THE eQRM

JUNE 2020



JUNE 27-28

The BVARA in Beaver County Pennsylvania

Beaver Valley Amateur Radio Association

W3SGJ

Repeater 145.310 PL 131.8

On the cover

It's that time of year when all Hams get on the air to practice their radio skills. Even hams that have cobwebs on their gear get it fired up and get on the air. It's Field Day! June 27 to 28th.

Inside this edition

Who We Are	3	Radio Sport	11
This Month	4	Bits and Pieces	12
Propagation	6	It's Your Dime	13
Get a License or Upgrade	7	Of interest to all	14
New License and Upgrades	8	Gang from Bygone Days	16
Membership	9	Voacap propagation info	17
Hamfests & General Announcements	10		

Check into our nets

Wednesday 2 Meter Wednesday 10 Meter
8:30PM on 145.310 MHz PL 131.8 9:00PM on 28.470 MHz

The eQRM is a publication of the Beaver Valley Amateur Radio Association (BVARA) and is Copyright 2010 - 2020. All material presented in this publication is not necessarily the views of the American Radio Relay League (ARRL), BVARA, or members of the said organizations. If you would like to contact the editor of the eQRM, please email David at kc3bxc.73@gmail.com. Please visit us online at www.W3SGJ.org. To subscribe to our newsletter, please visit W3SGJ.org/newsletter.php

2020 BVARA OFFICERS

MONTHLY MEETINGS

E-Board meetings are now held the Saturday before the monthly club meeting.

VE testing begins at 5:00 PM.

Regular meetings are at 6:30 PM

All meetings are held at the **Beaver County Emergency Services Center** 351 14th Street Ambridge, PA 15003 on the second Thursday of every month (unless otherwise stated).

Club Meetings 2020

Jun 11 *Online ZOOM Telecom

Jul 09

Aug Club Picnic TBA

Sep 10

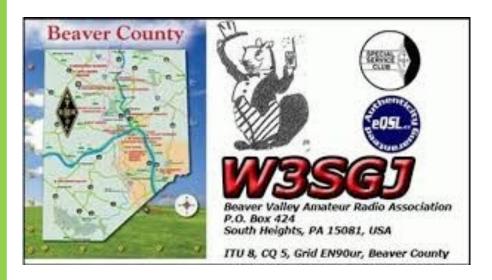
Oct 08

Nov 12

Dec Club Christmas

Party







Page 3 THE eQRM

This Month

This Month:

Speaker:

Rich Soltesz K3SOM

Topic:

Including:

Rich's Background:

Extra Class Ham, Licensed since 1962, VE, B.S. Electrical Engineering



Page 4 THE eQRM

More this Month

The Freedom Monaca has a great

Weekly

Thursday Morning Breakfast (or you can have lunch)



The BVARA meets every Thursday at the Freedom Square Diner in Center Township, just to the right of the Cinemark Center Township Marketplace at 09:30 AM. All radio amateurs and those interest-

ed in amateur radio are

encouraged to come join us at our Thursday morning breakfast.

Any Beaver County vice Net which PM local time on the WW3AAA 146.850

See you Thursday at



RACES / ARES

The eQRM Urges All County Hams to Participate.



Page 5 THE eQRM

Propagation

The July 2020

Propagation chart was unavailable

from the ARRL

at the time of

eQRM publishing.

PROPAGATION

The East Coast propagation chart listed here is for June 2020.

If you would like more information in general, please visit http://www.arrl.org/propagation

Page 6 THE eQRM

Get your License or Upgrac

If you are interested in getting your first FCC license or upgrading your current amateur radio license, the Beaver Valley Amateur Radio Association holds VE Test sessions (Volunteer Examinations) the second Thursday of each month at the Nine One One center in Ambridge Pennsylvania prior to our BVARA Club meeting. If there is no meeting there is no test session. Please come take your test with us!

For more information, contact: Rich Soltesz, K3SOM (724) 847-0610 k3som@arrl.net



VE TEST

School parking lot instead of regular location **Beaver County** Ambridge, PA 15003. Tests begin promptly at 5 pm

Emergency Services Center 351 14th Street

Meetings (the second Thursday of the month). on the same day as BVARA Club



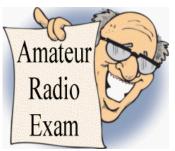
ALL candidates MUST bring ALL of the following:

- 1. 2 forms of I.D. one MUST be a photo I.D.
- 2. A pencil AND a pen with blue or black ink.
- 3. The original AND a photocopy of any valid ham license.
- 4. The original AND a photocopy of any C.S.C.E.
- 5. The test fee of \$15 cash, check, or money order.

Page 7 THE eQRM

New License and Upgrades

BVARA VE Testing



Testing this month:

You're invited, come test with us!

Testing for June 2020

Our Volunteer Examiners have secured an alternate location to resume testing this month. Details will be made available to those who have already contacted the VE Liaison because of space limitations. Communication will be emailed to these candidates no later than June 1st with specific details such as time and location. Face masks will be required and candidates will be kept approximately 6 to 8 feet apart, according to State of Pennsylvania guidelines as issued by the Governor and his representatives.



Page 8 THE eQRM

Membership Information

By becoming a BVARA member you help secure the future of Amateur Radio in Beaver County. Additionally, the BVARA receives a portion of each ARRL

membership you purchase!

Join the BVARA and ARRL

Sign up for:		Price					
☐ BVA	RA full membership	20.00					
☐ BVA	RA student membership	15.00					
BVA	RA associate membership	10.00					
BVA	RA Child under 21 at home membersh	nip 5.00					
One ye	ear ARRL membership	49.00					
A Clu	A Club Donation						
ARRL Memb	per? Yes No	Total	Enclosed				
Your License Class (If you have one.) Technician Name							
	General						
	Advanced						
	Extra Class	Email					
_							
	Your	Call sign					
	Your	Signature					

Make check or money order payable to:

The Beaver Valley Amateur Radio Association, P.O. Box 424 South Heights, Pa 15081

Hamfests & General Announcements

Cancelled till further notice

The eQRM has been notified that due to the COVID-19 safety precautions, the Breeze Shooter's Hamfest and Western Pennsylvania Section Convention has been CANCELED. The hamfest was scheduled for June 6-7 at the Big Butler Fairgrounds, but WILL NOT BE HELD THIS YEAR.

Page 10 THE eQRM

Radio Sport

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

Contest Corral

June 2020

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 - -Time		sh le-Time	Bands	Contest Name	Mode	Exchange	Sponsor's Website
1	1900	1	2030	3.5	RSGB 80-Meter Club Championship, Data	Dig	RST, serial	www.rsgbcc.org/hf
2	0100	2	0300	3.5-28	ARS Spartan Sprint	CW	RST, SPC, power	arsgrp.blogspot.com
4	1700	4	2100	28	NRAU 10-Meter Activity Contest	CW Ph Dia	RS(T), 6-char grid square	nrau.net/activity-contests
4	1900	4	2100	1.8-50	SKCC Sprint Europe	CW	RST, SPC, name, mbr or power	www.skccgroup.com
5	1900	5	1959	3.5, 7	HA3NS Sprint Memorial Contest	CW	RST, mbr or "NM"	radioamator.honlapepites.hu
6	0000	7	0200	1.8-28	PVRC Reunion	CW Ph	1st year of membership (for members), name, SPC, call sign when joined PVRC (for members)	pvrc.org/reunion/reunion.htm
6	0000	7	2359	28	10-10 International Open Season PSK Contest	Dig	Name, SPC, mbr	www.ten-ten.org
6	0400	7	2000	3.5-28	DigiFest	Dig	RST, 4-char grid square	rigexpert.com/digifest/rules
6	0600	6	0800	7, 14	Wake-Up! QRP Sprint	CW	RST, serial, suffix of previous QSO	grp.ru/contest/wakeup
6	0600	7	0600	3.5-28	VK Shires Contest	CW Ph	RS(T), VK Shire or CQ zone	wia.org.au/members/contests/wayks
6	1300	7	1300	50	UKSMG Summer Contest	CW Ph Dia	RST, serial, 6-char grid square	uksmg.org/summer-contest-rules.php
6	1400	7	0200	1.8-144	Kentucky QSO Party	CW Ph Dig	RS(T), county or SPC	www.kygsoparty.org
6	1500	7	1500	7-50	Dutch Kingdom Contest	CW Ph	RS(T), serial	dkars.nl/index.php?page=rules
6	1500	7	1500	1.8-28	RSGB National Field Day	CW	RST, serial	
0	1500	/	1500		HOGB National Field Day	CVV	Ho I, Setial	www.rsgbcc.org/hf
7	1700	7	2200	All (no WARC)	Cookie Crumble QRP Contest	CW Ph Dig	RS(T), SPC, cookie #, name	w3atb.com/cookie-crumble
10	0030	10	0230	3.5-14	NAQCC CW Sprint	CW	RST, SPC, mbr or power	naqcc.info
10	1900	10	2030	3.5	RSGB 80-Meter Club Championship, CW	CW	RST, serial	www.rsgbcc.org/hf
13	0000	14	1559	3.5-28	DRCG WW RTTY Contest	Dig	RST, CQ zone	www.drcg.de/drcgww
13	0000	14	2359	50	SMIRK Contest	CW Ph	4-char grid, mbr (optional)	smirk.org/contest.html
13	1100	13	1300	14, 21	Asia-Pacific Sprint, SSB	Ph	RS, serial	jsfc.org/apsprint/aprule.txt
13	1200	14	1200	3.5-28	Portugal Day Contest	CW Ph	RS(T), CT district or serial	portugaldaycontest.rep.pt
13	1200	14	2359	1.8-50	SKCC Weekend Sprintathon	CW	RST, SPC, name, mbr or "none"	www.skccgroup.com
13	1400	13	1800	144, 432	AGCW VHF/UHF Contest	CW	RST, serial, power class, 6-char grid	agcw.org/index.php/en
13	1500	14	1500	3.5-28	GACW WWSA CW DX Contest	CW	RST. CQ zone	contest.com.ar/gacw-wwsa
13	1600	14	1600	50	REF DDFM 6 Meter Contest	CW Ph	RS(T), serial, 4-char grid	concours.r-e-f.org
13	1800	15	0259	50 and up	ARRL June VHF Contest	CW Ph Dia	4-character grid square	www.arrl.org/june-vhf
15	0000	15	0200	1.8-28	4 States QRP Group Second Sunday Sprint	CW Ph	RS(T), SPC, mbr or power	www.4sqrp.com
15	1900	15	2030	3.5	RSGB FT4 Contest Series	Dia	4-char grid square	ususu mahan asaluf
						Dig		www.rsgbcc.org/hf
16	1200	16	1400	7	SARL Youth Sprint	Ph	RS, age	www.sarl.org.za
17	0030	17	0230	3.5-14	NAQCC CW Sprint	CW	RST, SPC, mbr or power	naqcc.info
20	0000	20	2359	3.5-28	Battle of Carabobo International Contest	Ph	RS(T), YV state or serial	www.qrz.com/db/YV4VV
20	0000	21	2359	1.8-28	All Asian DX Contest, CW	CW	RST, 2-digit age	www.jarl.org/English
20	1200	21	1159	3.5-28	Ukrainian DX Classic RTTY Contest	Dig	RST, 2-letter oblast or serial	urdxc.org/rtty/eng.htm
20	1400	21	1400	50, 70	IARU Region 1 50/70 MHz Contest	CW Ph Dig	RS(T), serial, 6-char grid	www.iaru-r1.org
20	1500	21	1500	1.8	Stew Perry Topband Challenge	CW	4-char grid square	www.kkn.net/stew
20	1600	21	0400	3.5-28	West Virginia QSO Party	CW Ph Dig	RS(T), county or SPC	qsl.net/wvsarc/wvqp/wvqp.html
20	1800	20	1959	1.8-50	Feld Hell Sprint	Dig	RST, mbr, QTH, grid, power	sites.google.com/site/feldhellclub
20	1800	20	2359	3.5,7,14,18, 21,24,28, 144 repeaters	ARRL Kids Day	Ph	Name, age, QTH, favorite color	www.arrl.org/kids-day
21	0800	21	1400	50	WAB 50 MHz Phone	Ph	RS, serial, WAB square or country	wab.intermip.net
21	1900	21	2359	1.8-28	Run for the Bacon QRP Contest	CW		grpcontest.com/pigrun
							RST, SPC, mbr or power	
24	00000	24	0200	1.8-28	SKCC Sprint	CW	RST, SPC, name, mbr or power	www.skccgroup.com
	1900			3.5	RSGB 80-Meter Club Championship, SSB	Ph	RS, serial	www.rsgbcc.org/hf
27	0600			3.5-28	UFT QRP Contest	CW	RST, QRP/QRO, mbr or "NM"	uft.net/reglement/eng.pdf
27	1200		1200	3.5-28	Ukrainian DX DIGI Contest His Majesty King of Spain	Dig	RST, 2-letter oblast or serial	www.izmail-dx.com
27	1200		1200	1.8-28 All (no	Contest, SSB	Ph	RS, EA province or serial Number of transmitters, operating	concursos.ure.es/en
27	1800	28	2100	WARC)	ARRL Field Day	CW Ph Dig	class, ARRL/RAC section or "DX"	www.arrl.org/field-day
29	0001	5	2359	28	10-10 International Spirit of 76 QSO Party	CW Ph Dig	Name, mbr or "0," SPC	www.ten-ten.org
29	1300	30	0400	1.8-28	QCX Challenge	CW	RST, name, SPC, rig	qrp-labs.com/party.html

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.

www.arrl.org QST June 2020 69

Bits and Pieces

Hello all,

We had our first BVARA Club meeting via computer by Zoom video communication. It went very well. We had twelve members check in. Some valuable field day and VE testing discussion took place. Technology has served us well in this hobby once again.

I was contacted by a local ham looking for lost ham gear from his early days. I hope someone out there can help him locate the lost gear, see the "It's your dime page 13". I sure would like



to hear how it turns out so I can share it here in the eQRM. Connected to the lost Ham gear, we have a story to share in this month's issue that pertains to the OLD Gang picture from the May issue of the eQRM. James Tolbert Jr. shared a very nice story with us, it is on page 16.

I talked to an eQRM reader the other day, he told me he has been getting a kick out of my Dadgum Pole exploits. He said "We all have had our setbacks in putting up an antenna. Our hobby isn't about the destination it's all about the journey and the people you meet along the way. You will overcome and be more educated because of it." I told him I will most likely have a professional pole installation done as soon as the ground dries out and can support the weight of their large truck. It will simply have to wait for a bit longer. He asked me to make sure I share how it all turns out in another issue of the eQRM. I will. His interest in the BVARA newsletter encouraged me greatly. I would sure like to hear from you. Please send me an email with a radio story you have to share.

To mask or not to mask, social distancing, home schooling, working from home, (red yellow green) open counties... "WELL DOGGIES" Things are interesting right now as Jed Clampett may say... some days I feel like I shorted out some electrical current (the Bits and Pieces photo represents me). I then remembered, (June 27-28) ARRL Field Day is right around the corner! How will I participate? Have you given any thought to this?

These sure are interesting times we are living in right now. Some things we have no control over. The things we do have control of can be comforting. Time on the radio waves is one such thing. Our radio hobby is not extremely affected by what is currently touching the entire world. The radio waves are not affected at all, well maybe they are busier. That is a good thing! I am always excited about Field Day. This year I am not sure how things will proceed. Field Day 2020 will be one for the record books most certainly!

I am excited to see and hear how fellow hams work out the details for their Field Day activities, it will just be different. I think the radio part will be exciting as always. The public interaction will have to be considerably different and our club member interactions will be different too. It still looks to be a very exciting Field Day. I encourage you to participate in some meaningful way for you. Please continue to be prudent but not panicked about this virus. Good luck to all, enjoy our hobby and be safe.

Be courteous on the air, be safe and have fun with your hobby.

Till next month, 73 KC3BXC.

Page 12 THE eQRM

It's Your Dime

Remember back when you could communicate by "Pay Phone" for ten cents? This page is for anyone who wants to communicate with the BVARA community and beyond. Please send me your article that you would like posted on this page. Please, only topics and language in good taste. As the editor I reserve the option to post it or ignore it. Send your dime to me at: kc3bxc.73@gmail.com

I received this email. Can anyone out there help a fellow Ham locate some old radio gear? Please read on...

I know this is a long shot, but years ago, I lived in New Sewickley Township, corner of Big Knob and Pine Run Rd. My novice call was WN3TIS. Dale K3HCT was one of my grandfather's friends from church he lived on Clay Street in Rochester. I used to meet him sometimes after school to watch and listen to him on the 80m CW traffic net. I had an old Millen 90801 transmitter and a Millen VFO. My father was an engineer with Honeywell in Pittsburgh. He helped me build a HV power supply for the radio. My dad sold all that ham gear at a garage sale sometime late 70s, early 80s. After my novice license ran out, I tried to pass the general exam. Back then you had to take your test with the FCC office in Pittsburgh. Taking the exam was quite intimidating for this 15yr old kid in a room with a bunch of much older men. I passed the CW, thanks to Dale, but never passed the theory.

I was wondering if anyone still around the area may have bought that gear back then and still has it. I sure would like to buy it back. Could you put this information in the eQRM, I sure would appreciate it. The VFO, power supply and etc.; I would surely like to buy it back. The power supply, holds a great deal of sentimental value... its something my dad and I did together. I was 14 yrs. old. I'd love to lay eyes on it again. It was in a real tall chassis, probably because of the big capacitors we used. If you would spread the word that I'm looking for that old gear; I sure would appreciate it....

73, Jamie Tolbert WW3S

David KC3BXC, over....

If you can help please email kc3bxc@gmail.com

Page 13 THE eQRM

Of Interest to All

Creative Approaches to Field Day 2020 By Paul Bourque ARRL Contest Program Manager



This year, Field Day promises to be a unique iteration of this annual event, with many individuals and groups coming up with new and interesting ways to adjust their approach. As an event, Field Day is structured to be versatile and can be adapted for any situation. Many groups have asked how they can adjust their Field Day planning to address social-distancing guidelines that may be in effect in many areas of the country, as gathering at their traditional FD site may not be feasible or safe. Instead of participating in a group event this year, consider operating as a Class B, C, D, or E station, utilizing your own call sign.

We will be including club names for all participating stations in the published results, so the efforts of your club's members can be acknowledged. While we will

Page 14 THE eQRM

Of Interest to All

not publish an aggregate club score, seeing the name of your club associated with various individual member's results is certainly a way to highlight your club's activity. Consider having an intraclub competition among members, seeing who can make the most contacts during the event. You can award prizes or distribute cer-



tificates at a club meeting. This can be a fun way to bolster the activities of individual club members, even though they cannot all gather together at the same location this year.

Try setting up a Field Day Challenge with rival clubs in neighboring communities. See how many members of each club get on the air from their own stations and participate in the event. In addition to "bragging rights," perhaps certificates to the top-scoring individual entry in each category can be presented as part of this inter-club camaraderie. Myriad opportunities are possible in this year's Field Day setting.

One club is planning to conduct their Field Day as a four-transmitter Class A club group, with participants spaced to comply with social distancing guidelines within the 1,000-foot diameter circle and operating individual stations. This club also plans to set up a Get-on-the-Air (GOTA) station. The club's plan is to have the GOTA coach at the Field Day site, while having GOTA operators participate via remote link.

Another club is planning to set up a remote-controlled station at their usual Field Day site, with club members taking turns controlling the station from their own homes. The club is creating a schedule outlining when each member of the club will be at the control of the transmitter via the remote link.

Whatever approach you take to this year's Field Day, keep up to date with the current guidelines issued by local and state health agencies that may impact your proposed operation. ARRL invites your stories about the interesting and creative ways you're planning to use to adapt your Field Day operation. Share these on the ARRL Field Day Facebook page at https://www.facebook.com/groups/1966096706830030/We will be posting updates on the Field Day webpage as they become available.

ARRL FIELD DAY is June 27-28

Courtesy of the ARRL web page

Page 15 THE eQRM

The Old Gang of Bygone Days

A Letter from an eQRM Reader

Hello, my name is James Tolbert Jr, I go by Jamie, and my amateur call sign is WW3S. I can't tell you how thrilled I was to see a picture of Dale Squires, K3HCT in your recent newsletter. I grew up in Beaver County. I lived on the corner of Big Knob and Pine Run roads, and Dale was one of my Elmers. He sang in the Grace Lutheran Church Choir with my grandfather, and I learned to copy CW listening to Dale handle traffic on the CW net that met around 6:00 pm. I would go to his house on Clay Street in Rochester after school.

As I recall, he had a Heathkit DX-60 for his transmitter and (maybe) the matching HR-10 for a receiver. My other Elmer was Steve Williams, W3NBQ. Steve lived out behind Sewickley somewhere and worked with my Dad at Honeywell, in the computer field service division. Steve gave me my Novice exam during the summer of 1972, and after impatiently waiting for what seemed like forever, I got my first ham license, WN3TIS. I already had a Radio Shack DX-150A receiver from my SWL days, and Santa (aka Steve, W3NBQ) brought a Millen transmitter and VFO for Christmas that year, but we had no power supply. So, with the help of my Dad and Steve, we built one, and my first QSO was in January of 1973.

I remember attending a few Beaver Valley club meetings, they were held in the old train station as you entered into Beaver. There was a nice man, Mr. Householder I believe, that always tried to make the shy kid feel welcome. Back then Novice licenses were only good for two years and sadly, after Mom drove me into Pittsburgh to the FCC field office, I was unable to pass the test.

I took the receiver with me when I moved into our family cottage in Conneaut Lake, and Dad sold the other gear at a garage sale. Boy, if anyone reading this knew of what happened to my old gear, I'd sure like to know! (see page 13)

Fast forward to 1991, and the first Gulf War. News reports indicated that news of the invasion reached the outside world by a ham operator from inside Kuwait. I told my family, hey, I used to have my ham license, I dug the old receiver out of the attic, and never looked back!!! Licensed again in early 1991 as KA3YRG, I went thru the ranks, trying for Amateur Extra, as that was before vanity call signs, and the third call district was the only one with 2x1 calls left (reserved for extras only), and the FCC just started allowing hams from outside the district to apply for those calls. A few months later I passed my Extra and changed call signs to WW3S.

I enjoy reading your newsletter, especially when it comes to old articles from the 70's. Perhaps one day I'll even make it to one of your meetings, thanks again and 73.....de WW3S

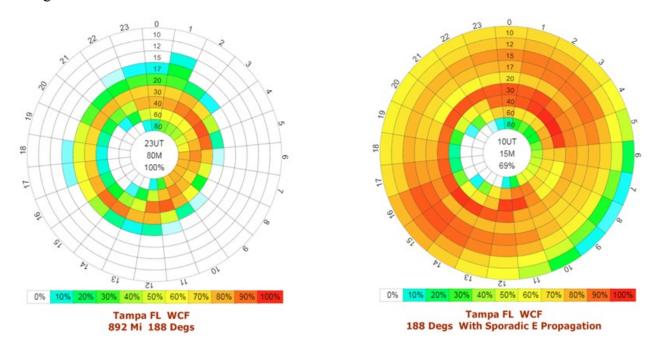
(Read more about Jamie's activities at his web page on QRZ.com)

Page 16 THE eQRM

Field Day Propagation Forecasts with VOACAP Online

One of the **free** software tools available to ham radio operators for predicting which are the best bands to use between two locations is *VOACAP Online*. Shown here is a forecast between Beaver County and Tampa, FL. Around the outside, the hour is given as UTC (subtract four hours for EDT). Note that 'Hour 01' is actually from 00:30 to 01:30 UTC. Concentric rings from 10 meters towards the outer rings down to 80 meters near the center show colored circular segments that indicate the probability of making an SSB contact. Defined parameters have chosen 100 watts, and the use of vertical antennas as we have used over the last several years. A deep-red color predicts a 'slam dunk' while no color predicts 'no chance' of making a contact between the two locations.

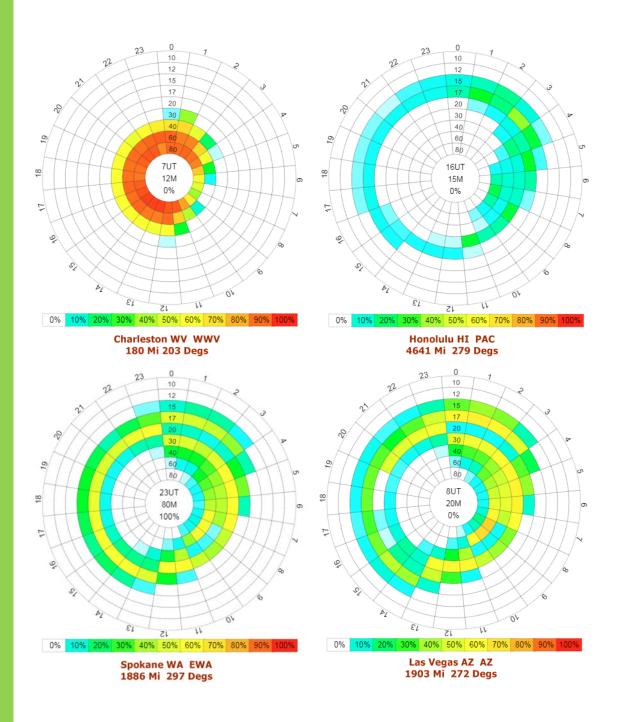
Models and forecasts are always wrong. You can take that to the bank! At best, they are educated guesses based on smoothed data that have been accumulated over many 11-year sunspot cycles and adjusted for consistent predictable deviations from the norm caused by factors previously unknown or neglected.



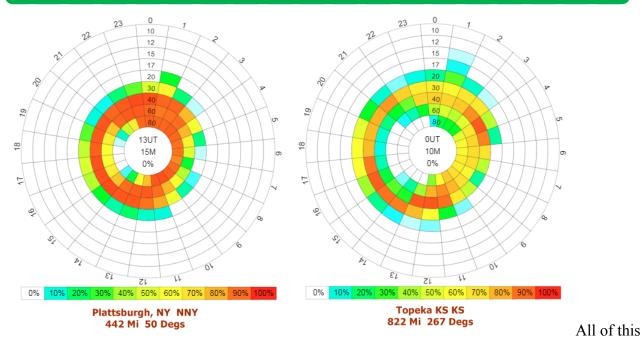
Because we are at 'rock bottom' between Cycle 24 and 25, some factors tend to be too aggressively forecast in the absence of significant f-layer interaction that appear with significant sunspot numbers and related solar flux. Perhaps this is a fault of the model, as indicated by the writer of the user notes for VOACAP Online. By activating the Sporadic E (E_s) option, the results clearly appear exaggerated and not realistic. The same prediction was repeated with Sporadic E included. You be the judge! The results for June 27, 2020 without E_s for various cities follow.

You can find VOACAP Online at https://www.voacap.com/hf/ so that you can take a test drive.

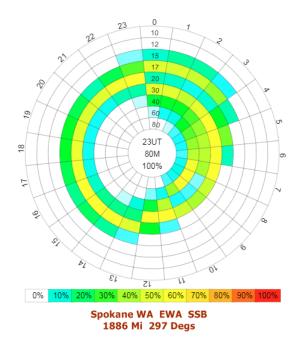
Page 17 THE eQRM



Page 18 THE eQRM

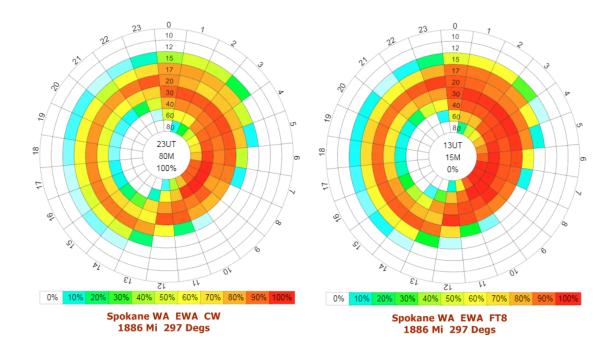


forecasting seems very helpful for SSB, but what happens if one wants to operate CW or FT8? Does it change the odds of making the contact, assuming same power level, same skill level, same antenna? A good target for these non-SSB modes might be Spokane, Washington. Do the probabilities improve? You bet! First is our Propagation Wheel for Spokane with SSB:



Now compare those probabilities with SSB above with the CW on the left and the FT8 Propagation Wheel on the right as shown below.

Page 19 THE eQRM



Even if you only run 50 watts on FT8, that is only 3 dB or half an S unit no matter what mode. Being able to pull signals out of the noise more than makes up that small 3 dB difference.

Rich Soltesz – K3SOM

Page 20 THE eQRM