Radio Club, Inc. as a means of providing club members the minutes from K6MEP's monthly general membership meetings, the monthly board of directors' meetings, a calendar of events and articles of interest on amateur radio. Layout and logos are the property of The Ventura County Amateur Radio Club, K6MEP. The stories printed in this journal remain the property of the writers, without whom we would not have a publication. Permission to reprint articles should be obtained from the authors. Articles and photos from the ARRL are reproduced with permission. Material submitted for inclusion is encouraged. Submit material by email to KM6RSS@gmail.com. Our club mailing address is **K6MEP, PO Box 2103 Oxnard, CA 93034-2103**K6MEP holds general membership meetings at 7:30 PM on the 2nd Friday of each month (except December). Dues are $20 per year.

Message from the President

The Prez Sez,

It's time for spring cleaning.

What again, I just finished a major cleanup of the Ye Old Fiasco Factory and now you're telling me I have to start spring cleaning.

With the ramping up of the sun spot numbers, a good cleanup of the old shack is needed. When was the last time you checked your antenna connectors on the back of your rig? Have you checked the connectors or connections for the feed line to the antenna? Sure it's not easy, but we have had some rain and peeling the tape off the connections may show you that water has made it under all that tape or even into the coax. How many years has it been since you inspected the antenna? Five, ten or dozens of years?

Now's the time to do it or you'll find yourself off the air in the middle of a contest or the opening of century.

Have you looked at your feed line lately? How long has it been up? Fifteen years, twenty years or more? Maybe a new piece of coax will make those weak stations louder. Did you pile on the electrical tape when you connected the feed line to the antenna or connected two pieces of feed line together? It's time to unwrap them and check the connections out.
Take them all the way apart. Don't be surprised that under all that expensive tape water has crawled in and soaked until the connectors are a mass of corrosion.

Then there are the ground connections. The often hidden behind the desk or in the weeds connections. Those connections that hide behind everything are important. Take the ground cable connections apart, polish them up, bolt them back together and tape them up so they don't corrode. Better yet replace the whole mess with bigger wire that has a straight run and fewer connections in it. Use flat braid if you can. The big joint to check is the one to the ground rod. It's out in the weather and gets

(Cont. on page 3)

Message from the President (Cont. from page 2)

watered with the yard. Tape those ground rod connections up.

Good propagation is coming and with it new and strange contacts from around the world, but you will be fighting with thousands of other hams to make contacts with the rare or even any station. You may even find the band crowded and making the weekly or nightly contact with your longtime friend a challenge. So make sure your station is in tip top shape.

Don't forget to check the guy wires on your antenna. The wife may get upset if the wind comes up and she finds an element of your antenna sticking through the ceiling. That's a phone call you don't want to get while at work.

What else can you do? Clean off the old operating desk. Give yourself room to make those contacts. Pull out the rigs and dust them off and blow out the cobwebs. Make sure the air flow through the rig is good. That really important if you're running FT-8. Is the old power supply running hot? Maybe it's time to get a new one. Is the old computer slower than an ice cube in a blizzard (not going anywhere fast)? Think about getting a new one (I know it still works, but Windows 7 is a big risk and the hard drive may be on the edge of extinction).

Get or borrow an antenna analyzer, and verify that the SWR of your antennas is where it should be. When was the last time you checked them?

Is there any rusty metal near your antenna? That rust can act like a diode in a high radio frequency field and generate interference or steal radio energy your trying to send to another ham and turn it into heat.

How about something simple like a new seat cushion for your chair.

You're going to spend a lot of time in that chair.

A $3.75 Wattmeter

In my cleaning I ran across an article out of an old 73 Magazine on how to build a Wattmeter. This wattmeter will measure the output of a circuit from 160 Meters to 450 MHz. It will only do up to 5 watts, but can be real handy. The secret to this piece of test equipment is a GE PR 13 pilot light (an electrical light bulb). In the early days of amateur radio the lowly light bulb was the most common piece of test equipment you could have. Meters were expensive, very expensive, and easily damaged. The old saying "tune for maximum smoke" was really "tune for maximum brightness" and sometimes you got a lot of bright smoke. If you had a meter you then built a second circuit with a battery, a bulb and a pot in series. You measured the current through the circuit and marked on the pot where you got like .5 watts, 1 watt and so on. When you measured a circuit with the measuring bulb you then compared its brightness to that of the bulb in the calibrated circuit and turned the pot till the brightness were the same. Then you read the pencil marks off the pot.

This article wasn't from a magazine published in the 1920s or 1930s, but from August 1970. I used a 100 watts tungsten filament light bulb for a dummy load and to check my novice transmitter tuning and output using it back then. An SWR meter cost more than my transmitter and my receiver put together, and a Bird wattmeter was a rich man's toy or used by professionals in two way radio shops.

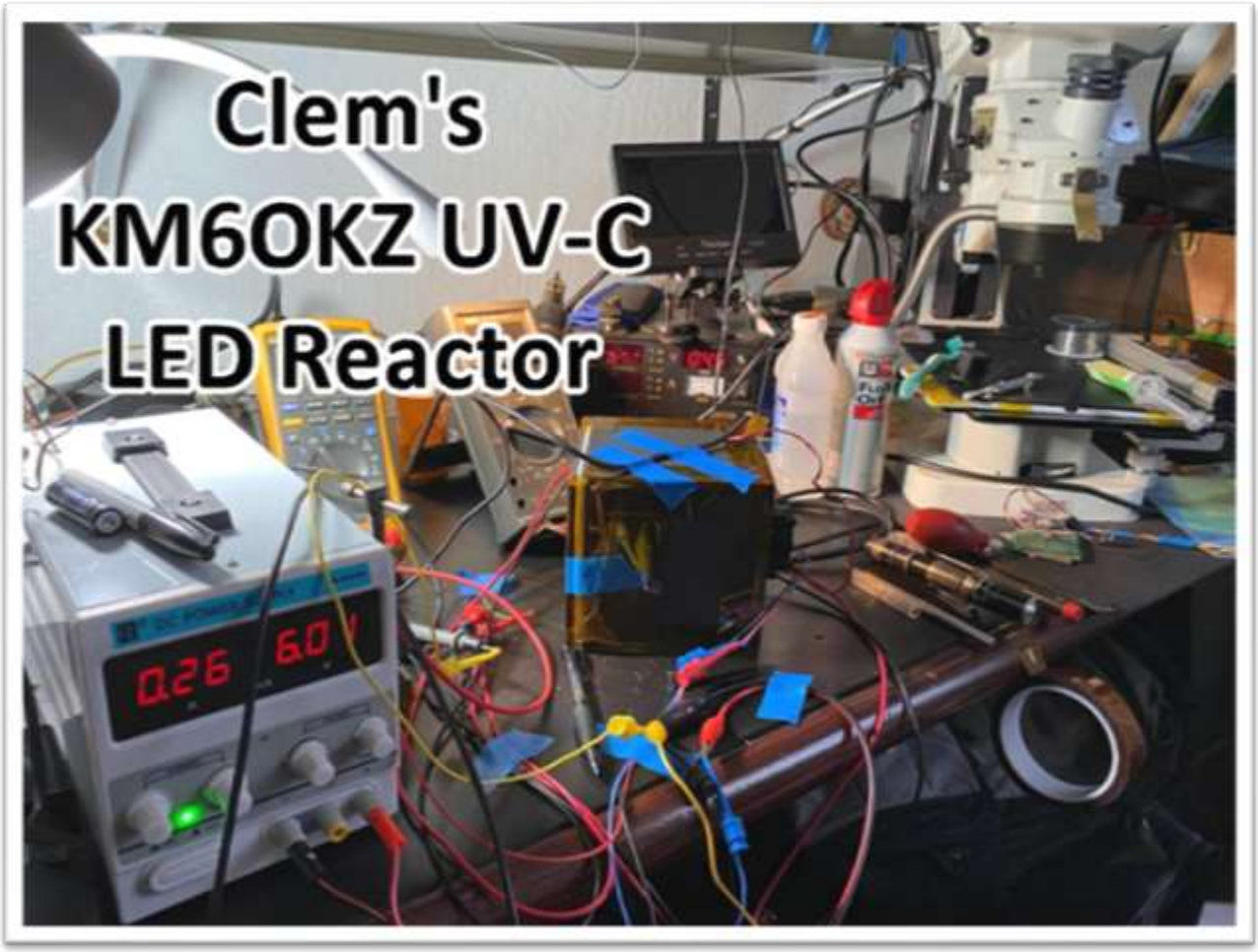
73, Denney N6HV

K6MEP Monday Night Net by Denney N6HV

Our 2021 Contest started on January 11 and will end on December 6th. Make sure to set your calendar alarms to remind you to check-in and join the Zoom get-together that follows.

Our Net is held each Monday night at 20:00 hrs. local time (we won't hold the net on Christmas Eve/Day or New Year's Eve/Day if they fall on a Monday). We welcome all Ham operators so please check-in and join the roundtable discussion. The net is on Two Meters on the WD6EBY Repeater of Oxnard on 145.200 MHz with a negative offset and a PL of 127.3. We also have a Zoom meeting following the net at 20:30; see K6MEP.groups.io for details. Many thanks to PVARC and Paul WD6EBY for hosting our meeting on the repeater.

As of March 29th, we've held 12 nets and had a total of 240 check-ins including 50 visitor check-ins.



Minutes of the March 12th VCARC meeting by Denney N6HV.

The On-The-Air portion of the meeting began at 7:00 and we had 20 check-ins.

Stewart KG6BOV mentioned that he had hail at his place during the recent lightning and thunder storm. I hope everyone had their antennas disconnected during the lightning storm.

Pedro KE6MIL has been busy now that the schools are going to open.

Richard WB6AEW has acquired a Yaesu 891 for his home station. I hope to hear him on the low bands soon.

Jeremy KN6JMD got his Unitone rig on the air. I'm sure it's not a tube radio from the 1920s.

Clem KM6OKZ is trying to get the ICOM 7300 he just acquired on the air.

Under new/old business Robert KM6RSS brought up the need to set up a 2021 Field Day committee. We have a couple of volunteers, but can always use more help. It is looking like we may be able to get together someplace this year. It may be limited but we need to make plans if we can or alternate plans if we can't. Contact the club on the Monday night net if you would like to join or help the committee, or email the club at K6MEP@qsl.net, or respond to my message on K6MEP.gropus.io.

There was a short discussion about places we could set up for Field Day if limited face to face get-togethers are allowed.

After the On-The-Air part of the meeting we held a Zoom get together.

Burt KA6BJA gave an interesting overview of Digital Modes. Good presentation, Burt! There is a lot of interest in the details of specific modes. If you have experience in a digital mode (FT-8, Packet, Winlink) step on up, there are a bunch of members that want to hear what you have to say.

Also if you have facets of ham radio that you enjoy consider giving a talk at a club meeting. And if you want to hear about a talk about a branch of ham radio let me know so I can go look for a speaker.

There was quite a bit of discussion on Field Day. Finding a place to set up will be complicated since we do not know the state and county rules that will be in place during June. It was suggested that we work with Stu AG6AG and other clubs to learn from them and help everyone have the best Field Day possible.

73, Denney N6HV

Denney N6HV

Selected April Contests & Special Events

The following contests and special events caught your editor's eye. This is by no means a complete listing. Please see QST or the ARRL website (www.arrl.org) for any details and QSL information.

04/01/2021 | Quebec Parks On The Air (QcPOTA)

Apr 1-Dec 31, 0000Z-2359Z, all, all. VE2GT and VE2NCG. ALL. Certificate. no QSL, no QSL, no QSL, CANADA. qcpota.ca

04/10/2021 | The Annual Nancy Kott Memorial KN0WCW Event

Apr 10-Apr 11, 0001Z-2359Z, KN0WCW, Leonardo, NJ. FISTS North America. 10.058 7.058 10.118 3.558. Certificate. cody codianni, 413 Martin Court, Leonardo, NJ 07737. The Annual Nancy Kott Memorial KN0WCW Event! Nancy met Fists' founder George, G3ZQS (SK) in a happenstance QSO in 1988, befriended him and shortly became the head of what is now The Americas Chapter of Fists. From then till her passing on 2 March of 2014, she worked tirelessly to promote our club and Morse Code, showing kindness to all and exemplifying our mottos of "courtesy at all times" and "accuracy transcends speed." She is deeply missed by all, but not forgotten. Please help us honor Nancy's work and dedication from 00:01 UTC April 10 2021 to 23:59 UTC April 11 2021. fistsna.org/operating.html

04/10/2021 | Celebration of the 155th Anniversary of Auburn University

Apr 10-Apr 11, 1200Z-2359Z, W4E, Auburn University, AL. Auburn University. 7.060 7.074 and 7.047.5 14.074 and 14.080 7.070. QSL. Stew Schneller, 1869 Hillton Court, Auburn, AL 36830-2693. www.qrz.com/db/k4jop

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Selected April Contests & Special Events (Cont. from page 6)

04/10/2021 | Spring has Sprung
Apr 10, 1700Z-2100Z, W4D, Kodak, TN. Sevier County Emergency Radio Service. 14.280 +/- .020 USB 7.200 +/- .020 LSB 14.070 +/- .020 PSK31 7.070 +/- .020 PSK31 CW only on 7.060 +/- .010. QSL. Thomas P. Baxter W9TPB, 2054 James Rd., Sevierville, TN 37876. For additional information, please go to our website www.eventqsl.webs.com

04/10/2021 | USS Midway Museum Ship Special Event: Doolittle Raid
Apr 10, 1600Z-2300Z, NI6IW, San Diego, CA. USS Midway (CV-41) Museum Ship. 7.250 14.320 14.070 (PSK31) DSTAR via PapaSystem repeaters. QSL. USS Midway CV-41 COMEDTRA NI6IW, 910 N Harbor Dr, San Diego, CA 92101. Please include SASE. www.qrz.com/db/ni6iw

04/14/2021 | Maritime Radio Day 2021
Apr 14-Apr 22, 1200Z-2200Z, various, various, GERMANY. Maritime Radio Day. CW only. Certificate & QSL. Rolf Marschner, Narzissenweg 10, 53359 Rheinbach, GERMANY. This is an operating event. Please see website for rules. mrd.sfk-bremen.com

04/17/2021 | Celebrating the Louisiana Purchase
Apr 17-Apr 24, 0000Z-2359Z, W5L, West Monroe, LA. NorthEast Louisiana Amateur Radio Club. 14.250 21.250 7.250 3.850. QSL. Jim Ragsdale, W5LA, 111 Eagle Lake Drive, West Monroe, LA 71291. https://www.qrz.com/db/W5L

04/17/2021 | Texas State Parks On the Air (TSPOTA)
Apr 17-Apr 19, 1400Z-0200Z, K5LRK, The Colony, TX. Lake Area Amateur Radio Club. CW Phone VHF. QSL. See website, for, Information. Times are daily. K5LRK on as a special event station. Contest: Activate as many Texas parks as possible. www.k5lrk.com or www.tspota.org

04/18/2021 | World Amateur Radio Day
Apr 18-Apr 19, 1300Z-0400Z, W7W, Rochester, NY. W2JLD/Special event coordinator. Echolink *ROC-HAM* CONFERENCE 531091 Allstar 2585, 47620, 53130. QSL. John Derycke, W2JLD, 85 Amherst St #2, Rochester, NY 14607. This will be our 6th annual WORLD AMATEUR RADIO DAY celebration on the VOIP Echolink system We have a 16 hr net with net controllers from all over the world. A special event qsl card will be available Join us again for one of the LARGEST special events on Echolink@ 9AM EST TILL 12 MINDNIGHT EST we will have Allstar, DMR as well. w2jld2@gmail.com

04/24/2021 | 156th Anniversary of Sultana Disaster
Apr 24, 1500Z-2100Z, W5S, West Memphis, AR. AG5QY. 14.240. QSL. Marc Gwin, 1402 Stratford Drive, West Memphis, AR 72301. https://ag5qy9.wixsite.com/ag5qy

04/24/2021 | OC&E Woods Line Last Train 31st Anniversary
Apr 24, 1600Z-2200Z, W7VW, Klamath Falls, OR. Klamath Basin Amateur Radio Society. 14.074. Certificate & QSL. Jim English, 2602 Wiard Street, Klamath Falls, OR 97603. The Oregon, California, and Eastern Railway (OC&E) was a 64-mile (103 km) rail line between Klamath Falls and Bly in the US state of Oregon. After 70 years of bringing logs from nearby forests to local sawmills, the former railroad right of way was converted to the OC&E Woods Line State Trail. The last OC&E log train to Bly ran on Sunday, 29 April 1990. wo7v@arrl.net or https://www.facebook.com/kfalls.radio

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Selected April Contests & Special Events (Cont. from page 7)

04/24/2021 | San Jacinto Day Special Event
Apr 24-Apr 25, 1400Z-2359Z, K5T, Nacogdoches, TX. Nacogdoches Amateur Radio Club. 7.216 14.260 21.350 28.350. QSL. Army Curtis, 167 CR 2093, Nacogdoches, TX 75965. All contacts will be confirmed via LOTW https://w5nac.com

04/24/2021 | W1BSA Birthday of Scouting Event
Apr 24, 1400Z-1930Z, W1BSA, Fall River, MA. USTNE ne1pl.org. 14.259. QSL. Rick Emord, 135 Wareham St., Middleboro, MA 02346. The USTNR group will be activating on the USS Massachusetts this year at least 4 times for the following events. Except for the Museum ships on the air event, we will be on the air by 1000 EST or 1400 utc we will be shut down at 1530 EST or 1930 utc. We have a website to see the current QSL card for the events go to ne1pl.org. Look for the ticker tape for added events. Our first event for the year will be: W1BSA April 24th On the air by 1000 off the air around 1530 This event is for the Birthday of Scouting in America. The birthday is on February 8, 1910 because of the chilly weather in February we celebrate in April. Please visit battleshipcove.org for more information about the park and its equipment. Please visit us at ne1pl.org

04/24/2021 | Woronoko Heights Outdoor Adventure
Apr 24, 1300Z-1900Z, W1M, Russell, MA. Western Mass. Council--BSA. 14.290 14.060 10.115 7.190. QSL. Tom Barker, 329 Faraway Road, Whitefield, NH 03598. SES operating from the Horace Moses Scout Reservation in western Mass. SASE for QSL.

This is an early warning of the Spring VHF/UHF SPRINT Events

1. 144 MHz Monday April 5, 2021 0700 - 1100 PM Local
2. 222 MHz Tuesday April 13, 2021 0700 – 1100 PM Local
3. 432 MHz Wednesday April 21, 2021 0700 – 1100 PM Local
4. Microwave (900MHz & up) Saturday May 1, 2021 0800 AM – 0200 PM Local
5. 50 MHz Saturday May 8, 2021 2300z through Sunday May 9, 2021 0300z

I'll send full SPRINT details in about a week, but meanwhile, you can put notes in your calendars & plan which bands to plan to use.

bt73
Pete, N6ZE in DM04ne
(Cont. on page 9)

Selected April Contests & Special Events (Cont. from page 8)

Maty Weinberg, KB1EIB, events@arrl.org; www.arrl.org/special-event-stations

Special Event Stations

Working special event stations is an enjoyable way to help commemorate history. Many provide a special QSL card or certificate!

Mar. 11 – Mar. 14, 0000Z – 0000Z, W5T, Cleburne, TX. Club KC5NX. **Battleship *Texas* Birthday**. 14.255 14.045 7.240 7.235. QSL. Club KC5NX, 9200 Summit Ct. W., Cleburne, TX 76033-8212. **jay.n.violet@gmail.com, www.qrz.com/db/kc5nx**, *or check here to find us*: **https://www.dxwatch.com/dxsd1/dxsd1.php?f=0&c=w5t&t=dx**

Apr. 1 – Dec. 31, 0000Z – 2359Z, all calls, all areas. VE2GT and VE2NCG. **Quebec Parks on the Air (QCPOTA)**. Certificate. *This is an operating event. See website for details.* **qcpota.ca**

Apr. 10, 1600Z – 2300Z, NI6IW, San Diego, CA. USS *Midway* (CV-41) Museum Ship. **Doolittle Raid**. 7.250 14.320 14.070 (PSK31) DSTAR via PapaSystem repeaters. QSL. USS *Midway* CV-41 COMEDTRA NI6IW, 910 N. Harbor Dr., San Diego, CA 92101. **www.qrz.com/db/ni6iw**

Apr. 10, 1700Z – 2100Z, W4D, Kodak, TN. Sevier County Emergency Radio Service. **Spring has Sprung**. 14.280 7.200; PSK31 14.070 7.070; CW only 7.060. QSL. Thomas P. Baxter, W9TPB, 2054 James Rd., Sevierville, TN 37876. **www.eventqsl.webs.com**

Apr. 10 – Apr. 11, 0001Z – 2359Z, KNØWCW, Leonardo, NJ. FISTS North America. **The Annual Nancy Kott Memorial KNØWCW Event**. 10.058 7.058 10.118 3.558. Certificate. Cody Codianni, 413 Martin Ct., Leonardo, NJ 07737. **fistsna.org/operating.html**

Apr. 10 – Apr. 11, 1200Z – 2359Z, W4E, Auburn University, AL. Auburn University. **155th Anniversary of Auburn University**. 7.060, 7.074; 7.047.5, 14.074; 14.080, 7.070. QSL. Stew Schneller, 1869 Hillton Ct., Auburn, AL 36830-2693. **www.qrz.com/db/k4jop**

Apr. 14 – Apr. 22, 1200Z – 2200Z, various calls, various areas, Germany. Maritime Radio Day Group. **Maritime Radio Day 2021**. CW only. Certificate & QSL. Rolf Marschner, Narzissenweg 10, 53359 Rheinbach, Germany. *This is an operating event. See website for details.* **mrd.sfk-bremen.com**

Apr. 17 – Apr. 19, 1400Z – 0200Z daily, K5LRK, The Colony, TX. Lake Area Amateur Radio Club. **Texas State Parks On the Air (TSPOTA)**. CW Phone VHF. QSL. Ken Mitchell, KD2KW, 931 Amber Ln., Little Elm, TX 75068-2283. The Colony, TX 75056. *K5LRK will be on as a special event station. Operating event to activate as many Texas parks as possible, see website for details.* **www.k5lrk.com** *or* **www.tspota.org**

Apr. 17 – Apr. 24, 0000Z – 2359Z, W5L, West Monroe, LA. NorthEast Louisiana Amateur Radio Club. **Celebrating the Louisiana Purchase**. 14.250 21.250 7.250 3.850. QSL. Jim Ragsdale, W5LA, 111 Eagle Lake Dr., West Monroe, LA 71291. **www.qrz.com/db/W5L**

Apr. 24 – Apr. 25, 1400Z – 2359Z, K5T, Nacogdoches, TX. Nacogdoches Amateur Radio Club. **San Jacinto Day Special Event**. 7.216 14.260 21.350 28.350. QSL. Army Curtis, 167 CR 2093, Nacogdoches, TX 75965. *All contacts will be confirmed via LOTW.* **https://w5nac.com**

Apr. 24, 1500Z – 2100Z, W5S, West Memphis, AR. AG5QY. **156th Anniversary of Sultana Disaster**. 14.240. QSL. Marc Gwin, 1402 Stratford Dr., West Memphis, AR 72301. **https://ag5qy9.wixsite.com/ag5qy**

Apr. 24, 1600Z – 2200Z, W7VW, Klamath Falls, OR. Klamath Basin Amateur Radio Society. **OC&E Woods Line Last Train 31st Anniversary**. 14.074. Certificate & QSL. Jim English, 2602 Wiard St., Klamath Falls, OR 97603. **wo7v@arrl.net** *or* **www.facebook.com/kfalls.radio**

Certificates and QSL cards: To obtain a certificate from any of the special event stations offering them, send your QSO information along with a 9 × 12 inch self-addressed, stamped envelope (three units of postage) to the address listed in the announcement. To receive a special event QSL card (when offered), be sure to include a self-addressed, stamped business envelope along with your QSL card and QSO information. *Note: Some clubs may ask for a nominal fee to cover the cost of the certificate or QSL. Request will be made on air during the event or on the club's website.

Special Events Announcements: For items to be listed in this column, use the ARRL Special Events Listing Form at **www.arrl.org/special-events-application**. A plain-text version of the form is available at that site. You may also request a copy by mail or email. Off-line completed forms can be mailed, faxed (Attn: Special Events), or emailed.

Submissions must be received by ARRL HQ no later than the 1st of the second month preceding the publication date; a special event listing for **July** *QST* would have to be received by **May 1**. In addition to being listed in *QST*, your event will be listed on the ARRL Web Special Events page. Note: All received events are acknowledged. If you do not receive an acknowledgement within a few days, please contact us. ARRL reserves the right to exclude events of a commercial or political nature.

You can view all received Special Events at **www.arrl.org/special-event-stations**.

Bruce Draper, AA5B, aa5b.corral@gmail.com

Contest Corral — April 2021

Check for updates and a downloadable PDF version online at **www.arrl.org/contest-calendar**.
Refer to the contest websites for full rules, scoring information, operating periods or time limits, and log submission information.

Start - Finish Date-Time		Finish Date-Time		Bands	Contest Name	Mode	Exchange	Sponsor's Website
1	1700	1	2000	3.5	SARL 80-Meter QSO Party	Ph	RS, serial, grid locator	www.sarl.org.za
1	1800	1	2200	28	NRAU 10-Meter Activity Contest	CW Ph Dig	RS(T), 6-char grid square	nrrlcontest.no
1	1900	1	2100	1.8-50	SKCC Sprint Europe	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
2	2000	2	2100	1.8-14	K1USN Slow Speed Test	CW	20 WPM max. Name, SPC	k1usn.com/sst.html
3	1000	4	0400	14	PODXS 070 Club PSK 31 Flavors Test	Dig	SPC, mbr or name	www.podxs070.com
3	1400	4	0200	1.8-144	Louisiana QSO Party	CW Dig Ph	RS(T), LA Parish or SPC	laqp.louisianacontestclub.org
3	1400	4	0200	1.8-144	Mississippi QSO Party	CW Ph Dig	RS(T), MS county or SPC	www.arrlmiss.org
3	1400	4	2200	3.5-28	Florida State Parks on the Air	CW Ph Dig	Park ID or SPC	flspota.org/rules
3	1500	4	1500	1.8-28	SP DX Contest	CW Ph	RS(T), SPC province or serial	spdxcontest.pzk.org.pl
3	1600	4	1600	3.5-28	EA RTTY Contest	Dig	RSQ, EA province or serial	concursos.ure.es/en
4	0000	4	0400	3.5-14	North American SSB Sprint Contest	Ph	Other's call, your call, serial, name, SPC	ssbsprint.com/rules
4	1500	4	1730	3.5,7	DARC Easter Contest	CW Ph	RS(T), DOK or serial	www.darc.de
5	1900	5	2300	144	144 MHz Spring Sprint	CW Ph Dig	4-char grid square	sites.google.com/site/springvhfupsprints
6	0100	6	0159	1.8-50	Worldwide Sideband Activity Test	Ph	RS, age group (OM, YL, or Youth)	wwsac.com/rules.html
6	0100	6	0300	3.5-28	ARS Spartan Sprint	CW	RST, SPC, power	arsqrp.blogspot.com
6	1700	6	1900	3.5-14	RTTYops Weeksprint	Dig	Other's call, your call, serial, name	rttyops.wordpress.com
7	1300	7	1400	1.8-28	CWops Mini-CWT Test	CW	Name, mbr or SPC	cwops.org/cwops-tests
7	1700	7	2000	144	VHF-UHF FT8 Activity Contest	Dig	4-char grid square	ft8activity.eu/index.php/en
7	1900	7	2000	1.8-28	CWops Mini-CWT Test	CW	Name, mbr or SPC	cwops.org/cwops-tests
7	1900	7	2030	3.5	RSGB FT4 Contest Series	Dig	4-char grid square	www.rsgbcc.org/hf
7	2000	7	2100	3.5	UKEICC 80-Meter Contest	Ph	6-char grid square	ukeicc.com/80m-rules.php
8	0300	8	0400	1.8-28	CWops Mini-CWT Test	CW	Name, mbr or SPC	cwops.org/cwops-tests
10	0000	10	0600	1.8-28	QRP ARCI Spring QSO Party	CW	RS, SPC, mbr or power	qrparci.org/contest
10	0700	11	1300	1.8-28	JIDX CW Contest	CW	RST, JA prefecture or CQ zone	jidx.org/jidxrule-e.html
10	1200	11	1200	1.8-28	OK/OM DX Contest, SSB	Ph	RS, county code or serial	okomdx.crk.cz
10	1200	11	1200	3.5-28	FTn DX Contest	Dig	RST, state or province or serial	europeanft8club.wordpress.com
10	1200	11	1800	3.5-28	IG-RY World Wide RTTY Contest	Dig	RST, 4-digit year first licensed	igry.webs.com/ig-ry-ww-contest
10	1200	11	2359	1.8-50	SKCC Weekend Sprintathon	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
10	1300	11	2200	1.8-UHF	Nebraska QSO Party	CW Ph	County or SPC (or grid for FT8)	www.nebraskaqsoparty.org
10	1400	11	0200	1.8-144	New Mexico QSO Party	CW Ph Dig	Name, NM county or SPC	newmexicoqsoparty.org
10	1600	11	0400	1.8-28	Georgia QSO Party	CW Ph	RST, GA county or SPC	gaqsoparty.com
10	1800	11	1800	1.8-144	North Dakota QSO Party	CW Ph	RS(T), ND county or SPC	ndarrlsec.com
10	2100	11	2100	1.8-28	Yuri Gagarin International DX Contest	CW	RST, ITU zone	gc.qst.ru/en/section/32
11	1000	11	2100	3.5-14	WAB 3.5/7/14 MHz Data Modes	Dig	RS, serial, WAB square or country	wab.intermip.net
11	1200	12	1100	3.5-28	DIG QSO Party, CW	CW	RST, mbr or "none"	diplom-interessen-gruppe.info
11	1500	11	1600	3.5	Hungarian Straight Key Contest	CW	RST, serial, power	hskc.ha8kux.com
11	1900	11	2030	3.5	RSGB RoLo SSB	Ph	RS, 6-char grid of previous QSO	www.rsgbcc.org/hf
12	0000	12	0200	1.8-28	4 States QRP Second Sunday Sprint	CW Ph	RS(T), SPC, mbr or power	www.4sqrp.com
12	1900	12	2030	3.5	RSGB 80-Meter Club Championship, CW	CW	RST, serial	www.rsgbcc.org/hf
14	0030	14	0230	3.5-14	NAQCC CW Sprint	CW	RST, SPC, mbr or power	naqcc.info
14	1700	14	2000	432	VHF-UHF FT8 Activity Contest	Dig	4-char grid square	ft8activity.eu/index.php/en
16	2100	17	2100	1.8-28	Holyland DX Contest	CW Ph Dig	RS(T), 4X area or serial	iarc.org/iarc/#HolylandContest
17	0500	17	0859	3.5,7	ES Open HF Championship	CW Ph	RS(T), serial	www.erau.ee/en
17	0600	18	0559	3.5-28	Worked All Provinces of China	CW Ph	RS(T), province or serial	www.mulandxc.com
17	0700	18	0659	3.5-28	YU DX Contest	CW Ph	RS(T), YU county or serial	yudx.yu1srs.org.rs
17	0900	18	2359	3.5-28	CQMM DX Contest	CW	RST, continent	www.cqmmdx.com
17	1400	18	2000	All	Texas State Parks on the Air	CW Ph Dig	RS(T), TX park or SPC	www.tspota.org
17	1600	18	0400	3.5-28	Michigan QSO Party	CW Ph	Serial, MI county or SPC	miqp.org/Rules.htm
17	1700	18	1200	3.5-28	EA-QRP CW Contest	CW	RST, category code	www.eaqrp.com
17	1800	17	2159	1.8-50	Feld Hell Sprint	Dig	RST, mbr, SPC, grid	sites.google.com/site/feldhellclub
17	1800	18	1800	1.8-144	Ontario QSO Party	CW Ph	RS(T), ON county or SPC	www.va3cco.com
18	1800	18	2359	3.5-28	ARRL Rookie Roundup, SSB	Ph	Name, 2-digit year licensed, SPC	www.arrl.org/rookie-roundup
18	2300	19	0100	1.8-28	Run for the Bacon QRP Contest	CW	RST, SPC, mbr or power	qrpcontest.com/pigrun
21	1900	21	2030	3.5	RSGB 80-Meter Club Championship, SSB	Ph	RS, serial	www.rsgbcc.org/hf
24	0001	25	2359	28	10-10 International Spring Contest, Digital	Dig	Name, mbr or "0," SPC	www.ten-ten.org
24	0800	24	1800	3.5-21	QRP to the Field	CW Ph	RST, SPC, name or SOTA ID	www.zianet.com/qrp
24	1300	25	1259	1.8-28	Helvetia Contest	CW Ph Dig	RS(T), HB canton or serial	www.uska.ch/contest
24	1600	25	2159	7-28	Florida QSO Party	CW Ph	RS(T), FL county or SPC	floridaqsoparty.org/rules
25	1200	25	1800	3.5,7	International Vintage Contest HF	CW Ph	RS(T), 6-char grid square	contestvintage.beepworld.it
25	1700	25	2059	3.5-28	BARTG Sprint 75	Dig	Serial	bartg.org.uk/wp
28	0000	28	0200	1.8-50	SKCC Sprint	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
28	2000	28	2100	3.5	UKEICC 80-Meter Contest	CW	6-char grid square	ukeicc.com/80m-rules.php
29	1900	29	2030	3.5	RSGB 80-Meter Club Championship, Data	Dig	RST, serial	www.rsgbcc.org/hf

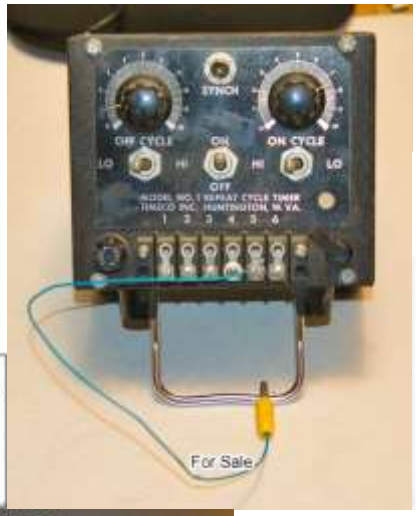
There are a number of weekly contests not included in the table above. For more info, visit: **www.qrpfoxhunt.org**, **www.ncccsprint.com**, and **www.cwops.org**. All dates refer to UTC and may be different from calendar dates in North America. Contests are not conducted on the 60-, 30-, 17-, or 12-meter bands. Mbr = Membership number. Serial = Sequential number of the contact. SPC = State, Province, DXCC Entity. XE = Mexican state. Listings in blue indicate contests sponsored by ARRL or *NCJ*. The latest time to make a valid contest QSO is the minute listed in the "Finish Time" column. *Data for Contest Corral is maintained on the WA7BNM Contest Calendar at* **www.contestcalendar.com** *and is extracted for publication in* QST *2 months prior to the month of the contest. ARRL gratefully acknowledges the support of Bruce Horn, WA7BNM, in providing this service.*

Want and For Sale Ads (Also see page 62 for more items)

Jeff, KH6O@ARRL.net: Would like to purchase a heavy duty antenna spring and ball mount (to be used for an HF mobile antenna). Jeff will pick it up from KM6RSS.

Denney N6HV: One roll, 250 feet 14/2 clear speaker wire $30.00, [new, still in wrapper, old stock]. Various rolls of wire, big rolls; 8 gauge, shielded single pair and other gauges, good prices. Three-quarter-inch wide, flat, heavy, copper-braid, $1.00/ft.; great for grounding.

Items Given to the Club for Donations: Multimeter, Micronta brand $5.00. HP 1706A oscilloscope, as is, $50. Various lengths of Ethernet cables, $0.25 each. Radio Shack Power Supply, 13.8 volt at 3 amps, $3.00. Swing arm desk lamp includes light bulb and other various items; $5.00 to $25.00. Vacuum tubes donated by Scott Vilander with delivery by Dave AI6VX. Kenwood TL-922A Linear Amplifier AS IS: All items as shown below: Contact Denney for price.



Equipment Tech and Operator Manuals

I have a large collection of radio tech manuals and operator manuals from Alinco / Icom / Kenwood / Yeasu and others. All are PDF format.

Stewart
KG6BOV@arrl.net

(Cont. on page 12)

Want and For Sale Ads (Cont. from page 11)

Denney N6HV

(Cont. on page 13)

Want and For Sale Ads (Cont. from page 13)

(Cont. on page 14)

Want and For Sale Ads (Cont. from page 13)

For sale by Orv – W6BI – orv.beach@gmail.com

TenTec Omni VI Plus HF Transceiver 160 through 10 with 1.8 kHz, 500 and 250 Hz filters – works fine, receiver recently aligned. With power cable - $450

Heathkit HM-102 SWR Bridge - $25

(Cont. on page 15)

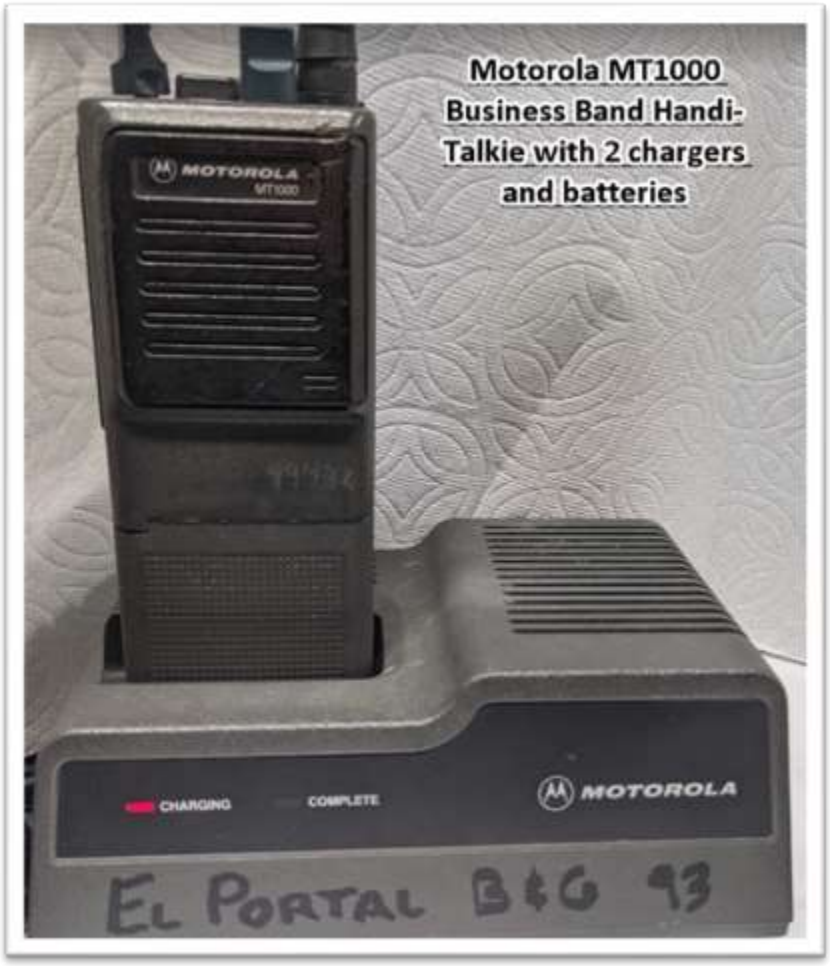
Want and For Sale Ads (Cont. from page 14)

For sale by Orv Beach

For Sale By N6WIX Wayne Woodhams (w.wixman@yahoo.com)

(Cont. on page 16)

Want and For Sale Ads (Cont. from page 15)



(Cont. on page 17)

Want and For Sale Ads (Cont. from page 16)

Five Hammarlund SP-600 JX Receivers for sale by Robert KM6RSS@gmail.com

Continued on page 62

Upcoming FCC Exam Session Preparation Sites (Virtual; it seems that due to COVID-19 rules, physical classes are unavailable)

Online NA 00000

04/03/2021
Start/End Dates: 04/03/2021 - 04/24/2021
Times: 8:00 am-12:00 noon
# of Sessions: 4
Class level: Technician
Morse code offered: No
Pre register required: Yes
Fee: 0
Pre Study required: Yes
Class Type: Online or Hybrid
Exam offered: No
Sponsoring Club/Organization: Conejo Valley ARC
Instructor: N6PK
Contact: Keith Elliott W6KME
Phone: (805) 208-5655
Email: W6KME@CVARC.org
Location: Online
Online
N/A, CA 00000
Additional Information: Due to Covid-19, classes are being conducted via Zoom There is an additional Orientation one week before classes start, Saturday March 27 at 10:00 to 11:00 PDT. A reading assignment may be given at that time. Contact Keith Elliott at W6KME@CVARC.org for more information or registration. Information on testing will be provided.

Concord CA 94521

04/13/2021
Start/End Dates: 04/13/2021 - 06/08/2021
Times: 6:30 - 9:00 pm PST
# of Sessions: 9
Class level: General
Morse code offered: No
Pre register required: Yes
Fee: 10
Pre Study required: Yes
Class Type: Traditional
Exam offered: No **Sponsoring Club/Organization:** MDARC
Instructor: KK6QPE
Contact: John Primus AF6RJ
Phone: (925) 825-7670
Email: primus@astound.net
Location: Virtual
(Cont. on page 19)

Upcoming FCC Exam Session Preparation Sites (Cont. from page 18)

Cerritos CA 90703

1307 Saddlehill Lane
Concord, CA 94521

Additional Information: The General License Course will begin 4/13/21 Virtually on ZOOM in compliance with COVID-19 rules/regulations. License testing will be offered one week following the course completion. For further details, please visit MDARC.org.

04/14/2021
Start/End Dates: 04/14/2021 - 05/05/2021
Times: 7PM to 9PM Pacific Time
# of Sessions: 4
Class level: Technician
Morse code offered: No
Pre register required: Yes
Fee: $60
Pre Study required: Yes
Class Type: Online or Hybrid
Exam offered: No
Sponsoring Club/Organization: American Red Cross - Los Angeles
Instructor: KK6SMD
Contact: Mark Chung KK6SMD
Phone: (562) 708-3893
Email: mchung@prodigy.net
Location: At your own home
Your own street
Your own street
Cerritos, CA 90703
Additional Information: The Technician License Class is a review of radio science knowledge needed to pass the FCC License test. This is the first level license but will enable you to perform countless communications opportunities for local and long distance radio contacts. Pre-study using the Gordon West Technician Study Guide 2018-2022 is mandatory (which can be bought on Amazon). The four lecture series are given via an interactive video-conference method. Once you are registered, a link will be emailed to you for entry into the conference. Classes are given over the Wednesday evenings from April 14-May 5th. Students may participate from anywhere in the USA. You must attend all the classes. Exam information will be given during the course. The course fee may be paid via PayPal or if needed mailed to 12393 Andy Street, Cerritos, CA 90703.

ON EXAM DAY BRING THE FOLLOWING ITEMS:

1. A legal photo ID (driver's license, passport).
2. When no photo ID is available, two forms of identification must be presented: a. non-photo ID/driver's license (some states still have them) b. birth certificate (must have the appropriate seal) c. social security card d. library card e. utility bill, bank statement or other business correspondence that specifically names the person; or a postmarked envelope addressed to the person at his or her current mailing address as it appears on the Form 605.
3. Students may bring any of the above items and/or a school ID, minor's work permit, report card, or a legal guardian may present a photo ID.
4. Bring your Social Security Number (SSN) or your FCC issued Federal Registration Number (FRN). VEC's are required by FCC to submit either your SSN or your FRN number with your license application form. If you prefer not to give your SSN, then you may use your FCC issued FRN, if you have one. For instructions on how to register your SSN with the FCC and receive a FRN, visit the FCC's FAQ page and the FCC's registration instructions page.
5. If applicable, bring the original and a photocopy of your current Amateur Radio license and any Certificates of Successful Completion of Examination (CSCE) you may hold from previous exam sessions. The photocopy(s) will not be returned.
6. Two number two pencils with erasers and a pen.
7. 7. A calculator with the memory erased and formulas cleared is allowed. You may not bring any written notes or calculations into the exam session. Slide rules and logarithmic tables are acceptable, as long as they're free of notes and formulas. Cell phone must be silenced or turned off during the exam session. The phones' calculator function may not be used.
8. Bring a check, a money order or cash to cover the exam session fee(s). Check the ARRL VEC's current exam fee. The fee is normally $15.00 for ARRL-sponsored tests. Beginning sometime in the future, the FCC will announce the starting date of the $35 fee. That is paid directly to the FCC and not to the VEC.

Upcoming FCC Exam Test (Due to the Coronavirus outbreak, please **verify** with your **VE** team that the exam session is being held.**)**

GLAARG is offering remote testing; see https://glaarg.org/remote-sessions/ for details)

San Diego CA 92128

04/09/2021
Sponsor: San Diego VE Group
Date: Apr 09 2021
Time: 6:00 PM (No Walk-ins / Register or Call ahead)
Contact: Heather J. Parker
Email: parker_prince@yahoo.com
VEC: Greater LA VEC
Location: Parking Lot/Remote
Online Remote
Registration required
Poway Warehouse In person
San Diego CA 92128

Ridgecrest CA 93555

04/10/2021
Sponsor: Sierra ARC
Date: Apr 10 2021
Time: 9:00 AM (No Walk-ins / Register or Call ahead)
Contact: Michael D. Herr
Email: wa6ara@gmail.com
VEC: ARRL/VEC
Location: Due to COVID TBD
Pre-Register Required
Ridgecrest CA 93555

Clayton CA 94517-9999

04/10/2021
Sponsor: Unsponsored
Date: Apr 10 2021
Time: 9:00 AM (No Walk-ins / Register or Call ahead)
Contact: Larry S. Loomer
Email: laryloomer@yahoo.com
VEC: ARRL/VEC
Location: Clayton
General Delivery
Clayton CA 94517-9999 **(Cont. on page 22)**

Upcoming FCC Exam Test (cont. from page 21)

Mill Valley CA 94941-1551

04/10/2021
Sponsor: Marin ARS
Date: Apr 10 2021
Time: 1:00 PM (No Walk-ins / Register or Call ahead)
Contact: Kenneth N. Brownfield
(415) 389-6630
Email: exams@w6sg.net
VEC: ARRL/VEC
Location: MARS Clubhouse
27 Shell Rd
Mill Valley CA 94941-1551

Highland CA 92346-2101

04/17/2021
Sponsor: Citrus Belt ARC
Date: Apr 17 2021
Time: 8:00 AM (Walk-ins allowed)
Contact: Moises De Leon
(909) 754-4340
Email: kk7kc@w6jbt.org
VEC: ARRL/VEC
Location: Patton State Hospital
3102 E Highland Ave
Staff Development Ctr Bldg
Follow VE Testing Signs
Highland CA 92346-2101

Banning CA 92220-3046

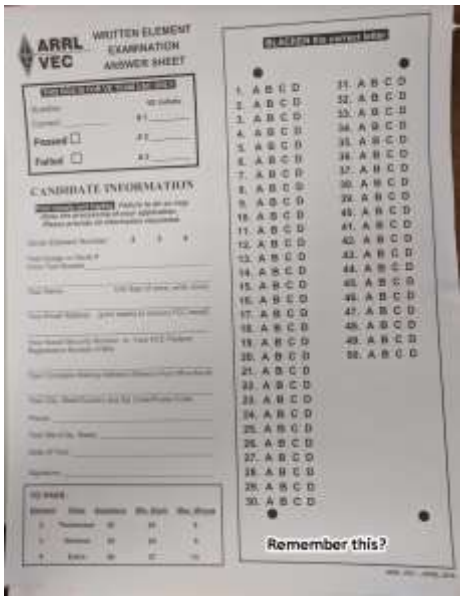
04/24/2021
Sponsor: SPARC PRE-REGISTER CALL PETER
Date: Apr 24 2021
Time: 9:00 AM (No Walk-ins / Register or Call ahead)
Contact: Peter J. Hersey
(951) 845-1363
Email: pandvhersey@verizon.net
VEC: ARRL/VEC
Location: San Gorgonio Memorial Hospital
600 N Highland Springs Ave
Modular C Bldg Rear Hospital
Off Wilson St
Banning CA 92220-3046 **(Cont. on page 23)**

Upcoming FCC Exam Test (cont. from page 22)

Lakeside CA 92040-4212

EXAM SESSION

04/24/2021
Sponsor: Lakeside ARC
Date: Apr 24 2021
Time: 9:00 AM (Walk-ins allowed)
Contact: Michael Paul. Mastroleo
(401) 282-1665
Email: mastroleo20@outlook.com
VEC: Greater LA VEC
Location: Morning Star Luthern Church
12821 H Hanna Rd
MASK REQUIRED!!!
Lakeside CA 92040-4212



Trivia for April 2021

Did you know???

1. Barbie's boyfriend Ken hit 60 years old this month. Barbie still looking hot at 62.
2. The auto battery is about 120 years old.
3. The average American eats 23 lbs. of ice cream a year.

73s, Dana KG6WXE

Calendar April 2021

3: CVARC Radio School
5: K6MEP Monday Night Net and Zoom Meeting
6: ACS/ARES Tuesday Night Net and A6&7 Simplex
8: Winlink Thursday ARC
9: K6MEP Monthly Club Net and Zoom Meeting starting at 19:00
12: K6MEP Monday Night Net and Zoom Meeting
13: ACS/ARES Tuesday Night Net
17: CVARC Radio School
18: World Amateur Radio Day
19: K6MEP Monday Night Net and Zoom Meeting
20: ACS/ARES Tuesday Night Net
24: CVARC Radio School
26: K6MEP Monday Night Net and Zoom Meeting
27: ACS/ARES Tuesday Night Net

(Repeated from the CVARC website). The wildly successful "Auxiliary Bored Meetings" will continue on a new schedule beginning Monday, June 29, 2020. The informal nets have been running four times daily on the Bozo repeater. Over 7,500 calls from 275 unique hams have been logged on the nets. Under the new schedule, the net will be called to order at 9 A.M. Monday through Saturday. The Saturday morning net will run 9 A.M. to noon with a swap and the repeater will linked with Paul Strauss' (WD6EBY) repeater network for full Ventura County coverage. Starting July 11, 2020, there will be a second Saturday net at 9 P.M.

The Bozo Repeater operates with the following settings:

Frequency: 147.885 MHz
Offset: –
PL: 127.3

Stu AG6AG

http://www.cvarc.org/event/auxiliary-bored-meetings-on-bozo-2/all/

It was announced during the Tuesday 3/23/21 Ventura County ACS/ARES Net that the Bored Net has just had its one year anniversary! Congratulations to all who have made it possible and who have checked-in and listened.

K6MEP Monday Night Net Script

QST- QST- QST. This is _____(Name)_____(Call Sign), with the Ventura County Amateur Radio Club Net. If there is any station with EMERGENCY or PRIORITY Traffic that needs the immediate use of this frequency, please come now.

Hearing none, the following is a QST. This is _____(Name) _____ (Call Sign), tonight's net control station for the Ventura County Amateur Radio Club Net. If, at any time, during tonight's net, anyone needs this frequency for emergency or priority traffic, please call net control, and we will respond appropriately.

This is a directed net, open to all amateur radio operators and is sponsored by K6MEP, the call sign for VCARC. This net begins each Monday evening at 20:00 local time on the WD6EBY linked repeater system.

The primary frequency of this net is 145.200 MHz with a minus offset and a PL of 127.3 Hz. If the repeater should fail for any reason, we can use South Mtn. repeater on 146.385 MHz with a positive offset and a PL of 127.3 Hz as backup.
All amateurs are welcome to check in after the following announcements.
A roundtable will follow the check-ins. A rag chew session may follow the formal net.

K6MEP, the Ventura County Amateur Radio Club, meets at 19:30 hours on the second Friday of each month at The Dudley House, 197 N Ashwood Ave, Ventura, CA. However, due to government health restrictions, we meet "virtually" on 145.200 MHz with a minus offset and a PL of 127.3 Hz followed by a Zoom meeting afterwards. The next virtual meeting date is Friday _____ (insert date). We urge any non-members interested in the VCARC to contact us at K6MEP@qsl.net. Non-members interested in amateur radio are welcome to attend our meetings.
When you check-in, please give your call sign, name and if you are a VCARC member. If you are not a member of the club, please include your QTH or location.

(Check-ins completed): Hearing no other check-ins, we will now begin with our Roundtable
****

Any last comments? ******** Any late, missed, or visitor check-ins?
Please check-in now.

Hearing no new check-ins does anyone have anything else they would like to add to tonight's net? Hearing none;
(Closing): This concludes the VCARC weekly net at _____hours. Thank you for your interest and participation. Also thanks to Paul Strauss, WD6EBY, for the use of the repeater for our K6MEP net. 73, this is _____ call sign), tonight's VCARC net control, signing off.

Steve Ewald, WV1X, sewald@arrl.org; www.arrl.org/hamfests-and-conventions-calendar

Convention and Hamfest Calendar

A = AUCTION
D = DEALERS / VENDORS
F = FLEA MARKET
H = HANDICAP ACCESS
Q = FIELD CHECKING OF QSL CARDS
R = REFRESHMENTS
S = SEMINARS / PRESENTATIONS
T = TAILGATING
V = VE SESSIONS

Abbreviations
Spr = Sponsor
Tl = Talk-in frequency
Adm = Admission

VIRTUAL OZARKCON
April 10, Online
8 AM – 4 PM Central. *Spr:* Four State QRP Group.
www.ozarkcon.com

VIRTUAL COMM ACADEMY 2021
April 10 – 11, Online
S
9 AM – 5 PM Pacific. *Spr:* Western Washington Medical Services Communications Team. *Adm:* none.
www.commacademy.org

VIRTUAL MICROHAMS DIGITAL CONFERENCE
April 24, Online
8 AM – 5 PM Pacific. *Spr:* MicroHams ARC.
www.microhams.com/mhdc/mhdc2021

Alabama (Fort Payne) — Mar. 27 D H R T
7 AM – Noon. *Spr:* DeKalb County ARC. DeKalb County VFW, 151 18th St. NE. *Tl:* 147.270 + (100 Hz). *Adm:* $5.
www.w4gbr.org

Georgia (Savannah) — Apr. 24 F R T
8 AM – 1 PM. *Spr:* Coastal ARS. Savannah Hilton Head Regional Airport Recreation Building, Crossroads Pkwy. *Tl:* 442.70, no tone. *Adm:* Free. **www.coastalamateurradiosociety.net/wpW4LHSblog/?page_id=1001**

Illinois (Sandwich) — May 2 D F H R T V
7 AM – 1 PM. *Spr:* Kishwaukee ARC. Sandwich Fairgrounds, 1401 Suydam Rd. *Tl:* 146.730 – (100 Hz), 146.52 simplex. *Adm:* Advance $8, door $10. **www.karc-club.org**

New Jersey (Fair Lawn) — Apr. 24 F H R T
8 AM. *Spr:* Fairlawn ARC. Fair Lawn Recycling Center, 19-25 Saddle River Rd. *Tl:* 145.470 – 600 (167.9 Hz). *Adm:* $5.
www.fairlawnarc.org

Ohio (Athens) — Apr. 25 D F H R T V
8 AM – 1 PM. *Spr:* Athens County ARA. Athens Community Center, 701 East State St. *Tl:* 145.15 – no tone. *Adm:* Advance $8, door $10. **www.ac-ara.org**

Pennsylvania (McKeesport) — Apr. 18 D F H Q R V
8 AM – 2 PM. *Spr:* Two Rivers ARC. The McKeesport Palisades, 100 Fifth Ave. *Tl:* 146.73 – (100.0 Hz). *Adm:* $5.
www.trarc.net

Tennessee (Tullahoma), Outdoor Tailgate — Mar. 13 D F H Q R S T V
8 AM – 2 PM. *Spr:* Middle Tennessee ARS. Waggoner Memorial Park, 1300 E. Carroll St. *Tl:* 146.700 – (114.8 Hz). *Adm:* $5. **www.mtars-ham.org**

Tennessee (Sevierville) — Mar. 27 D F H R S T V
8 AM – 4 PM. *Spr:* Sevier County ARS. Sevier County Fairgrounds & Exhibit Hall, 754 Old Knoxville Hwy. *Tl:* 146.94 – no tone. *Adm:* $5. **www.seviercountyars.com**

Tennessee (Memphis) — Apr. 10 D F H Q R S T V
9 AM – 3 PM. *Spr:* Mid-South ARA, Bartlett Station Municipal Center Auditorium 5868 Stage Rd. *Tl:* 147.03 + (107.2 Hz). *Adm:* Free. **www.maraonline.org/freefest**

Tennessee (Greeneville) — Apr. 17 F T
7:30 AM – 2 PM. *Spr:* Andrew Johnson ARC. Greene County Fairgrounds, 123 Fairgrounds Cir. *Tl:* 145.39 – (88.5 Hz), 443.20 – (100 Hz). *Adm:* $5. **www.greenevillehamfest.com**

ARRL VIRGINIA VIRTUAL SECTION CONVENTION
April 24, Vienna, VA
D F H Q R S T V
9 AM – 2 PM. *Spr:* Vienna Wireless Society, online event. *Adm:* Free. **www.viennawireless.net/wp/events/winterfest**

Wisconsin (Superior) — May 1 D F H Q R V
9 AM – 1 PM. *Spr:* Arrowhead Radio Amateurs Club. Head of the Lakes Fairgrounds, 4700 S. Tower Ave. *Tl:* 146.94 – (103.5 Hz). *Adm:* $7. **www.thearac.org**

To All Event Sponsors

Before making a final decision on a date for your event, you are encouraged to check the Hamfest and Convention Database (**www.arrl.org/hamfests-and-conventions-calendar**) for events that may already be scheduled in your area on that date. You are also encouraged to register your event with HQ as far in advance as your planning permits. See **www.arrl.org/hamfest-convention-application** for an online registration form. Dates may be recorded up to 2 years in advance.

Events that are sanctioned by ARRL receive special benefits, including an announcement in these listings and online. Sanctioned conventions are also listed in *The ARRL Letter*. In addition, events receive donated ARRL prize certificates and handouts. Once the form has been submitted, your ARRL Director will decide whether to approve the date and provide ARRL sanction.

The deadline for receipt of items for this column is the **1st of the second month preceding publication date**. For example, your information must arrive at HQ by **May 1** to be listed in the **July** issue. Information in this column is accurate as of our deadline; contact the sponsor or check the sponsor's website for possible late changes, driving directions, and other event details. Please note that postal regulations prohibit mention in *QST* of games of chance, such as raffles or bingo.

Promoting your event is guaranteed to increase attendance. As an approved event sponsor, you are entitled to special discounted rates on *QST* display advertising and ARRL web banner advertising. Call ARRL's toll-free number at 1-800-243-7768, or email **ads@arrl.org**.

Emergency and Volunteer Training

Some excellent emergency and volunteer training is available through the American Red Cross of Ventura County, FEMA and the American Radio Relay League.

Red Cross Courses

The following is a list of locally available Red Cross courses and a current schedule of classes over the next two months. Enroll by calling the Red Cross Chapter House at 805-987-1514 Ext 320 leaving your name, course code and telephone number. If you are interested in a class not currently scheduled call to be placed on a waiting list for the next scheduled date.

Note: The classes **Fulfilling Our Mission** and **Introduction to Disaster Services** are required for all Red Cross classes if you are not currently registered as a Red Cross Volunteer.

For training class registration, call: 805-987-1514 Ext 320.

Course schedule and descriptions:

http://www.arcventura.org/DSCourseDescriptions.html

http://www.arcventura.org/contact_us.html

COLLABORATING TO ENSURE EFFECTIVE SERVICE DELIVERY(ARC3089-4)
COMMUNITY SERVICES OVERVIEW (ARC 3068-1)
DISASTER ASSESSMENT (ARC 3067-1)
DISASTER HEALTH SERVICES: OVERVIEW (3076-1F)
DISASTER HEALTH SERVICES SIMULATION (ARC 3076-2F)
DISASTER MENTAL HEALTH SERVICES (ARC 3077-1F)
DISASTER MENTAL HEALTH: AN OVERVIEW (ARC 3077-2)
DISASTER WELFARE INQ.:CONNECTING YOUR COMMUNITY(ARC 3085-1)
DISASTER WELFARE INQUIRY SIMULATION (ARC 3085-2)
EMERGENCY OPS CENTER/INCIDENT COMMAND LIAISON (ARC 3089-5)
ERVs: READY, SET, ROLL (ARC 3068-4)
FAMILY SERVICES: PROVIDING EMERGENCY ASSISTANCE (ARC 3072-1)
FINANCIAL STATISTICAL INFORMATION MANAGEMENT (ARC 3078-2)
HUMAN RESOURCES IN DISASTER (ARC 3087-3F)
LOGISTICS: AN OVERVIEW (ARC 3087-1)
LOGISTICS SIMULATION (ARC 3071-2)
MANAGING TOTAL DIVERSITY
MASS CASUALTY DISASTER (ARC 3079 1F)
PUBLIC AFFAIRS IN DISASTER 1 (ARC 3080 1F)
SAFE FOOD HANDLING WORKSHOP
SHELTER OPERATIONS (ARC 3068-11)
SHELTER SIMULATIONS (ARC 3068-12)
WORKING WITH TOTAL DIVERSITY

Scheduled Red Cross Classes

For training class registration, call: 805-987-1514
Please try to register for classes a week before the class is being offered

(Cont. on page 28)

The following free **FEMA Independent Study Courses** are recommended. There are several other FEMA courses available; see the other courses at http://training.fema.gov/is

IS-5.a **An Introduction to Hazardous Materials** - (10/31/2013)
IS-10.a **Animals in Disasters: Awareness and Preparedness** - (10/2/2015)
IS-11.a **Animals in Disasters: Community Planning** - (10/2/2015)
IS-15.b **Special Events Contingency Planning for Public Safety Agencies** - (10/31/2013)
IS-20.19 **Diversity Awareness Course 2019 - (1/30/2019)**
IS-21.17 **Civil Rights and FEMA Disaster Assistance** - (1/25/2017))
IS-26 **Guide to Points of Distribution** - (8/11/2010)
IS-27 **Orientation to FEMA Logistics** - (10/31/2013)
IS-29 **Public Information Officer Awareness** - (10/31/2013)
IS-33.19 **FEMA Initial Ethics Orientation 2019** - (1/30/2019)
IS-35.19 FEMA Safety Orientation 2019 - (1/30/2019)IS-36 **Multi-hazard Planning for Childcare** - (10/31/2013)
IS-42 **Social Media in Emergency Management** - (10/31/2013)
IS-75 **Military Resources in Emergency Management** - (2/25/2011)
IS-100.b **Introduction to Incident Command System, ICS-100** - (10/31/2013)
IS-111.a **Livestock in Disasters** - (10/31/2013)
IS-144 **Telecommunicators Emergency Response Taskforce (TERT) Basic Course** - (10/31/2013)
IS-162 **Hazard Mitigation Floodplain Management in Disaster Operations** - (11/16/2016)
IS-200.b **ICS for Single Resources and Initial Action Incidents** - (10/31/2013)
IS-230.d **Fundamentals of Emergency Management** - (12/16/2013)
IS-235.c **Emergency Planning** - (12/15/2015)
IS-240.b **Leadership and Influence** - (6/16/2014)
IS-241.b **Decision Making and Problem Solving** - (3/31/2014)
IS-242.b **Effective Communication** - (3/31/2014)
IS-244.b **Developing and Managing Volunteers** - (3/29/2013)
IS-250.a **Emergency Support Function 15 (ESF15) External Affairs: A New Approach to Emergency Communication and Information Distribution** - (5/7/2012)
IS-271.a **Anticipating Hazardous Weather & Community Risk**, 2nd Edition - (10/31/2013)
IS-288.a **The Role of Voluntary Organizations in Emergency Management** - (2/12/2015)
IS-315 **CERT Supplemental Training: The Incident Command System** - (8/13/2013)
IS-317 **Introduction to Community Emergency Response Teams** - (6/26/2014)
IS-320 **Wildfire Mitigation Basics for Mitigation Staff** - (10/31/2013)
IS-322 **Flood Mitigation Basics for Mitigation Staff** - (10/31/2013)
IS-323 **Earthquake Mitigation Basics for Mitigation Staff** - (10/31/2013)
IS-325 **Earthquake Basics: Science, Risk, and Mitigation** - (10/31/2013)
IS-326 **Community Tsunami Preparedness** - (10/31/2013)
IS-366.a **Planning for the Needs of Children in Disasters** - (12/9/2015)
IS-368 **Including People With Disabilities & Others With Access & Functional Needs in Disaster Operations** - (2/20/2014)
IS-393.a **Introduction to Hazard Mitigation** - (10/31/2013)
IS-405 **Overview of Mass Care/Emergency Assistance** - (12/10/2013)
IS-454 **Fundamentals of Risk Management** - (10/31/2013)
IS-546.a **Continuity of Operations Awareness Course** - (10/31/2013)
IS-547.a **Introduction to Continuity of Operations** - (10/31/2013)
IS-559 **Local Damage Assessment** - (10/31/2013)
IS-700.b **An Introduction to the National Incident Management System** - (6/25/2018)
IS-775 **EOC Management and Operations** - (8/6/2008)
IS-800.b **National Response Framework, An Introduction** - (1/20/2017)
IS-815 **ABCs of Temporary Emergency Power** - (12/27/2016)
IS-906 **Workplace Security Awareness** - (10/31/2013)
IS-907 **Active Shooter: What You Can Do** - (12/28/2015)
IS-909 **Community Preparedness: Implementing Simple Activities for Everyone** - (10/31/2013)
IS-910.a **Emergency Management Preparedness Fundamentals** - (10/19/2012)
IS-915 **Protecting Critical Infrastructure Against Insider Threats** - (7/10/2013)
IS-916 **Critical Infrastructure Security: Theft and Diversion – What You Can Do** - (10/31/2013)
IS-922 **Applications of GIS for Emergency Management** - (10/31/2013)
IS-951 **DHS Radio Interoperability** - (9/22/2016)
IS-2200: **Basic Emergency Operations Center Functions - (5/17/2019)**
IS-2500 **National Prevention Framework, an Introduction** - (3/27/2018)
IS-2600 **National Protection Framework, An Introduction** - (3/27/2018)
IS-2700 **National Mitigation Framework, an Introduction** - (3/27/2018)
IS-2900.a **National Disaster Recovery Framework (NDRF) Overview** - (7/11/2018)

The **ARRL** offers several on-line courses. The courses listed here are recommended for those involved in disaster and emergency service. See these and other courses at the ARRL web site.

Introduction to Emergency Communication EC-001
HF Digital Communications EC-005
PR-101: ARRL Public Relations (EC-015)
Public Service and Emergency Communications Management for Radio Amateurs- EC-016

There are some costs with the ARRL courses but discounts and occasional scholarships are available to ARRL members. See ***www.ARRL.org*** for details and enrollment.

ARES-ACS Frequency Updates

The Tuesday night Ventura County ARES/ACS Net is held on the WD6EBY Sulphur Mt. Repeater. Local nets are 7:00 to 7:30 PM; County Net starts at 7:30 on WD6EBY Sulphur Mt. Repeater 145.200 (-) PL 127.3 / 445.560 Mhz(-) PL 141.3

Good Frequencies to have pre-programmed into your radios...

Area 1 Simi Valley – K6ERN 146.805 Mhz (-) PL 100.0
Area 2 Conejo Valley, T. Oaks, Newbury Park – N6JMI 147.885 Mhz (-) PL127.3 BOZO
Area 3 Camarillo, Somis,– K6ERN 147.915 Mhz (-) PL 127.3
Area 4 Oxnard, Port Hueneme, NBVC – WB6YQN 146.970 Mhz (-) PL 127.3
Area 5 Ojai Valley – N6FL 145.400 Mhz (-) PL 114.8
Area 6 Ventura City – WA6ZSN 146.385 Mhz (+) PL 127.3
Area 7 Santa Paula, Fillmore, Piru – WA6ZSN 146.385 Mhz (+) PL 127.3
Area 8 Moorpark, Santa Rosa Valley – K6ERN 145.460 Mhz (-) PL 127.3
County-Wide – WD6EBY 145.200 (-) PL 127.3
ACS Portable – VCACS/p 144.930/147.585 Mhz PL 127.3

WD6EBY SP 145.420 Mhz (-) PL 127.3
WD6EBY 447.480 (-) PL 156.7 Hz South Mtn.
K4NGL 145.360 Mnz (-) PL 156.7 Kimberly Peak

Other Good Area Frequencies ...

AA6DP 147.090 Mhz (+) No PL Catalina
K0AKS 147.150 Mhz(-) PL127.3 TOaks
K6CPT DCS 145.300 Mhz (-) PL100.0 LA DCS
K6CPT DCS 147.270 Mhz (-) PL100.0 LA DCS
K6DCS DCS22 147.225 Mhz (+) PL 94.8 LA DCS
K6ERN 146.880 Mhz (-) PL 127.3 SMRA Red Mt.
K6ERN 147.765 Mhz (-) PL 127.3 Olivas Park / SMRA
K6TZ 146.790 Mhz (-)PL131.8 SBARC
KB6C 147.735 Mhz (-) PL 100.0 Oat Mt / MMRA
N6EVC 146.850 Mhz (-) PL 94.8 Rasnow
N6FDR 145.260 Mhz (-) PL 100.0 Malibu
W6AAX 147.180 Mhz (+) PL 186.2 Verdugo Peak
W6GRG 146.940 Mhz (-) PL 127.3 Simi DSW Repeater
W6YJO 145.180 Mhz (-) PL 131.8 Sta Ynez
WA6FGK 146.640 Mhz (-) PL 127.3 Simi Valley
WA6PPS 147.300 Mhz (-) PL 110.9 L.A.City ACS
WB6OBB 147.000 Mhz (+) PL 131.8 Sta Barbara
WD6EBY 145.240 MHz (-) PL 127.3 Chatsworth Pk

Due to assignment and coordination of several D-Star Repeaters, TASMA, the southern California Two meter amateur frequency coordination body, has had to re-align several frequencies. Among these changes are the channelization (15 KHz spacing) of the 145.5 - 145.6 simplex allocation and reassignment of several frequencies from simplex to other uses.

None of the local Ventura County repeaters are directly affected; however several previous simplex frequencies are now in use either as repeater inputs or outputs. **New County ARES Packet frequency is 145.050 Mhz**;

Ventura County ARES-ACS simplex frequencies have been re-assigned as follows:

Area 1 Simi Valley – 145.510 Mhz (S)
Area 2 Conejo Valley, T.O., Newbury Pk – 146.445 Mhz (S)
Area 3 Camarillo, Somis – 146.550Mhz (S)
Area 4 Oxnard, Port Hueneme, NBVC – 146.595Mhz (S)
Area 5 Ojai Valley – 145.555Mhz (S)
Area 6 Ventura City – 147.510Mhz (S)
Area 7 Santa Paula, Fillmore, Piru – 145.540 Mhz (S)
Area 8 Moorpark – 146.535Mhz (S)
County ARES Simplex – 145.615 Mhz (S)
National Simplex – 146.520Mhz(S)

Ventura County ARES / ACS Emergency Coordinators

ACS RO/ARES DEC: Rob Hanson, W6RH, Email: w6rh@arrl.net
Assist ACS RO/Deputy DEC: Rick Tate, KQ6NO Email: kq6no@arrl.net

Area 1 Simi Valley EC: Steve King, KE6WEZ Email: ke6wez@gmail.com
Area 2 TO, Conejo Valley EC: Zack Cohen, N6PK , Email: n6pk@arrl.net
Area 3 Camarillo, Somis EC: Avi Carmi, K6AVI Email: avi@carmi.us
Area 4 Oxnard, Hueneme, Mugu EC:Hovan Salibian, KI6BQL Email: ki6bql@arrl.net
Area 5 Ojai EC: Wayne Francis, W6OEU Email: w6oeu@arrl.net
Area 6 City of Ventura EC (acting): **James (Jim) Aguirre** KM6GUE Email: KM6GUE@gmail.com
Area 7 Santa Paula, Fillmore, Piru EC: **James (Jim) Aguirre** KM6GUE Email: KM6GUE@gmail.com
Area 8 Moorpark, Santa Rosa Valley EC: Marc Hanley KM6B, Email: km6b@arrl.net

ACS/ARES Training and News

Rob Hanson Ventura County ACS Radio Officer, Ventura County ARES District Emergency Coordinator

Experience Gained in March 11 Winlink Thursday Red Cross/ARES Exercise Ahead of May 8 Nationwide Exercise

Richard Palm participated in the March 11 "Winlink Thursday" (WT#6) to gain some more experience with Winlink Express, its message and other form templates, attaching jpeg files to messages, and using the VARA HF high-speed (thanks to his purchase of the full-feature unlocking key) mode, to be prepared for the May 8 nationwide American Red Cross/ARES drill. The objective for the March 11 WT was learning how to use and make the Winlink Express Check-in form a Favorite form for easy and quick access to it, and saving the data entered into the form for ease of loading the next time for quicker generation; and second, learning how to attach a jpg picture file to the Winlink message after resizing it to keep it under 25 kb, the limit for Winlink jpg files.

Richard found the single page of instructions provided by the organizers to be clear and easy-to-follow. It took him about 20 minutes to accomplish the above, and post the Check-in form message and attached jpg file to his Winlink Express outbox. The total size of the message file was a little over 26 kb. The packaged message was addressed to ARCSOUTHEAST - the American Red Cross Southeastern Divisional Clearinghouse for the Winlink Thursday sessions.

The next step was to send his message. Hestarted my Winlink Express program, connected to his area's 7 MHz Radio Mail Server (RMS), which had path reliability and quality predictors in the upper 90s. It took about 35 minutes to complete the message/photo transfer for an average data transfer rate of about 750 BPM. That rate seemed a bit slow to him, but the channel was busy, possibly with other stations trying to send their messages at the same time, and his signal-to-noise ratio was low, as indicated by the S/N meter on the VARA HF dashboard.

The point of this editorial is to encourage you to try these excellent Winlink learning exercises. He is not an especially gifted data mode operator, to say the least. In other words, if he can do it, you can do it! The next Winlink Thursday is **April 8**, and is the last one before the **May 8 nationwide exercise**. Get the complete information and instructions. The American Red Cross is a longtime, key ARRL-served partner. It's important to know how to operate the modes and systems that the Red Cross needs for emergency communications for its shelters and regional offices for when a major incident occurs.

This month, get on Winlink Thursday for April 8, and be prepared for the big nationwide drill on May 8! It's great training in using a premier data platform for public service, and it's just plain fun!

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ACS/ARES Training and News (Cont. from page 30)

The Spring Drill 2020 had more than a thousand participants from 40 states passing Red Cross traffic (ARC Red Cross Message Form 6409) over long distances with no internet, using Winlink.

The Fall Drill 2020 took place in November, with more than 1500 participants from 47 states and Puerto Rico, Canada and Venezuela, passing ARC-213 forms for practice. For more information, organizers have established a groups.io mail list with 1600+ interested parties, regular weekly and monthly on-the-air digital training sessions, and a website. Join the drills and see what hams can do for Red Cross in disasters when there is no internet, cell service or even electrical power.
K1CE

Protecting Gear from EMP

With an increasing number of bad actors with EMP (electromagnetic pulse) devices these days, the disruption of the country's electronic infrastructure is tempting. Many veteran radio amateurs have older V/UHF/HF mobile radios and handhelds; it may be a good idea to store them in a small steel trash can, along with a roll of RG58, mag mount or other kind of antenna, and light line to hoist the antenna into a tree. There is little or no cost involved, and this puts older gear to potential use in an EMP incident.

While not too likely, the military and other government entities do pay attention to the possibility of such an incident that could cripple the internet, power grid, copper pair telephone, and much of the sensitive modern lower voltage circuitry.

Many hams licensed since the end of the cold war may have little or no knowledge of what an EMP blast can do, and how difficult it is to protect against. "When all else fails" means being prepared for the unlikely. -- Doug McCray, K2QWQ, Southampton, South Jersey

[Here is an info sheet on electromagnetic pulse from the Washington State Department of Health--Office of Radiation Protection.
https://www.doh.wa.gov/portals/1/Documents/Pubs/320-090_elecpuls_fs.pdf]

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ACS/ARES Training and News (Cont. from page 31)

Separated by distance — and a pandemic — Puget Sound's amateur radio enthusiasts are connecting with even greater frequency (By Christy Karras Special to The Seattle TimesThe Seattle Times)

FOR YEARS, AS a coordinator for the West Seattle Grand Parade, Jim Edwards WS7JIM had to rely on eyesight, hollering and hope. "I'd just be looking down the street and saying, 'I hope everything's OK down there,' " he recalls. When the West Seattle Amateur Radio Club had an entry in the parade, they asked whether he could use their help.

By the next year, he'd gotten a radio operator's license, and, "It's just gone along since then," he says. He hooks his radios and a laptop to his motorcycle, which he now uses as a mobile base.

For ham radio operators, connecting from separate locales always has been part of the fun. With in-person socializing temporarily absent during the pandemic, it's even more important.

On top of its regular events, the West Seattle club added a daily noon check-in last year to give everyone an extra chance to say hello and to let others know whether they needed anything.

"If we haven't heard from someone in a while, it might end up with someone going and knocking on their door and asking, 'Is everything all right?' " Edwards says. "We keep tabs on each other."

The West Seattle club is one of a few in the Puget Sound area, which, I learned, is packed with an extensive network of radio infrastructure. (To find a club, go to the American Radio Relay League website.)

In some ways, amateur radio is the perfect pandemic activity. It has always been about reaching through space to connect to people who aren't physically nearby.

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ACS/ARES Training and News (Cont. from page 32)

"I think it does a really good job of creating community on every scale," says Curt Black, the West Seattle club's current president. People of different ages, backgrounds and physical abilities can use it to connect.

The club typically has a couple of meetings a month (meetings are online these days). Sometimes, members will arrive early and stay late to help each other with technical problems or answer questions.

When I think of ham radio, I think of sending a message across radio waves, around the world, to eventually connect with some random person on the other side of the Earth. And people from as far away as Australia have used Seattle repeaters to connect.

But much of what ham radio folks do is more local. Some are trained to help out in an emergency or disaster; Black says local radio operators helped coordinate rescue efforts after the Oso landslide, for example.

They also teach those new to radio, and help them prepare for the tests required to get various FCC licenses. (I was a bit sad to learn that Morse code is no longer a requirement. But if you like acronyms, you're very much in luck.)

Online resources like hamstudy.org make it easy to get started, but fellow radio fans are always eager to answer questions and help newbies figure out how to apply their knowledge in the real world. "It's what I would describe as a lifelong learning thing, which is what I love about it the most," Black says.

It's also not as old-fashioned a hobby as I would have thought: While you can use old-school equipment if you want to, computers and Wi-Fi networks are part of the modern radio equipment arsenal. "When people get into it and find out what the capabilities are, it blows them away," Edwards says. "That's what's fun — finding out what they can do with it."

ARRL offers online training for hams who want to participate in the Amateur Radio Emergency Service.

The time for training is before a disaster...not during one.

The former Amateur Radio Emergency Communications (AREC) series of three training courses has been reconfigured into two courses: An introductory course and a course for leaders and managers.

Introduction to Emergency Communication (#EC-001)

Revised in 2018, this is an update of the former Level 1 course. It is designed to provide basic knowledge and tools for hams who want to serve as a Public Service volunteer. It provides an opportunity for non-hams who rely on communications in emergency situations to learn about Amateur Radio and its unique role in emergencies.

For start dates, registration deadlines and more visit www.arrl.org/online-course-catalog

Public Service and Emergency Communications Management for Radio Amateurs (#EC-016)

Launched in 2010, this course is designed for Amateur Radio operators who will be in leadership and managerial roles, organizing other volunteers to support public service activities and communications emergencies. Participants will learn how radio amateurs prepare to support local community events and, when working in coordination with governmental and emergency response organizations, how to deploy their services. This is a self-study course. For more information and to register visit www.arrl.org/online-course-catalog.

PR-101: ARRL Public Relations (EC-015)

This is a basic training course for PIOs and anyone interacting with the media and promoting Amateur Radio.

This course is designed to give hams a quick overview in public relations activities. It uses the skills of experts in various aspects of public relations to provide volunteer Public Information Officers with the basic skills and expectations that a PIO needs to know to be effective in their home region.

PR-101 covers everything from the basic news release to Web sites and video work.

This course is available--free! – on-line, or can be purchased in CD format from the ARRL store.

Local Area Radio Weekly Nets by Wayne Woodhams, N6WIX

Monday

Cuckoo Net 146.790 MHz (-) 131.8 Hz PL and 145.180 MHz (-) 131.8 Hz PL MTWThF from 08:00 Hrs

Auxiliary Bored Meeting: MTWThF at 09:00 and on Saturday at 21:00 Hrs : Bozo Repeater Frequency: 147.885 MHz Offset: -PL: 127.3

California Rescue ARES Net 7.25 MHz MTWThF 08:30 Hrs

Santa Barbara South County ARES net 19:30 Hrs on 146.79 MHz (-) PL 131.8.

Southwest ACS Nets Every Monday at 18:30 Hrs, on a local station on the Cactus Intertye Network. Check-in by roll call. 4th Monday "grid test" 20:30 Hrs.

LA DCS-22 Net – 19:30 Hrs - K6DCS - 147.225 MHz (+) then on 7.2353 MHz LSB

K6MEP Net -20:00 Hrs 145.200 MHz (-) 127.3 PL

CESN (California Emergency Services Net) at 20:00 Hrs Primary frequency - 3992 kHz, Backup frequency - 3960 kHz. All free to listen, check-in by membership only.

LA Section ARES Net - HF Every Monday following the VHF/UHF net (21:30 Hrs) 1st. 3rd and 4th Monday - 75 meters 3.995 MHz (± 45 kHz) / 2nd Monday -10 meters 28.495 MHz

Tuesday

Cuckoo Net 146.790 MHz (-) 131.8 Hz PL and 145.180 MHz (-) 131.8 Hz PL MTWThF from 08:00 Hrs

California Rescue ARES Net 7.250 MHz MTWThF 08:30 Hrs

Ventura County ARES-ACS 6 Meter Net - between 18:45 Hrs to 19:00 Hrs K6SMR 52.980 MHz (-) PL 82.5 SMRA Red Mt

Ventura County ARES-ACS Simplex Net - 18:30 Hrs on 147.510 MHz Simplex ORT schedule only!

Ventura County ARES-ACS HF Net - between 18:30 Hrs to 19:00 Hrs 40M on 7.235 MHz LSB +/-

Ventura County ARES/ACS Nets between 19:00 and 20:00 Hrs. The County-wide net starts at 19:30 Hrs and normally finishes by 20:00 Hrs on WD6EBY 145.200 MHz (-) /127.3 PL

SBARC Swap Net 146.790 MHz (-) / 131.8 Hz PL and 145.180 MHz (-) / 131.8 Hz PL 19:30-20:00 Hrs

West SB ARES HF Net (1" Tuesday, Monthly) 3822 kHz LSB 20:30 Hrs

6-Meter Roundtable - 50.125 MHz USB First Tuesday of each month 20:00 Hrs

ATV Net 20:30 Hrs 148.790 MHz (-) / 131.8 Hz PL RITZ repeater

SBARC Digital Communications Net 146.790 MHz (-) / 131.8 Hz PL and 145.180 MHz (-) / 131.8 Hz PI 8:00 - 10:00 PM

Wednesday

Cuckoo Net 146.790 MHz (-) 131.8 Hz PL and 145.180 MHz (-) 131.8 Hz PL MTWThF from 08:00 Hrs

California Rescue ARES Net 7.25 MHz MTWThF 08:30 Hrs

CESN (California Emergency Services Net 10:00 Hours, Primary frequency 7192 kHz, Backup frequency - 7230 kHz All free to listen, check-in by membership only.

SMRA Tech Net 146.880 MHz (-) / 127.3 PL (SMRA Red Mt) 20:00 Hrs

SBARC Swap Net 146.790 MHz (-) / 131.8 Hz PL K872 20:00 Hrs

Teamtalk Voice Net.20:00 Hrs k6pvr-svr.local.mesh server http://www.pvarc.club/mesh/mesh-applications/

Thursday

Cuckoo Net 146.790 MHz (-) 131.8 Hz PL and 145.180 MHz (-) 131.8 Hz PL MTWThF from 08:00 Hrs

California Rescue ARES Net 7.25 MHz MTWThF 08:30 Hrs

So Cal 6 meter net. 51.940 MHz - pl 82.5. 19:00-20:00 Hrs

Southern Calif 6M SSB Technical Roundtable Net 20:00 Hrs on 50.2 MHz USB SSB

SBARC / K6TZ Technical Mentoring Net 20:00-21:00 Hrs 146.790 MHz (-) / 131.8 Hz PL and 224.08 MHz (-) 131.8 PL (linked)

Friday

Cuckoo Net 146.790 MHz (-) 131.8 Hz PL and 145.180 MHz (-) 131.8 Hz PL MTWThF from 08:00 Hrs

California Rescue ARES Net 7.250 MHz MTWThF 08:30 Hrs

Saturday

Military Radio Collector Net 18:00 Hrs 3985 kHz AM vavw.mrcuwestord/mrca-radio-nets/

Sunday

ARRL Southwestern Division Net 08:00 Hrs 3965 MHz. ARRL Officers check in first. All visitors welcome at end of that net

Newbie Net 19:00-19:30 Hrs Bozo Repeater 147.885 MHz (-) PL127.3

Rabbit Net 19:00 Hrs Linked Rabbit repeater.

NEWS FROM PVARC

Hello All,

On Saturday March 6th the new PVARC South Mtn repeater system was installed.

The temporary cabinet is removed to make room for the new cabinet

The team bringing the new cabinet to the site

(Cont. on page 37)

NEWS FROM PVARC (Cont. from page 36)

The team is part mountain goat

It's in the building

Equipment installed and operational

This new system is operational with a couple of bugs to be worked out on Saturday March 13th.

- UHF Repeater 447.480 MHz Input and output PL 141.3 Hz, *changing to 156.7 Hz*
- VHF Repeater 147.060 MHz Input and output PL 127.3 Hz, *antenna issue to be resolved*
- 420 MHz Link to Camarillo Hills
- 420 MHz Link to Chatsworth Peak, *not working suspect bad RF jumper*
- 420 MHz Link to Sulphur Mtn
- 420 MHz Link to Santa Ynez Peak
- On demand Link to Bozo Repeater
- WinLink Server (Win10) with access available from the Mesh, 220 MHz packet and the Internet
  - Keith W6KME and Andy K3CAQ will be the WinLink system manager
- Mesh resource server (Debian)
  - Orv W6BI and Eric KG6WXC will be the Linux system managers

(Cont. on page 38

NEWS FROM PVARC (Cont. from page 37)

- Orv W6BI and Eric KG6WXC will be the Linux system managers

And a very weary team

Not pictured Rich W7KI

I want to thank the team for their outstanding work in getting this system to the hilltop and operational. This was defiantly a team effort. If you see these folks or talk to them please thank them for their hard work and dedication to Amateur Radio Disaster communications.

The Team:
Eric Satterlee KG6WXC
Rob Hanson W6RH
Rich Willaimson W7KI
Keith Elliot W6KME
Eric Oberg KE6MLF
Orv Beach W6BI

I am looking for feedback on system performance so if you have an opportunity to try the system send me a little note on the coverage areas. And thank all those who have supported the Pleasant Valley Amateur Radio Club.

South Mountain

On Wednesday March 17 Eric KG6WXC and I traveled to South Mountain to perform a couple of cleanup tasks from the system installation of March 6.
The 420 MHz link to Chatsworth Peak is now operational. After a bit of trouble shooting I discovered that when I reinstalled the equipment in the rack on the hilltop I reversed the RF connections between
(Cont. on page 39)

NEWS FROM PVARC (Cont. from page 38)

the duplexer and the link radios. The link transmitter is supposed to connect to the duplexer transmit port. Lesson learned! With this link now performing properly the Chatsworth Peak 145.24 repeater is again linked to the repeater system. The Chatsworth Peak 445.840 is still plagued with noise.

The new 147.060 repeater antenna remains an issue. We tested many on-site antennas but did not find a suitable temporary antenna. A trip will have to be scheduled with Rob W6RH to investigate and correct the antenna issue. I suspect a bad RG-214 jumper from the LDF4-50 feed line to the antenna.

The new 447.48 repeater PL change was successful and is now using a PL tone of 156.7 Hz. The repeater also encodes a 156.7 Hz PL. The repeater is performing very well.

Eric made a short trip up the tower and was able to discover the RJ-45 connector had fallen out of the 5 GHz dish antenna pointed to the Camarillo Hills. When I prepared the CAT 6 cable I neglected to properly prep the antennas RJ-45 connector. The locking tab on many RG-45 connectors will not lock in properly unless you gently pull the lock tab away from the connector body first. Once this locking tab was pulled into position it locked in properly to the tower mounted 5 GHz dish. I am now working to establish a usable RF frequency.

This site has a backup generator. This summer we are looking to install a battery bank to keep the system operational during transfers between Edison and Generator power.

I want to thank Eric KG6WXC for his help today and for driving us to the hilltop.

Sulphur Mtn

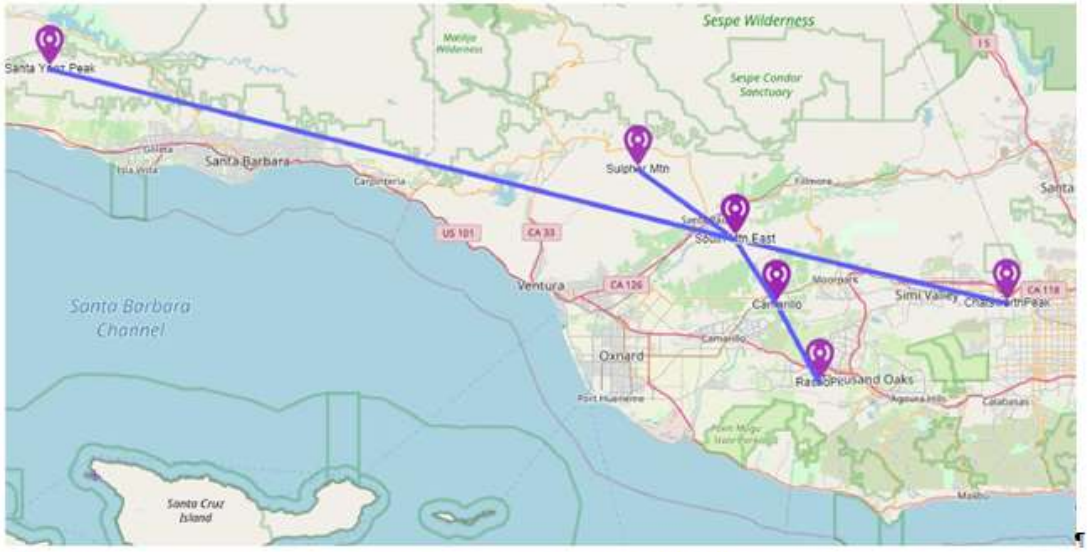
On Friday March 19 Dick K6VGP, Mike K6MJU, Mike's son Theo and I traveled to Sulphur Mountain to finalize the system updates.

When the PVARC system reconfiguration project started I removed the 420 MHz links to Camarillo, Chatsworth Peak and Santa Ynez Peak for reuse with the South Mountain system. With this now abundant space in the equipment rack we set out to physically reorganize the repeaters and South Mountain link. Many hours of work resulted in a new repeater layout.
Mountaintop time being a premium, we achieved the goal of reintegrating the system to the rest of the repeater systems. In the aftermath this reintegration there are a lot of unused cables left in the rack from the removal of the relocated link radio trays and duplexers. On the next site visit I will remove these unused cables and properly route and bundle the remaining cabling.Network software

A new version of AREDN software for network nodes will be out in maybe 2-3 weeks. It will be a production release that includes any patches added since July, including adding support for new hardware and any updates or patches applied since then. **(Cont. on page 40)**

NEWS FROM PVARC (Cont. from page 39)

With the 420 MHz link to the new South Mountain repeater installed and operational, the Sulphur Mountain 145.200 and 445.560 repeaters are again linked to Camarillo Hills, Chatsworth Peak and to the new South Mountain Repeaters.



I am looking forward to Santa Ynez Peak and Rasno Peak becoming fully integrated by summers end.

Thank you to Dick K6VGP Mike K6MJU and Theo for your help today.

Sulphur Mtn being again fully integrated to the system marks the completion of the principal Ventura County Systems upgrades. Thank you to the operators and nets for accommodating the system interruptions during the reconfiguration.

(Cont. on page 41)

NEWS FROM PVARC (Cont. from page 40)

South Mtn revisit

While the team was at Sulphur Mountain we heard the familiar squeals of a failing transmitter coming from the South Mountain UHF repeater transmitter. So when Sulphur Mountain was completed the team made a trip to the South Mountain repeater site to deal with the transmitter issue. I have had this issue before on the Motorola CDM radios and Mike also with the DARN system. In discussion with Mike I learned that this issue is with the 45 watt radios but not the 30 watt radios. So how do you replace a noisy transmitter at a repeater site when you did not bring a spare unit? My repeaters and Links use the same Motorola CDM radios for transmitters and receivers. We just swapped the 45 watt TX radio with the 30 watt RX radio, reprogrammed the radios and put the system back on the air with a clean transmitter.

This was a very long day and also a very rewarding day for all. Thank you again Mike, Dick and Theo.

Santa Ynez Peak

Another system rebuild underway is the 145.16 Santa Ynez Peak repeater. Last week Bill W1UUQ delivered the parts to be integrated. The principal system rebuild is to bring operational compatibility with the PVARC repeaters systems. When completed and reinstalled the system package will be a Motorola Quantar VHF repeater, a new repeater controller, new 420 MHz links to PVARC and a future northbound 420 MHz link. The JPS NXU Radio Over IP internet link to PVARC will remain as a backup link Section Break (Continuous)

We are looking to having the 145.16 rebuild and headed back to the hilltop sometime in early May.

The Santa Ynez Peak repeater and the PVARC repeaters are two of the three parts of a ARRL Santa Barbara Section linked repeater system. Bill and I have been working towards this tri county system for many years now and look forward to a future San Luis Obispo County linked system coming online.

I want to thank all who have volunteered their time and to those who have helped financially.

Please contact me if you have any questions or concerns.
Thank you all for your time

Paul Strauss
WD6EBY / K6PVR
pgstrauss@verizon.net

VC Ham Network News Orv E6BI

MESH Network software

A new version of AREDN software for network nodes will be out in maybe 2-3 weeks. It will be a production release that includes any patches added since July, including add support for new hardware and any updates or patches applied since then.

Network maintenance & troubleshooting

The number of the nodes on the network had grown to over 700. That in itself isn't a bad thing, but the network was becoming unstable, as evidence by occasional "routing storms", that make the network unusable. More and more tunnels (nodes linked across the Internet) were appearing and it's likely that some of them were involved in one or more "routing loops", which tend to encourage these routing storms. So action was taken several weeks ago to drop three or four of the "long haul" tunnels. As a result the node count and the number of tunnels detectable dropped precipitously. Since then the network has been very stable.

Winlink over the mesh network

More and more county stations are coming up on Winlink, the messaging system that's uniquely adapted for emergency communications. While Winlink supports these low- and medium-speed data protocols:

- ALE (Automatic Link Establishment)
- APRS (Automatic Packet Reporting System)
- AX.25 Packet Radio
- D-Star (Digital Smart Technologies for Amateur Radio)
- PACTOR, PACTOR-II, PACTOR-III, PACTOR-IV
- VARA FM, VARA HF

It also now supports communications via the ham 'mesh' network. That supports much quicker message handling as you'd expect. Several stations are now supporting Winlink Post Offices on the mesh network with a couple in Ventura County, and we expect this to continue to grow. (Ed. Note; Orv has created two VARA HF stations for Ventura County).

73

Orv W6BI
orv.beach@gmail.com

ARRL Santa Barbara Section Mgr. John Kitchens NS6X

(will be repeated until John contacts me that the positions are filled)

Hello all,

I have been trying to fill Section volunteer positions for a while. I am giving another push. I am pleased to let you know that our Section Emergency Coordinator is Richard Tate, KQ6NO from Santa Paula. (Congratulations and thanks to Rick for taking on this position in addition to his ACS/ARES assignment as Assistant ACS Radio Officer/ARES Assistant DEC.

Richard will be contacting you to see how each county operates emergency communications, and to see how the ARES SEC role will be able to assist and coordinate between the 3 counties in the Section. I have been the SEC for about 3 years. I should not be both the Section Manager and SEC. We need to have more focus on each position.

I am looking forward to spending more time on being SM. One of the tasks that I have passed off to Rick, among others, is the EmComm and volunteer hours reporting to ARRL headquarters.

Additionally, Andy Ludlum, K6AGL, member of the Conejo Valley Amateur Radio Club, has been appointed as the first Assistant Section Manager in the Santa Barbara Section. The SM position will be a club liaison for me, the Section Manager, to have a person in the know hopefully at each club. I really have little to no secret ARRL information, but when I am aware of issues, successes, opportunities, we can work together to accomplish our goals.

There are many volunteer positions to fill in the Section. The one that I am focusing on right now is the Section Traffic Manager. The STM will manage the Section's involvement in the National Traffic System. We need to work on and develop the NTS in the Section. There is quite a bit of work to do, but there are several dedicated volunteers in the Section, working within the NTS, who will make the system work.

Let me know if you would like to volunteer for the STM position, or any volunteer position. I'll be talking about specific positions in the coming months.

Santa Barbara Section Volunteers

Right now, we have 2 Section email systems. That is partly why we need volunteers to help rectify (electrical term) this issue. To make sure that everyone is getting the information, I will be sending emails through both systems. This email is for hams registered at the ARRL website as being in the Santa Barbara Section.

So, what do you get for being a volunteer? A special name/callsign badge and a certificate. And the satisfaction of helping ham radio in many aspects. I am still looking for volunteers to fill the remaining Section Leadership positions. The jobs are: **(Cont. on page 44)**

ARRL SB Section Mgr. John Kitchens NS6X (Cont. from page 43)

Assistant Section Manager (essentially a club liaison - one from each club, preferably)
Local Government Liaison (a person to be the contact for the local government, could be a city or county - to understand the local issues. Not to be a political operative or community organizer, but to be a positive contact for the local government, answer the government leader's questions, be aware of whom the players are)
Traffic manager - (the traffic system in the Section runs well, but needs a bit of coordination throughout the Section, and most importantly, finding new bodies to join the traffic system. Maybe the various Morse groups could provide people to be trained as traffic messengers).
Public Information Coordinators - (We have an excellent PIO, but each club should have someone who handles public information contacts, such as social media, print media, video (television, cable, YouTube etc.) media and more.)
Section Youth Coordinator (Doesn't need to be a teenager, but it could be. Someone who will focus ham radio toward the youth - schools, makers etc. Someone to help clubs do so, if they are so inclined.)
Club Coordinator (help get clubs active, motivated and working in the general support for ham radio. Some other type of groups will bring in a speaker to talk at all clubs for a reduced cost. We would like to have a Santa Barbara Section conference again. Need someone to help make it happen - just a small conference/Hamfest - look at the Yuma Arizona Hamfest.
Technical Specialist (working with the Technical Coordinator, maybe have experts "Elmers" for various aspects and specialties. How to get on FT8 (why won't my computer key my KX3; I can decode signals, just not key the radio), contesting, setting up a station, RFI solutions, use of chokes and why, homebrewing, how to solder - or crimping - how to install a coax connector, what is DMR/etc. and how to make my radio work - what is a hotspot, and more. We could use a dozen or more people.
Webmaster (I am not a web guy. Who is, or what groups of people are, who could help us? We need a Section website)
Special Event coordinator (We have a small Section budget that can cover some costs such as website hosting). The following clubs are ARRL affiliated:
Conejo Valley ARC (Andy Ludlum, K6AGL Assistant Section Manager)
Ventura County ARC (K6MEP)
Ventura County ARS
Simi Settlers ARC
Santa Barbara ARC
UC Santa Barbara ARC
Paso Robles ARC
Cal Poly San Luis Obispo ARC
Satellite ARC
And hopefully Pleasant Valley ARC soon.
(Cont. on page 45)

ARRL SB Section Mgr. John Kitchens NS6X (Cont. from page 44)

There are more groups and clubs, which should not be ignored, but these are the "affiliated" clubs. The Section includes the counties of San Luis Obispo, Santa Barbara and Ventura. More schools, middle, high, community college and college/university should have a radio club.

Let me know if you would like to help, or get more information. Get one of those pretty, special color ARRL badges. No membership is required.

Subject: Re: [K6MEP] Learning Code

The Conejo Valley ARC has a morse group that has a 10 meter weekly code training net. Info can be found at:
http://www.cvarc.org/morse-group/
There are Morse groups throughout the country. It really isn't difficult to learn or increase speed.

From: John Kitchens [mailto:ns6x.john@gmail.com]
Sent: Wednesday, February 3, 2021 11:24 PM
To: ARRL Santa Barbara Section
Subject: [ARRLSB] ARISS is Seeking Hosts for Ham Radio Contacts with the Space Station

http://www.arrl.org/news/ariss-is-seeking-hosts-for-ham-radio-contacts-with-the-space-station

ARISS is Seeking Hosts for Ham Radio Contacts with the Space Station

Amateur Radio on the International Space Station (**ARISS**) is seeking formal and informal educational institutions and organizations, individually or working together, to host amateur radio contacts with an International Space Station (ISS) crew member. Contacts would likely be scheduled between January 1 and June 30, 2022.

These voice radio contacts are approximately 10 minutes long and in a question-and-answer format. ARISS contacts afford participants the opportunity to learn firsthand what it's like to live and work in space, and about space research conducted on the ISS. Students will also have an opportunity to learn about satellite communication, wireless technology, and radio science.

Crew scheduling and ISS orbits will determine the exact dates. **(Cont. on page 46)**

ARRL SB Section Mgr. John Kitchens NS6X (Cont. from page 45)

ARISS is looking for organizations that can draw large numbers of participants and integrate the contact into a well-developed education plan. Organizations must demonstrate flexibility to accommodate changes in dates and times of the radio contact. The deadline for proposals is March 31, 2021.

Visit the **ARISS website** for more details and a proposal form. An ARISS introductory webinar will be held on February 25, 2021 at 8 PM EST (0100 UTC on February 26). Participants must **register**. **Email** with any questions.

Andy-K6AGL CVARC

We are still not allowed the use of the Community Room at the East County Sheriff's Station and I can't predict when that might change, however COVID conditions are improving and hopefully there will be some changes by the summer. As soon as we can safely do so, we will schedule in-person VE Ham Radio Licensing sessions.

I've attached the latest newsletter from the ARRL VEC. I think the item of most interest is the news that when the new $35 license fee is implemented (still no date) the examinees will pay the fee directly to the FCC. We will not have to collect the fee money. We will continue to collect the $15 exam fee as we have in the past. I think this is good news as we won't have to handle large amounts of cash.

I hope you all are well and hopefully we can begin testing again later this year.

73,

Andy-K6AGL

Andy Ludlum
818-370-3402

(Cont. on page 47)

ARRL SB Section Mgr. John Kitchens NS6X (Cont. from page 46)

From: Somma, Maria, AB1FM
Subject: ARRL VE Newsletter 2021

$35 FCC application fee in the Federal Register - does NOT take effect yet.

The final rule change was published in the Federal Register today March 19, 2021: Federal Register - schedule-of-application-fees-of-the-commissions-rules

Even though the document has an effective date of April 19, the Amateur Radio fees will not yet be required.
The fee changes outlined in this order will not take effect until the requisite notice has been provided to Congress, the FCC's information technology systems and internal procedures have been updated, and the Commission publishes notice(s) in the Federal Register announcing the effective date. This will most likely be in the summer.

The following application types will be subjected to the fee when the rule finally takes effect.

New, Modification (Upgrade and Sequential call sign change), Renewal, and Vanity call sign requests will be subjected to the $35 application fee. There will be no fee for Administrative Updates (email or mailing address changes, name changes).

The instructions on the FCC Fee Schedule are for the applicant to pay application fees directly to FCC via the License Manager System or Fee Filer System. VECs and VE teams will not have to collect the $35 fee at the session.

The ARRL VEC exam fee will remain at $15.
When the FCC application fee eventually takes effect, new and upgrade applicants will pay the $15 exam session fee to the VE team as usual and then pay the $35 application fee directly to the FCC.

FRNs Only at Exam Sessions

The FCC has indicated VECs/VE teams should no longer be accepting social security numbers at exam sessions.
Examinees should register in the FCC CORES registration system and receive an FRN before exam day.
FCC CORES User Account and Registration: https://apps.fcc.gov/cores/userLogin.do
(Cont. on page 48)

ARRL SB Section Mgr. John Kitchens NS6X (Cont. from page 47)

Remotely administered Online Examinations

The remote video exam session is conducted using an online video conferencing platform and a web-based examination system with on-screen tests.

ARRL VE teams must meet the following criteria and adhere to the following rules/policies to participate in the Remote video sessions program. Long-standing, well established teams with a history of adhering to the highest degree of examination integrity, and that consistently submit accurate exam documents consistent with ARRL VEC standards will be selected to participate.

Time and experience with in-person exam sessions is invaluable when transitioning to video-supervised online exam sessions.
Team leader experience at in-person sessions and/or training with an established team as a team leader for video sessions is required.

VE teams have been using the Exam.Tools online exams for the remote video sessions. Interested ARRL VE team leaders must contact the VEC department (VEC@arrl.org) to receive the remote video sessions procedures and ExamTools instructions.

Session Documents Upload Webpage

The US Postal Service has been slow and unreliable with moving mail and packages through their system. Some exam session packages have been unexpectedly delayed.

Uploading completed sessions as a PDF file (scanned documents) via the web allows for quicker processing to FCC. Please contact the VEC department (VEC@arrl.org) for the information on e-filing exam session documents through our secure upload page. Authorized VEs will be sent the upload page URL which is hidden from the public.

The VE team must only accept FRNs (Federal Registration Numbers) at the session. Social security numbers are not permitted on any exam documents or session files that are uploaded. Candidates will have to be registered in the FCC system and have FRNs already issued. Refer to the FRNs at Exam Sessions item above for the examinee registration instructions.

Resources for ARRL VEs

The ARRL VEC VE Resources page (www.arrl.org/resources-for-ves) offers information you will need to help conduct exam session business. Our support page offers easy access to exam forms and session information, online exams and remote video sessions, question pools, FCC Rules, basic qualification question information, and much more! **(Cont. on page 49)**

ARRL SB Section Mgr. John Kitchens NS6X (Cont. from page 48)

The ARRL VEC Staff is Ready to Serve You

As always, the dedicated VEC staff are here to answer any questions you may have.

ARRL VE toll free number: 1-800-9ARRLVE (1-800-927-7583)
Address: ARRL VEC, 225 Main St, Newington CT 06111
Email: VEC@arrl.org
Web: www.arrl.org/volunteer-examiners
ARRL VEC Fax: 860-594-0339

Maria Somma, AB1FM, Manager
Amanda Grimaldi, N1NHL, Assistant Manager
Stephanie Borden W2MAU, Service Representative
Ann Brinius, Service Representative
Lisa Riendeau, Service Representative
Joshua Nance, Service Representative

We thank you for your efforts and interest in the ARRL VEC program.
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72/73
John Kitchens, NS6X
PO Box 178
Somis, CA 93066
805.216.2569
NS6X@ARRL.org
NS6X@ARRL.net

ARRL Santa Barbara Section Manager
John, NS6X

John Kitchens, NS6X
805.216.2569
NS6X@ARRL.org, NS6X@ARRL.net

Meeting Location Maps (meetings may be on-the-air, please check K6MEP.org)

K6MEP Membership Application/Renewal. Please pay your 2021 Dues. Please mail the completed form (see below) or the one on K6MEP.org. Dues are now $10 (Apr-Jun).

To join the Ventura County Amateur Radio Club, Inc. (also known as VCARC or K6MEP), complete and send form, along with $20 annual dues, to VCARC P.O. Box 2103 Oxnard CA 93034-2103

Checks can be written to either Ventura County Amateur Radio Club, Inc. or VCARC

Pro-rate dues as follows based on our calendar year ending October 31 (Oct-Dec = $20, Jan-Mar = $15, Apr-Jun=$10, Jul-Sep=$5). Existing members should renew every October =$20.

Name (Last, First)_____ Call sign_____ License Type_____

Address Street_____ City, State Zip_____

Email_____ Telephone_____ Date of Application_____

Y/N for the following: New Member _____ Renewing _____ Member of ARRL?_____

I'd Like To See/Do....

TOPIC	YOUR INTEREST LEVEL			COMMENTS
	Meh	Ok	Yayy!	
All about coax cables				
Amateur Radio Satellites				
Antenna construction project				
Antenna ordinances				
ARES, ACS, CERT, RACES, MARS, SkyWarn				
Assembling a Go-Box				
Assembling a test lab				
Best bands to get on & what to expect				
Construction projects, like_____				
Ferrites, and demonstrations of.				
Field Day – Strategies, Tactics and Techniques				
FRS & GMRS - what are those?				
Ham Radio projects for Arduinos & Raspberry Pi				
VHF Digital Modes: D-Star, Packet, APRS				
HF Digital Modes: RTTY,JT65,WSPR,PSK31,PACTOR,FT8				
How to use an oscilloscope				
Local Repeaters You Can Hit				
MESH				
Moonbounce				
More social events, picnics, etc.				
NVIS for regional HF communications				
QSLs, QSL cards, ARRL LOTW, eQSL				
SDR - Software Defined Radios				
Compact HF antennas				
Soldering				
Sulphur Mountain Repeater Association				
SWR, Meaning and Measurement.				
Troubleshooting				
Vacuum Tubes				
VHF and Above Contesting				
What's DTMF, CTCSS, and PL?				
Power amplifiers and receiver preamplifiers				
Assembling Emergency Supplies				
The Love of Morse Code. Keys, Paddles & Bugs.				
The HF Reverse Beacon Network				
ARRL American Radio Relay League topics				

I can give a presentation on:	

ARRL News (all photos and icons from ARRL.org or other specified sources)

The ARRL Board of Directors considered a motion at its January Meeting to offer a program for 2021 that would pay the new, but not-yet-implemented $35 FCC application fee, for a limited number of new sub-18-year-old license candidates who, at the time of testing, were members of an ARRL-affiliated 501(c)(3) charitable organization and who passed their tests through an ARRL VEC session. The movers of the motion stated that its purpose was to ameliorate the potential financial hardship posed by the pending $35 FCC license fee on certain young license candidates applying for their first license and to encourage new youth membership.


David Minster, NA2AA

Consideration of the motion, which was subject to much debate and concern, was deferred to an ad hoc committee composed of the members of the Administration & Finance Committee, two Members of the Programs & Services Committee, and CEO David Minster, NA2AA (or his designated representative), with the direction to review and more fully develop the motion and to submit a report to the Board by March 31, 2021 as to whether the program should be adopted and, if adopted, how it should be implemented.

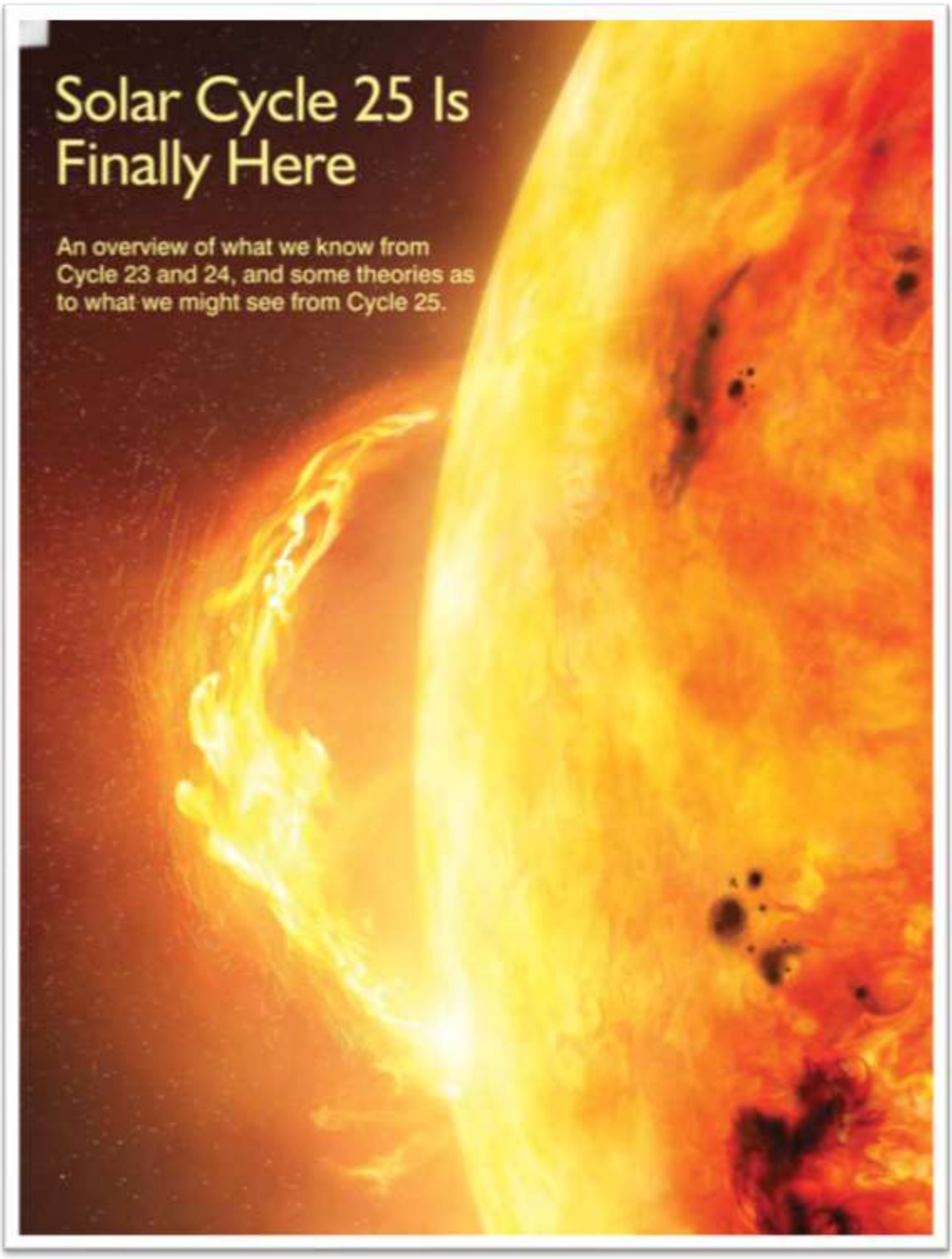
The Board also agreed to take a second look into the use of electronic balloting systems "to augment paper balloting for ARRL elections." The Board instituted a hybrid paper and electronic balloting process in the fall of 2012, which was popular among those who took advantage of it, but overall voter participation declined significantly. In 2015, the Board's Ethics and Elections Committee decided to return to using solely paper ballots. The Ethics and Elections Panel said continuing changes in technology, the acceptance of remote meetings, and significant advancements in voting processes since then have made electronic balloting worth a second look.

"Electronic balloting is now in common use among professional organizations," the Board said. "Using electronic balloting would be of benefit to members who find paper ballots difficult to use. Providing electronic balloting as an alternative to paper balloting may result in a cost savings to the organization and decrease delays and potential conflicts over delays of paper ballots. It is likely, also, that the use of online balloting will be attractive to younger members who are more accustomed to online transactions."

The Board directed its Administration & Finance Committee to investigate the state, cost, and availability of commercial electronic balloting services as a member-selected alternative to paper ballots distributed and collected via the postal service and report back to the Board within a year.

(Cont. on page 53)

ARRL News (Cont. from page 52)



(Cont. on page 54)

ARRL News (Cont. from page 53)

CYCLE 25

Carl Luetzelschwab, K9LA

Set off the fireworks! Solar Cycle 25 is finally here, so now is a good time to review some basics, including what solar minimums and sunspots are, and why they're important for amateur radio. After reviewing what we know so far, we'll be able to make some predictions about what we can expect from Solar Cycle 25. Be sure to read Steve Ford's, WB8IMY, article and Bernie McClenny's, W3UR, "How's DX" column in this issue for more on Solar Cycle 25.

Observing and Measuring the Sun

Sunspots are the oldest direct record of the activity of the sun. A *solar cycle*, or sunspot cycle, starts at *solar minimum* (when there are few sunspots), goes through *solar maximum* (when there are many sunspots), and then ends up at solar minimum again.

Sunspots are the darkened regions of reduced surface temperature that are caused by the sun's magnetic fields rising up from below the sun's surface and poking through. The term "surface" is somewhat of a loose term, as the sun is not a solid.

Sunspots are a subjective parameter, because visual counting by humans is required, and there can be an unintentional bias in the counting process by the observer. This, in fact, was the main reason why the old sunspot data set was reviewed in the last decade. The new data set was created in 2015, and that is believed to be a more accurate representation of past solar activity.

In 1947, to achieve a more objective parameter of solar activity, scientists starting using radar receivers from World War II to measure the radiation from the sun at a wavelength of 10.7 centimeters (2800 MHz). Although the data doesn't extend back in time like sunspots, the 10.7-centimeter solar flux parameter is preferred over the more subjective sunspot data because the solar flux measurement is the output from a calibrated antenna/receiver system. In this process, there is no need for human interpretation.

It is difficult to determine the best correlation between sunspots and 10.7-centimeter solar flux, given that they are from two different processes in the sun. Those two parameters are indeed correlated, but unfortunately not on a daily basis, because a daily 10.7-centimeter solar flux value does not map to a unique daily sunspot number.

The next logical step was to look at monthly averages (also known as monthly means) of both parameters. This helped a lot, but still the correlation was just not good enough. The next step was to average 12 months of monthly mean data — these are called *smoothed values*. The correlation is very high doing it this way, and that's how sunspots and 10.7-centimeter solar flux values are best correlated.

Observing and Measuring the Ionosphere

Propagation on our HF bands is influenced by the *ionosphere* — the portion of our atmosphere in which solar radiation at various wavelengths ionizes neutral atmospheric constituents resulting in electrons and positive ions. The electrons are the important factor in propagation.

For our radio endeavors on the HF bands (3 – 30 MHz), we are interested in the three regions, or layers, of the ionosphere: the D region, the E region, and the F region, which is further divided into the F1 region and the F2 region (see Figure 1).

We measure the ionosphere with an instrument called an *ionosonde*, which is a swept-frequency radar looking straight up. From the resulting data, the maximum electron density in the E region, the

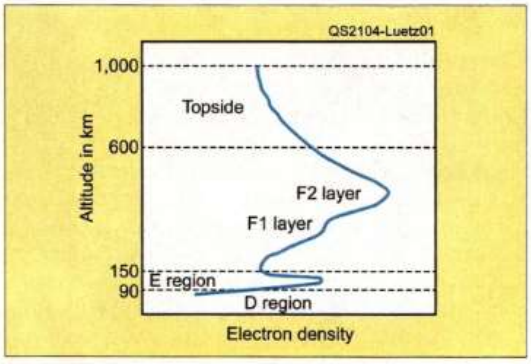


Figure 1 — A typical electron density profile as a result of the ionization process. Note that the electron density profile is a continuous function versus altitude. There aren't any thin layers as the name "layer" suggests. Also note that the E region and the F2 region have very distinct maximums, whereas the D region and the F1 region do not.

(Cont. on page 55)

ARRL News (Cont. from page 54)

Further Resources

Resources including websites and books are available for monitoring the status of Cycle 25 or for more information about the ionosphere and HF propagation. Recommended resources include:

- Daily 10.7-centimeter solar flux (along with other parameters) at **www.solen.info/solar**
- **www.spaceweather.com**
- **www.swpc.noaa.gov/products/solar-cycle-progression**
- **www.solarham.net**
- Propagation and information about who is working who on a given band is available at **www.dxmaps.com/spots/mapg.php?Lan=E**
- **https://pskreporter.info/pskmap.html**
- **www.wsprnet.org/drupal**
- **www.reversebeacon.net**
- For an assessment of the ionosphere itself, **http://prop.kc2g.com** shows worldwide MUFs for a 3,000-kilometer path using ionosonde data.
- Robert Brown's, NM7M (SK), *The Little Pistol's Guide to HF Propagation*, available for free at **https://k9la.us**
- Chapters on "Propagation" in *The ARRL Antenna Book* and *The ARRL Handbook*
- *The CQ Shortwave Propagation Handbook – 4th Edition* by Carl Luetzelschwab, K9LA; Theodore Cohen, N4XX; George Jacobs, W3ASK; Robert Rose, K6GKU (SK), from CQ Communications.

Be aware that the sun can hiccup, as seen by big spikes in the 10.7-centimeter solar flux and sunspot number. This can give us good propagation on the higher HF bands for a short time. This happened recently at the end of 2020. Read the "How's DX" column in this issue for more details on this. Always watch for a big spike in the 10.7-centimeter solar flux (and sunspot number), and head to the higher HF bands if it happens.

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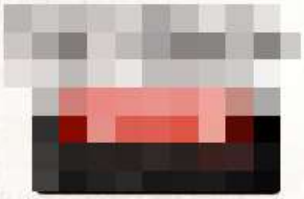

(Cont. on page 56)

ARRL News (Cont. from page 55)

Space Weather and Assessing the Ionosphere

For a broad assessment of HF propagation and what is important for our amateur radio endeavors, we can simplify all that data to just the sunspot number and the K index.

Sunspot Number

When the sunspot number is consistently at or above 70 for a couple months, 10 meters should offer consistent worldwide openings. For 15 meters, a sunspot number at or above 50 will offer good propagation. Those sunspot numbers for 10 meters and 15 meters correspond to 10.7-centimeter solar flux values of 100 and 90, respectively.

K Index

This parameter varies from 0 to 9, and is reported every 3 hours. It is a measurement of the activity of the Earth's magnetic field. As the K index increases, the Earth's magnetic field becomes more disturbed. In general, the MUFs in the F2 region of the ionosphere become lower, possibly causing a radio amateur to lose propagation on the band they are on, and have to move down in frequency to continue the contact. For best propagation, we would like to see a K index of 3 or lower.

maximum electron density in the F1 region, and the maximum electron density in the F2 region can be calculated.

This calculation allows us to determine the highest frequency, also known as the *maximum usable frequency* (MUF), which allows a contact over a given path at a given time. Propagation usually consists of our radio wave going up to the ionosphere and being bent, or refracted, enough to return it back to Earth. A frequency higher than the MUF is not refracted enough and goes off into space.

Correlating Propagation to the Sun and the Ionosphere

Now we're back to another correlation issue between the state of the ionosphere and what the sun is doing. Before proceeding, we should realize that 10.7-centimeter solar flux and sunspots are *proxies* for the wavelengths of radiation involved in the ionization process. We use these as stand-ins, due to the fact that before the space age, we had no way of measuring radiation at extreme ultraviolet (EUV) wavelengths (the true F2 region ionizing radiation) because its energy is used up in the ionization process and nothing gets to ground level for measurement. Now that we have satellites above the atmosphere, we can measure EUV. But our propagation predictions were developed before the space age and had to be correlated to sunspots (later, they could also be correlated to the 10.7-centimeter solar flux).

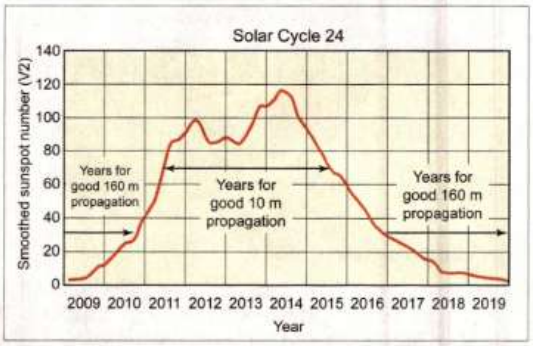

Figure 2 — During Solar Cycle 24, there were some years that were good for 160 meters and 10 meters.

EUV is the most important ionizing wavelength for our amateur radio endeavors. The discovery that more radiation at EUV wavelengths improved propagation on the higher HF bands gave us the correlation we needed to understand why more contacts were possible on the higher frequencies as more EUV impinged on our atmosphere. At solar minimum, the ionosphere can't refract the higher HF bands (15, 12, and 10 meters) back to Earth, because there isn't enough ionization.

Around solar maximum, the ionosphere can refract the higher HF bands back to Earth. On the other hand, the lower HF bands (160, 80, 60, and 40 meters) are generally best around solar minimum, because less ionization means there is less *ionospheric absorption* — loss that reduces the signal strength (see Figure 2).

Where Cycle 25 is Headed

Figure 2 is good history, but it is not enough to determine when 160 meters and 10 meters will be good during Solar Cycle 25. It all depends on how big Cycle 25 will be. As Steve Ford mentions in his article, there are pessimistic forecasts for Cycle 25 (a small cycle), and there are optimistic forecasts (a big cycle) for Cycle 25. Unfortunately, most of the forecasts are for a small cycle. But remember these are forecasts, not concrete truths.

If Cycle 25 is similar to Cycle 24, the good years for 160 meters are roughly for another year from now and toward the end of Cycle 25. The good years for 10 meters will be roughly 2023 through 2027. A bigger Cycle 25 will shorten the 160-meter lengths and extend the 10-meter lengths.

(Cont. on page 57)

ARRL News (Cont. from page 56)

Further Resources

Resources including websites and books are available for monitoring the status of Cycle 25 or for more information about the ionosphere and HF propagation. Recommended resources include:

- Daily 10.7-centimeter solar flux (along with other parameters) at **www.solen.info/solar**
- **www.spaceweather.com**
- **www.swpc.noaa.gov/products/solar-cycle-progression**
- **www.solarham.net**
- Propagation and information about who is working who on a given band is available at **www.dxmaps.com/spots/mapg.php?Lan=E**
- **https://pskreporter.info/pskmap.html**
- **www.wsprnet.org/drupal**
- **www.reversebeacon.net**
- For an assessment of the ionosphere itself, **http://prop.kc2g.com** shows worldwide MUFs for a 3,000-kilometer path using ionosonde data.
- Robert Brown's, NM7M (SK), *The Little Pistol's Guide to HF Propagation*, available for free at **https://k9la.us**
- Chapters on "Propagation" in *The ARRL Antenna Book* and *The ARRL Handbook*
- *The CQ Shortwave Propagation Handbook – 4th Edition* by Carl Luetzelschwab, K9LA; Theodore Cohen, N4XX; George Jacobs, W3ASK; Robert Rose, K6GKU (SK), from CQ Communications.

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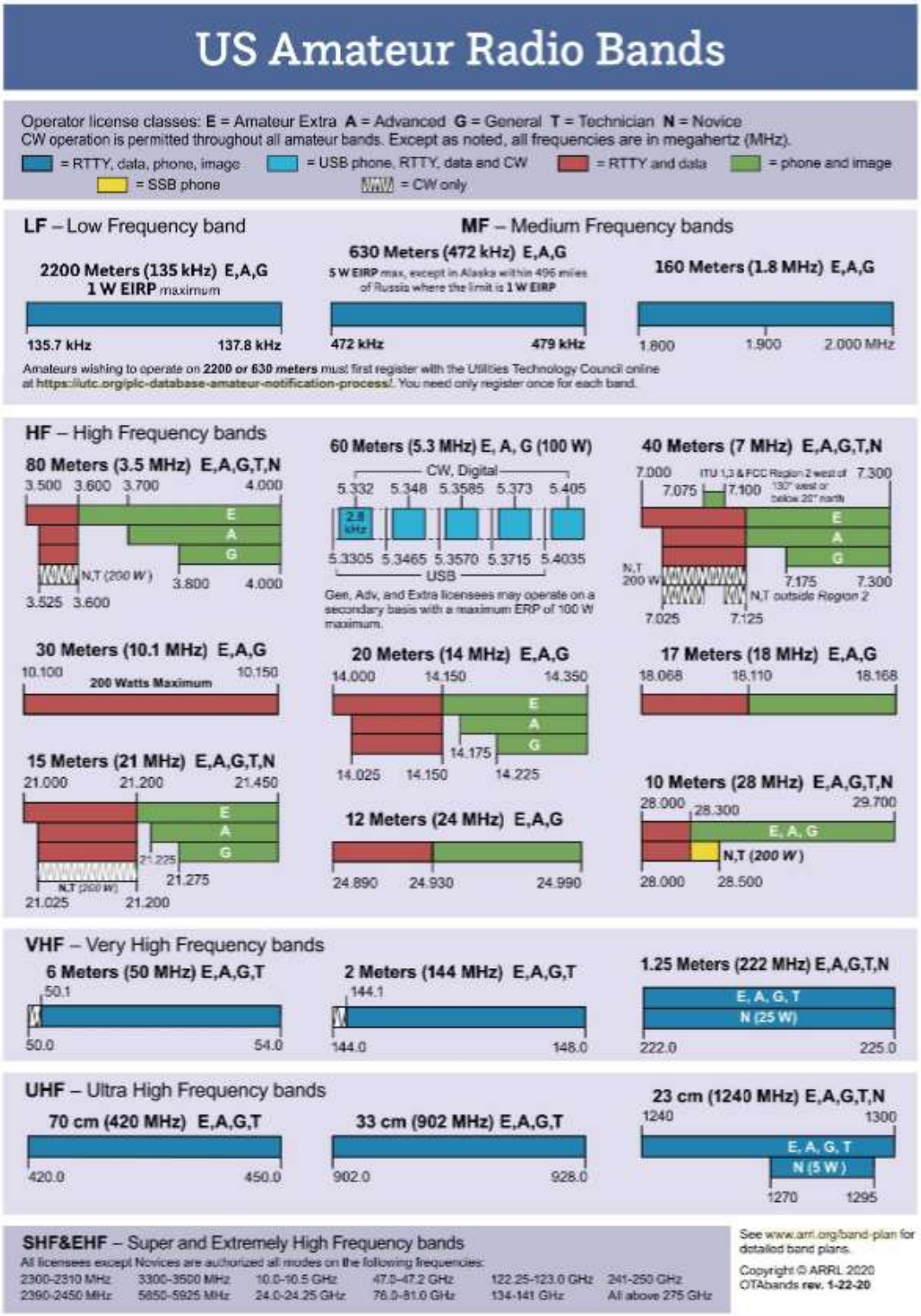
ARC/ARES Spring 2021 Exercise Speaker



(Cont. on page 60)

W1AW Schedule

PAC	MTN	CENT	EAST	UTC	MON	TUE	WED	THU	FRI
6 AM	7 AM	8 AM	9 AM	1400		FAST CODE	SLOW CODE	FAST CODE	SLOW CODE
7 AM-1 PM	8 AM-2 PM	9 AM-3 PM	10 AM-4 PM	1500-1700 1800-2045	VISITING OPERATOR TIME (12 PM-1 PM CLOSED FOR LUNCH)				
1 PM	2 PM	3 PM	4 PM	2100	FAST CODE	SLOW CODE	FAST CODE	SLOW CODE	FAST CODE
2 PM	3 PM	4 PM	5 PM	2200	CODE BULLETIN				
3 PM	4 PM	5 PM	6 PM	2300	DIGITAL BULLETIN				
4 PM	5 PM	6 PM	7 PM	0000	SLOW CODE	FAST CODE	SLOW CODE	FAST CODE	SLOW CODE
5 PM	6 PM	7 PM	8 PM	0100	CODE BULLETIN				
6 PM	7 PM	8 PM	9 PM	0200	DIGITAL BULLETIN				
6:45 PM	7:45 PM	8:45 PM	9:45 PM	0245	VOICE BULLETIN				
7 PM	8 PM	9 PM	10 PM	0300	FAST CODE	SLOW CODE	FAST CODE	SLOW CODE	FAST CODE
8 PM	9 PM	10 PM	11 PM	0400	CODE BULLETIN				

W1AW's schedule is at the same local time throughout the year. From the second Sunday in March to the first Sunday in November, UTC = Eastern US time + 4 hours. For the rest of the year, UTC = Eastern US time + 5 hours.

♦ Morse code transmissions: Frequencies are 1.8025, 3.5815, 7.0475, 14.0475, 18.0975, 21.0675, 28.0675, 50.350, and 147.555 MHz.

Slow Code = practice sent at 5, 7½, 10, 13, and 15 WPM.

Fast Code = practice sent at 35, 30, 25, 20, 15, 13, and 10 WPM.

Code bulletins are sent at 18 WPM.

For more information, visit us at
www.arrl.org/w1aw

♦ W1AW Qualifying Runs are sent on the same frequencies as the Morse code transmissions. West Coast qualifying runs are transmitted by various West Coast stations on CW frequencies that are normally used by W1AW, in addition to 3590 kHz, at various times. Underline 1 minute of the highest speed you copied, certify that your copy was made without aid, and send it to ARRL for grading. Please include your name, call sign (if any), and complete mailing address. Fees: $10 for a certificate, $7.50 for endorsements.

♦ Digital transmissions: Frequencies are 3.5975, 7.095, 14.095, 18.1025, 21.095, 28.095, 50.350, and 147.555 MHz.

Bulletins are sent using 45.45-baud Baudot, PSK31 in BPSK mode, and MFSK16 on a daily revolving schedule.

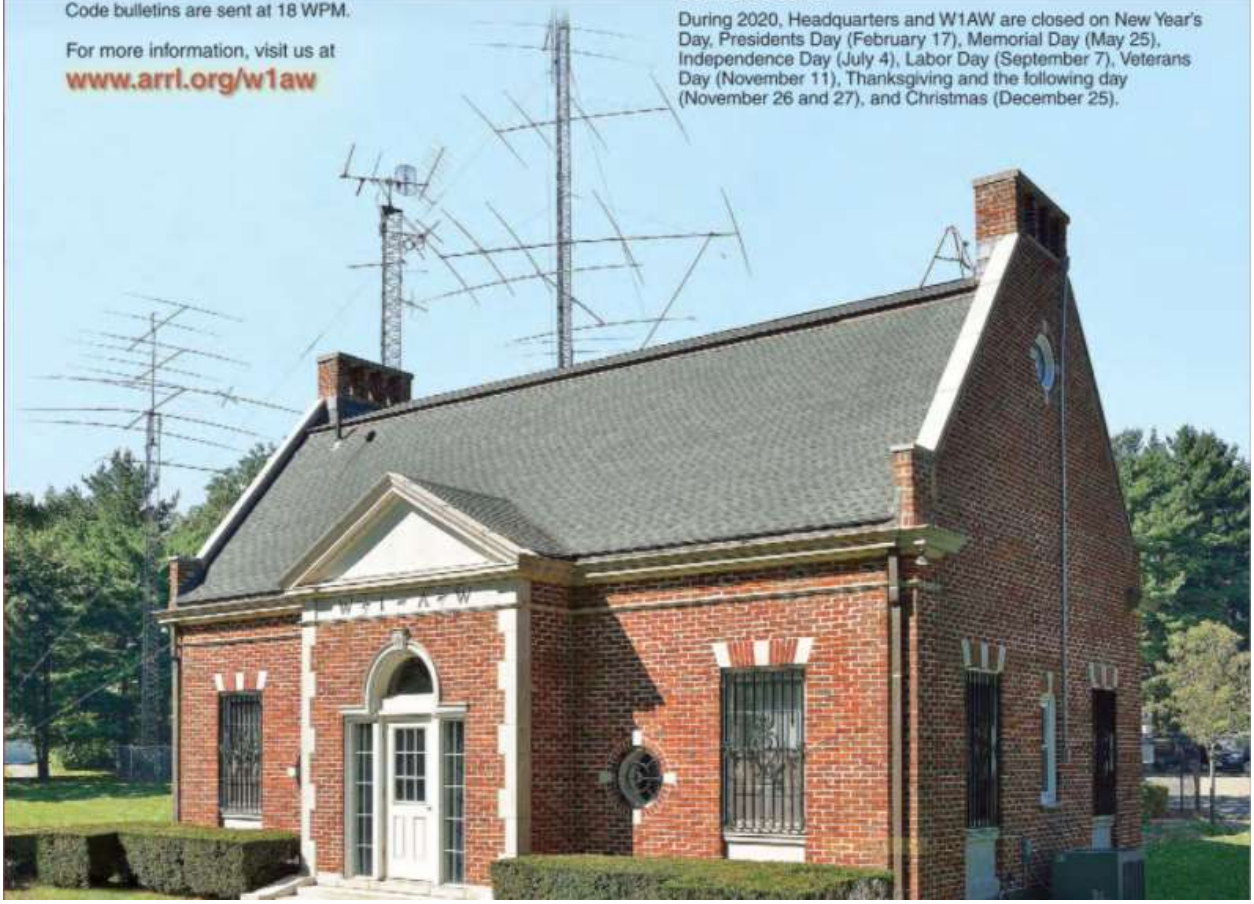
Keplerian elements for many amateur satellites will be sent on the regular digital frequencies on Tuesdays and Fridays at 6:30 PM Eastern time using Baudot and PSK31.

♦ Voice transmissions: Frequencies are 1.855, 3.99, 7.29, 14.29, 18.16, 21.39, 28.59, 50.350, and 147.555 MHz. Voice transmissions on 7.290 MHz are in AM double sideband, full carrier.

♦ Notes: On Fridays, UTC, a DX bulletin replaces the regular bulletins. W1AW is open to visitors 10 AM to noon and 1 PM to 3:45 PM Monday through Friday. FCC-licensed amateurs may operate the station during that time. Be sure to bring your current FCC amateur license or a photocopy. In a communication emergency, monitor W1AW for special bulletins as follows: voice on the hour, teleprinter at 15 minutes past the hour, and CW on the half hour.

W1AW code practice and CW/digital/phone bulletin transmission audio is also available real-time via the *EchoLink Conference Server* W1AWBDCT. The conference server runs concurrently with the regularly scheduled station transmissions. The W1AW Qualifying Run texts can also be copied via the EchoLink Conference Server.

During 2020, Headquarters and W1AW are closed on New Year's Day, Presidents Day (February 17), Memorial Day (May 25), Independence Day (July 4), Labor Day (September 7), Veterans Day (November 11), Thanksgiving and the following day (November 26 and 27), and Christmas (December 25).



A Quick Look at the "Two Slit" Experiment by Reese West KQ6TT

The accepted view is that a photon goes through the two slits as a wave and hits a sensor as a particle. OK. Let us try that.

Let's take a breakwater that has two gaps in it. A wave comes along which is parallel to the breakwater. Some of it goes through each gap or slit. These two waves now diffract from each slot and create an interference pattern on the shore which demonstrates regions where they add and subtract like there were two sources of the waves which were the gaps. No problem here. The original wave had parts of it that were reflected back in the other direction. There were three regions of reflection, each side of the slot area, and the section between the slots. Did that happen in our experiment? The energy that came through each slot was independent from each other.

We know that the frequency of photon as a wave gives us a specific amount of energy to account for. But our photon split into two wave fronts. We ignore the possible reflected part. If half of the photon energy went through each slit, it must now have a different frequency. But it did not change frequency, which means that the parts of wave front after 'breakwater' must still be connected so that it is an intact photon when looked at it from an energy point of view. The photon went through the slits with no back reflection, and, it remained intact on the far side. The only similarity with our water wave is that the diffraction pattern on the target structure bears some resemblance to a familiar affect. That is a true statement of the problem. The target structure always reacts with only a single spot for each photon. This is supposed to help illustrate the particle characteristic of the photon. But the wave action on the photon has to collapse to react with the waves going around to atom in order to transfer energy, and this is a function of frequency, phase, polarity, direction and angle of propagation, phase of the moon and that Schrodinger didn't have the courtesy to even give that poor cat a name.

So, I will take the position that the photon went through the slits intact but distorted in shape. Remember that, we guess, the photon has a rather small shape compared to the dimensions of the slits. I don't pretend to know what is correct. The only thing that I can say for sure is that the experiments with the slits should have been done a hundred years ago. The original slit work was in the mid- eighteen hundreds. I found a paper from the nineteen fifties about the E field polarity its effects. This was decades after that aspect should have been explored. **(Cont. on page 61)**

A Quick Look at the "Two Slit" Experiment (Cont. from page 60)

The slit experiments should be begun as if nothing has already been done. Effectively, that is where we are. Notice that the familiar word statement of the problem is what destroyed the thinking about it. Don't use words to think. Visualize!

Laurice J. West KQ6TT

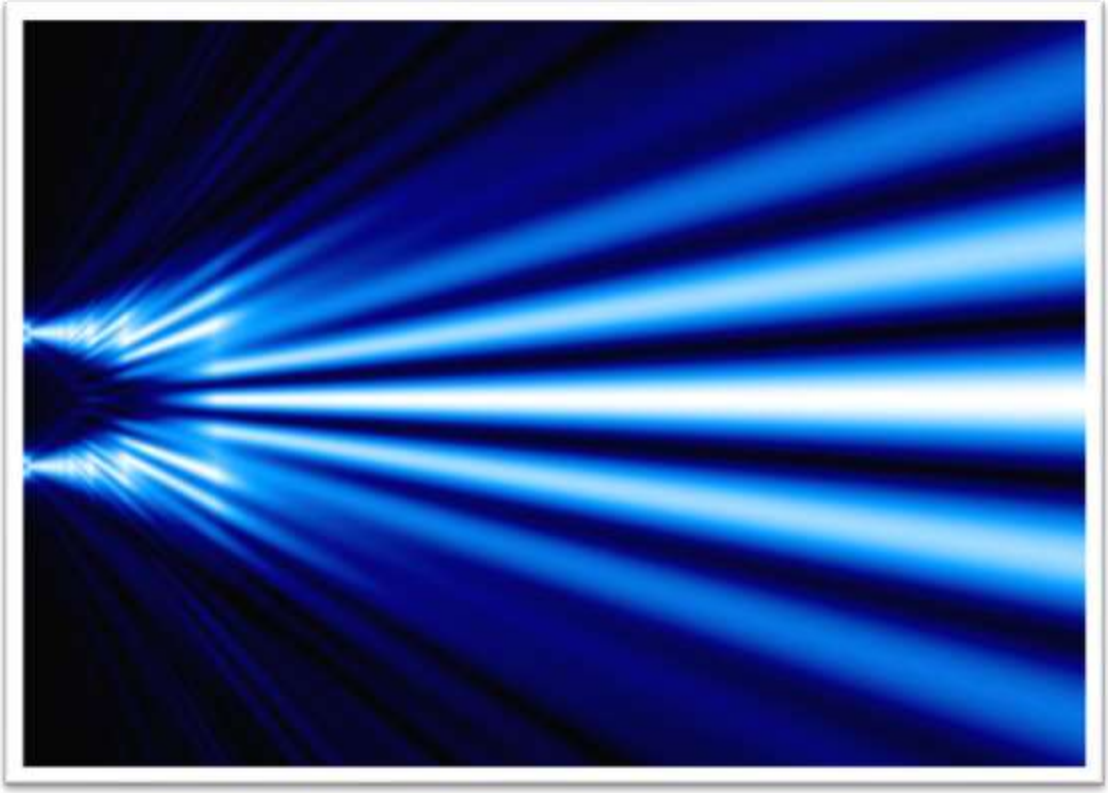


Photo credit Nature "Through Two Doors at Once: The Elegant Experiment That Captures the Enigma of Our Quantum Reality" Anil Ananthaswamy Dutton (2018) https://www.nature.com/articles/d41586-018-05892-6

Want and For Sale Ads (Continued from page 17))

See Denney N6HV for the following items: (note: all Items except the IC-251A have been donated to the club)

Asking for $75 (It's an all mode 2 meter rig.)

Asking for a $150 donation

Asking for a $100 donation (Cont. on page 63)

Want and For Sale Ads (Continued from page 62))

See Denney N6HV for the following items: (all the items below have been donated to the club)

Asking for a $10 donation

Asking for a $35 donation