

County Hunter News OnLine

July 2023
Volume 19 Issue 7

Welcome to the On-Line County Hunter News, a monthly publication for those interested in ham radio county hunting, with an orientation toward CW operation. We also cover some park chasing activities these days. Contributions of articles, stories, letters, and pictures to the editor are welcomed, and may be included in future issues at the editor's discretion.

The County Hunter News will provide you with interesting, thought provoking articles, articles of county hunting history, or about county hunters or events, ham radio or electronics history, general ham radio interest, and provide news of upcoming operating events.

We hope you will enjoy the County Hunter News. Feel free to forward, or provide links. Permission is given for copying or quoting in part or all provided credit is given to the CHNews and to the author of article.

CW County Hunter Frequencies are 14.0565, 10.124.5, and 7056.5, with activity occasionally on 3556.5 KHz. Also, there is SSB activity now occasionally on 7188 KHz. The CW folks are now pioneering 17M operation on 18.0915. (21.0565, 24.9155, and 28.0565). Look around 18136 or for occasional 17M SSB runs usually after the run on 20M SSB . (21.336 and 28.336)

You can see live spots of county hunter activity at ch.W6RK.com

For information on county hunting, check out the following resources:

The USACA award is sponsored by CQ Magazine. Rules and information are here:

<http://countyhunter.com/cq.htm>

For general information FAQ on County Hunting, check out:

<http://countyhunter.com/whatis.htm>

MARAC sponsors an award program for many other county hunting awards. You can

find information on these awards and the rules at:

<http://marac.org/awards.pdf>

There is a lot more information at www.countyhunter.com . Please check it out.

Back issues of the County Hunter News are available at www.CHNewsonline.com

De N4CD, Bob Voss, Editor (email: telegraphy@verizon.net)

Notes from the Editor

N4CD Rumblings

1) Sunspots – We got them. Seriously! Some days great with 17, 15 and above active. Lots of DX from fixed stations, especially FT-8 being worked world wide, on upper bands. In generally good up to 15m and sometimes good on 12 and 10m depending upon the sunspot numbers and solar disturbances. 20M been lagging but 15 and 10m rated 'good' most days.

In June, we got slammed a few times by flares that took out the band for an hour or two – all of them – zippo – then recovery. SFI is up to 180 with Sun spot number of 150! Plus this month sporadic Es on 10 and 6m have been good.

2) Dayton Attendance. From the Dayton Hamfest:

“FOR IMMEDIATE RELEASE

The 2023 Hamvention attendance was 33,861, which is more than 2,000 greater than last year and even surpassed the previous pre-pandemic attendance record at the Greene County Fairgrounds and Expo Center of 32,472. General Manager Jim Storms said, “Things went very smoothly due to the dedication and hard work of close to 700 volunteers.”

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Released by:
James M. Gifford
Hamvention Media Chair
KD8APT

3) **Connecticut Counties** - one source, the Extra Miler Club, indicates CT has done away with the 8 counties and instead has 9 'regional planning' entities. For the Extra Miler Club, you now have to visit the nine new entities to finish running all counties in CT. Don't know yet how this will affect county hunters yet.

Late Mobile QSO Party Results

New England QP

K2UA mobile (NM2G, K2UA ops) 1310 cw qso

Rig: TS-480HX with SGC500 amplifier to a Tarheel 200A-HP antenna in a receiver mount. Tarheel 40A-HP dedicated to 40 meters on a brush guard up front, running barefoot at 200 W. The radio is permanently installed and the vehicle has lots of permanent bonding. Power for the amplifier was supplied by a 200-Ah SOK LFP battery. The radio was powered by a separate home-brew 200-Ah LFP battery. Accessories ran from a 75-Ah LFP battery. The battery setup allows us to operate from a fixed location (county line) without drawing any current from the vehicle's start battery.

Counties activated: 23 (13 in Vermont, 6 in New Hampshire, and 4 in Mass).

1210 miles of driving, including 600 miles in New England and a little more than 600 to get there and back.

Mike, N2MG, and I started planning this contest in spring 2022 and we've been looking forward to it since our NEQP debut in 2021. This year's NEQP was our third full-time QP effort together, though we have collaborated on the last two NYQP contests as well, as separate M/S mobile operations. We were looking forward to another long drive with

obscure movie references, road sign commentary, incredible scenery, high gasoline bills, made-up on-the-spot memes, and vaguely inappropriate phonetics of the sort that begin to flow freely after a certain amount of fatigue and sleep deprivation have set in. In short, there's way more to our operation than just the operating!

Most of all we looked forward to "greeting our regular customers," and you did not disappoint!

Route: Started at the BERMA/FRAMA line, in a deep valley. Traveled north into Vermont, then northeast into New Hampshire, turning northwest and traveling back into Vermont on Saturday night. Stayed in St Johnsbury, arriving around 1:15 AM local time. Departed by 8 AM for points north and west in Vermont, then traveled south down Rte 100 most of the day through Vermont, finishing with two more Massachusetts counties. Left New England at 0001Z for home.

By any objective measure, 1300 QSOs looks really good for a mobile operation in a 20-hour contest that gets 1000 logs every year. However, aside from a few good runs, it was a struggle for us to get anything going most of the time. Other QSO parties create a puzzling issue to overcome for the first 9-hour segment of the contest. Like 2021, we ended day 1 with just 555 QSOs. Our rates were terrible for long stretches, especially Sunday afternoon. We had a three-hour stretch of 28-24-30 QSOs, for example, and only four clock hours of the entire contest at or above 100 QSOs, peaking at 123 in the 21Z hour on Sunday. That is to say, not close to what this setup usually produces. Still--keeping things in perspective-- we had a great time. We were able to be out on the road operating the radio in ideal weather and with amazing scenery.

Highlights: Every QSO with our regular chasers, especially OM2VL, K0SM (20+ Qs), and KE2AMI. KE2AMI (Mrs K0SM), who has been licensed just a few months, made her first-ever CW QSO with us on Saturday evening and then worked us 11 more times throughout the course of the event! A big thrill for this OT. OM2VL (30+ QSOs) was as reliable as ever. I began to get nervous if we went 20 minutes in a new county or a new band without working him. He and DL3DXX were strong and easy to work on all the bands--stronger than a lot of stateside and VE stations.

Other chasers who called in ten times or more included K1GU, WN4AFP, N8II, K4BAI, AA5JF, DL3DXX, K1RO, K3MM, K4QS, K5KPE, K9CW, KO1H, N2CU, N2JJ, N4OX, N6AR, N8UM, NE8P, NS2N, WA6KHK, WB2FUE, WB2WPM, and WN1GIV. One of the greatest feelings in mobile QSO party operating is the thrill you get when all the regulars call in--it's really hard to describe how cool that is!

The scenery was another great highlight. It is a very fine spring this year in New England! The station was reliable too, which you can't take for granted. We broke the PowerPole connector off the cable that powers all the accessory electronics as we were loading Mike's stuff into the vehicle, but that was a quick fix--that's why we carry spares.

Lowlights: Read K5ZD's comments on conditions. He uses the word "terrible" three times, which is simply not enough. The thing that hurt us the most was a complete lack of short skip, which aside from making it hard to work people, made frequency selection and management difficult. We could often only tell that we were too close to someone else by hearing their callers in the passband. Hard to say how many times we chose poorly, but it was a lot--we had to move around a lot more than usual to try to find a quiet, clear spot. Apologies to all who are used to finding us on the same frequency on each band with every QSY.

Noise was also a challenge. Hearing well is difficult when you're on the road. I know people were frustrated trying to work us; I apologize. We were frustrated too. Thank you for sticking with us! The station works well, and the vehicle itself is quiet, but during our trips through towns of any size and even rural areas along power lines, we had some hideous noise. With more normal conditions, people are louder on average, so we have fewer issues hearing people.

We had a weird issue in Northern Vermont on Saturday night on 80 meters. Every time Mike would transmit, the hands-free function in the car would want to dial a phone call. This got old in about 30 seconds. This is a problem I solved a few years ago by disconnecting the rear defroster in the Pilot--all it takes is about 35 W to trigger it when the defroster is connected. We were running 500 W. The only thing I had changed was to plug in the dual-band 144/440 FM radio for the trip to Mike's house. It uses a PowerPole cable that goes directly to the vehicle battery, but it doesn't have a choke in line. Once I disconnected the power cable to that radio, the problem was solved.

On balance, it was a great event and we enjoyed it a lot. It's one of my favorite radio weekends of the year. Thanks to K1KI and anyone else who has a hand in making NEQP a great event! Looking forward to being back next year.

N4CD Editorial

Several posts on the K3IMC forum got me thinking. First was a post from W7FEN which read:

“It's been a good many years with the County hunters. I started in June 1977 and have worked all counties two times and need 134 counties for 3rd time. My radio needed repair and I decided it was time to hang it up. The only driving I do is to church and Masonic Lodge. I have lost two wives and lost most of my hair. It has been a wonderful 40 plus years.

I'm not going that say how many counties I put out as I have lost that information. I am now living in Evergreen Estates in Clarkston, WA (Asotin County) just about 2 and a half miles from where I lived when I got my license and also started County Hunting. A big THANK YOU to all the County hunters for these wonderful years. I will make sure my address is correct in the data base. Happy Hunting to all.”

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Many county hunters have come and gone. Some worked first time and that was it – off to other challenges. Or they just show up in state QSO Parties – maybe mobile – maybe 'county expedition' or just at home giving out their county. On the other hand, many make friends during the years and years it takes to get the first time (all confirmed). That often takes ten years of effort, miles of driving, war and tear on cars. It can be a lot of fun going to county get togethers from minis around the country to the National Conventions. I'm not sure when county hunting 'peaked' but it was probably in the 1980-1990s decades, and still strong into the 2000s. There are still hundreds on the MARAC list receiving the Road Runner and hundreds on the list for the County Hunter News. We add a few new folks a year, but lose a few each year as well. Just add a few a year.

Who doesn't remember over 250 showing up for the 3M Minis in Murfreesboro, TN? The airwaves were full. Twenty folks on the list on 40M ready to run – up 3 up 6, down 3, and more. Big rigs running all over the interstates and more – KK7X, KC1NA, WB4FFV and more.

There used to be mini conventions all over the country. Las Vegas, Harlingen TX, Lake Texoma, OK, Kansas City, etc. Not too many lately other than Michigan.

I'll get back to some of that a bit later.

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Then another post about 'self credit' and county hunting, with lots of comments.

“This is what MARAC gets for allowing self credit. Remote is another total mess. Either one is not a level playing field!”

I'm not sure how one is supposed to take that. A dozen comments followed:

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KB6UF noted: “The reason for my last run was to finish up awards via self credit. But it seems that some folks thinks that is not right, I follow the current rules, but if there is disagreement regarding this practice, should I revise my next trip and take out counties I was going to run because they were going to be self credit counties? My next run is a transmit county for me, could just go and run 20 meters only get the transmit credit and move on. My project is to finish the lower 48, already ran AK in 2006, that will leave HI to finish them all. So if I'm hearing right, just concentrate on finishing up transmit and don't do the self credit stuff.”

N8HAM noted: "Last Oct I put 5000 miles on my truck and spent who knows how much money to go the National. I was able to put out about 120 new counties and about 10 repeats. Without self-credit I would have been able to fill in 120 new transmit slots and not much else. If I worked 10 CH in each they could have gotten the following slots filled: N, 1x3, bingo of their choice, 4 bands, MG, 2 stars. Not everyone could use everything but that is 10 slots time 120 counties or I could have filled 1200 slots for others, gotten about 120 for myself, spent 3 weeks wear and tear on me and the truck.

W9OO noted : "Just my poor attempt at an objective view: taking a relay is no different than using a remote station. One employs a station remote from their own to complete a contact. BUT unlike those who use remotes, the relay is also using a second station operator to complete the contact. The relay repeats the callsign of the first party to the mobile, thus making it a MULTI-OP contact.

Given that some may say such contacts should not be allowed for those applying for INDIVIDUAL awards, as they employed other persons to complete the contact. Contests separate multi-op stations from individual entries. Perhaps the solution is to list awards

and number by endorsements: all from the home station only, occasional remote/relay user, mobile using credits, etc. To be fair no mixed category allowed.”

AE3Z noted: "It's what they call "cheating"... Oh well, so much for MARAC today..."

N8KIE noted;" without self credit what incentive is there to run counties. The only ones I don't run are the counties as self credit for natural bingo is not allowed so if you need one of those who loses

KE3VV noted : "Well... it is just one award (Natural Bingo) and meant to be almost impossible to achieve..."

"many of my contacts for natural bingo are fixed stations, including some digital. It is also possible to use QRZ to identify hams in a county with a needed call letter and arrange a sked contact. For most of use... maybe all.. it is an award that cannot be achieved... doesn't mean we should make it easier. There are plenty of incentives to operate mobile without extending self-credit to natural bingo."

KB6UF noted: "Self credit was the reason for my last run, not many mobiles any more."

KC3X noted: "Without self Credit and remote operations it would be a level playing field. Self credits help the one running mobile but when you have a pair following each other and not working the counties for everyone else, it is not fair. I agreed that when remote first started it was fair because the remote station had to be within 50 miles from your home station.

KE3VV noted:" Two Ops following each other around and working each other without making any other contacts was allowed before self-credit for the county you are in when you transmit. That was done long before self-credit. Whether it is "fair" or not is a matter of opinion, if the rule allows it, it is not "cheating." It is taking advantage of a loophole. Didn't happen very often anyway and those who did it have to live with it. Self credit was adopted as an incentive to operate mobile after the rise in gas prices and other factors reduced the number of mobile ops. It is no different than the proliferation of follow-on awards that appeal only to mobile ops because they require mobile operations to earn the award. The awards and rules governing them are what they are and the choice is up to you whether you want to work for an award following the rules or pass on the award. Remote operations was actually meant to help level the playing field between the growing number of ops who were located in restricted HOAs and those who could put up all the aluminum they could afford. There are so many disparities among county hunters that an actual level playing field is a pipe dream. Not everyone can afford

an amp and a tribander, but that doesn't mean MARAC should require all valid contacts to be made with 100 watts and a dipole."

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Whew. Lots to digest there.

First, recall that 'county hunting' goes way back to the Certificate Hunters Club (CHC) run by 'THE OLD MAN', Clif Evans K6BX. The club was devoted to obtaining certificates – for participation in, or winning contests from state QSO Parties to other contests. It was to acquire wall paper. It was active in the 1950s, 60s and into the 70s. Most activity was in state QSO Parties with 'portables' going out to activate counties. Not many mobiles on HF in the 1950s – in fact, it wasn't even allowed other than 10m and up for a while. Even then, you had to notify your local FCC office if trip was more than 48 hours or portable operation more than 48 hours away from home!

The first award for working/confirming 500 counties created and was issued in 1961. Twenty Six applied for it, and in the confusion that followed, the first awards were labeled 1-A to 1-Z. The CHC net ran on 14.340.

In 1961, CQ Magazine took over the Award. The first award for all counties was issued to Cliff Corne, K9EAB, in 1965. There was a split in opinion and the main net for county hunting wound up on 14.336. Mobile activity was originally discouraged but showed up on the 40m net in 1963 as rigs became available for mobile use.

MARAC was formulated in 1969 with the first convention in 1971. It would be over a decade after that before MARAC took over most of the awards! MARAC initially was to encourage mobile operations, to provide incentives for keeping those who have worked all counties active, to provide awards related to mobile and county hunting and to publish a monthly newsletter. Awards consisted of running 25, 50, 100 counties activated, running all of a state. Etc. No awards for Nth time, Bingo, MG.

Let's start with mobiles. One of the unique things about county hunting, going back to the very beginning with CQ Magazine announcing the rules for the USA-CA Award, is that you can work counties from ANYWHERE. Let that sink it. Probably the main part of the reason is two fold. First, it was expected to take at least a decade before the first award was issued – and many folks would likely change QTHs at some point. Some might take 25-30 years. For ARRL Awards like WAS, that usually meant having to start

over at a new QTH. (Yeah, I worked 47 states on 160m in five years in VA, then had to move. Never bothered to start again on 160m). So, keep in mind that it matters NOT where you are when you work a county. You can be at home. You can be mobile. Portable 300 miles from home at your friends station. You can be on a self DX expedition outside the country. All of them. All count as long as you work someone IN the county and get them confirmed for the CQ USA-CA Award. (There was no MARAC in 1965.)

However, for CHC Awards, K6BX declared YOU COULD COUNT THE COUNTY YOU WERE IN MOBILE for the USA-CHA award. Self credit goes back to this era! 1960 up to the 70s for the CHC awards.

The USA-CHA is no longer available and the CHC faded away in the 1970s. K6BX had a disagreement with CQ Magazine and that ended that. He was the author of the CQ monthly county hunting column in CQ, and when CQ Magazine decided it would no longer print 'from the OLD MAN' in capital letters, they split.

Now, at some point, folks realized that if two mobiles traveled together – tag team, they could work each other. This going back to the 60s when rigs were full of tubes and you spend a bunch of bucks on a mobile setup like a Multi-Elmac transmitter and receiver, or a Johnson Mobile TX, maybe a war surplus ARC-5 type receiver and transmitter, or converter in front of the AM car radio, etc. Cars got 11-12 mpg. Even if there were two people in the car, it was very difficult to work each other – there were no 'portable' rigs back then. No 2m handhelds! Not even converted CB walkie talkie. So at convention times and others, mobiles would watch out for each other, give out counties needed. You heard the call 'Last county please' on net to get those last counties done. Was that cheating? Nope, that was part of county hunting. Remember, the first rule of counting hunting is you can work counties from ANYWHERE, including 10 feet way. Some trips two mobiles followed each other all around states or 800 mile trips. At convention time, usually several mobiles all went out on the same route, tag team, to give each other counties. Did anyone complain back then? Hope? It was all part of the adventure of getting them all.

Now, even back then, some elected to work all counties from their home station. Great.

The first organization to issue Second Time was the B&B shop in AZ. Not MARAC. The B&B shop offered half a dozen awards including running all of a state, YL mobile, Five Star. Publications including the annual County Hunter Handbook so you could get the names and addresses of county hunters to send QSL requests (or Skeds for their county or nearby). They put out the map book and the book for the Five Star Award,

first time, Second time, etc. There was no internet. No QRZ. No spotting sites. At first, if I remember right, you still had to confirm second time. That would eventually change.

The mobile QSL Bureau in SC sponsored the Third Time Around Award and the Master County Hunter Award (Bingo)

N9DEH sponsored the Big Rig Award.

No self credit for the CQ Magazine Award. You had to work someone 'in the county'. Didn't matter where you were. Home or 20 feet away.

Back then, the ultimate challenge was the five star award. Most mobiles had none. Several had two but almost no one had three. How long would it be? Decades! A short wave listener, WDX9DCJ, got the first Five Star Award in 1996. The first county hunter to get it was in 1999! Three decades later! (The latest challenges are Twenty Star and Natural Bingo -). Yeah – they are tough – but mobiles have 5,6, 7 stars. Some even more so five star is easily accomplished and 20 stars is not far away.

Of course, things are now primarily CW and SSB, with growing activity on FT-8.

In all the county hunting era, there are mobiles who 'ran all counties' using 2M FM. Worked every county on 2M FM. There are others who went to AK and HI and only worked each other (couples) on 2M FM for those tough to get ones. I think one award was done only on 10M using a handheld (converted CB walkie talkie) talking to the other mobile op.

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There have always been incentives for running counties. Awards for finishing a state. Credits and 'points for the Master Gold Award. (1 point per county run including repeats) for the Master Gold Award.

Well, after folks got the Master Gold Award (where you could count the county you were in for 'self credit' for the 1500 points) , MARAC created a whole 'ladder' of following awards. All of them required mandatory running of 500 different counties making contacts on multiple bands and working someone with the next lowest award level to count). Master Platinum. Mobile Diamond. Double Diamond. Each incentivized mobiles to go out and run, basically, 1/6th of the counties, to earn that part of the award (plus work the rest, too). Got MP? Now you need to go run another 500

for MD. You could get self credit if you worked someone with one lower award level FROM the county The first form of 'self credit'.

MARAC has 100 different awards. Back the 80s, there were over 2500 people on the MARAC mailing/directory list and in the listings of county hunters. 250 would show up in TN for the mini there. Now, it's a lot different. 30-40 attend a National. Same for a Mini here and there Counties are being run. Well over 1500 likely in the QSO Parties in the last year – fixed and mobile.

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So we get back to 'self credit'. Not new – been an idea that started in the 1960s with the CHC. Wasn't really needed for decades as we had lots and lots of mobiles. Twenty on the list at convention and Mini time. SSB nets. CW nets. Big Rigs on 5-6 days a week. Now? Now, it's hard to even find an open frequency on 20m SSB to put out a county as two dozen or more park 'activators' use all the band up to 14.347 sandwiched in between existing nets. Worse, for county hunters, there is sporadic activity until a mobile is out on a trip.

A few years ago, MARAC voted to extend 'self credit' to nearly all the county hunter awards'. (all but Natural Bingo basically). If you're an OM, you can't claim self credit for YL mobile, either. But it HAS created incentives for single op mobiles to run counties by the hundreds.

Now, some have not needed it for some awards. Way back when, Miss Ida N2TPH and I would go on long trips a few times a year. Fall trip from Warren County NY to Collin TX. Then later to Palm Beach FL for the winter. Then back to TX in Spring and back to NY in summer. We took detours and worked each other, first on 223.5 FM(pair of talkies – novices only had 220Mhz then) and later on 2M FM. Filled in many contacts. Later I went mobile with Charlie, W0RRY (SK) on many trips – to get needed counties – to Dayton Hamvention a half dozen years. Those were fun times till Charlie no longer could do that. We worked on 30M cw using a separate battery powered QRP CW rig from needed counties to finish 30M. Some do the same now on multiple bands (80-10M) for County Challenge Award working another mobile at short range, but there are fewer and fewer joint trips other than OM/YL teams. K5GE pops up here and there - same for W0GXQ and K8ZZ winding up in the same area and counties at times. Not all that often.

Now, K8ZZ and KB6UF are on a quest to run them all. Lots of long trips – east, west, Nantucket/Dukes, California, OR, WA, ME. Part of their reason for the trips is getting

needed counties for self credit as well for other awards. N5MLP has run most of the country along with a couple others.

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So it's 2023. Just forked out a bunch to put new tires on the 2016 Malibu with 157,240 miles on it. Last set lasted 67K miles, so not complaining too much. Had to replace the Tire Pressure Monitors, too. One gave up the ghost after 7 years, five months. They have little batteries in them that wear out. One goes, the rest will go soon. Time for an oil change again after two big trips. (Mich Mini and Dayton). Not even two months – hi hi.

I've got about 170 to go for 10th time. Only thing I'm really keeping track of other than transmitted counties (3rd time). All paper logs. Wander a bit here and there to get a last county for folks but not so much as in the past. I've worn out five cars. Over 200,000 miles on the first Buick LeSabre. 225,000 miles on the second LeSabre. 175,000 miles on the first Chevy Malibu. 157,000 miles on the current Malibu. (plus a couple thousand on rental cars). (that doesn't include 160,000 miles on the 1990 Honda Accord non-ham – around town, commuting to work and other trips, or the current around town Prius – 65K miles). I'm slowing down a bit. I'll still be car shopping in a year or two.

Now I sort of plan routes to get new Parks on the Air. Naturally, that requires a different route to get them – counties I've not been in for a while. Only so many ways to go from TX to Dayton – so wander further and further off the 'short way'. Same for MI. I get a counties here and there myself with self credit. Nice perk. Not complaining. In 2016, on year, hit over 35 states with 50,000 miles of driving (NPOTA year). Never counted the counties but it was hundreds and hundreds. I'm slowing down a bit these days with less miles per year. (and not as many county hunter events to go to either).

It takes over 150,000 miles to run all the counties for most folks. Likely 175,000 miles since you break things down to 2 to 3 week trips, with return to QTH each time. I've done it twice. Won't be doing it a third time. Enough. I'll let some of the others keep going and join the list of 'Ran all USA'. Likely younger ones. Well, since Sept 2014, when I started over after finishing Ran All USA Second Time, I'm up to 1373 new transmit counties run for third time. There's not even an award category in the MARAC database for Ran All Counties Second Time, no less 3rd time. Keep track but no real drive here to finish third time transmit all counties. . There aren't too many 'new' transmit counties within 500 miles of my house – hi hi.

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Now for remotes.....remember, you can work a county from ANYWHERE. So if you use a remote in NY to work a station in OH, that counts and always has. The only thing that matters is where the mobile is. Not you.

Miss Ida, N2TPH, had it great. When she was in Warren County, NY, with a beam, it was easy to work FL and TX and everywhere in between. When she spent winters in FL, easy to work New England and NY and a lot of the east coast. When she spent time in TX, she caught a lot of the west coast and midwest. Three different QTHs a year, year after year, for 7 years, plus of course, our trips to and from those locations via a somewhat different route each year. All fair in county hunting. She was an eager beaver. Beat me to first time. Got 2nd time, 3rd time and most way to 4th time. On the air 8 hours a day or more! (I was busy working!).

We do crazy things. I desperately needed a county in WY. There was one op there. He only operated on 160m late afternoon and not at night. Hmmmm.....how was I going to work him? I didn't even have a home 160m station (got on a few times a year with a temporary L antenna a few times for contests but it wasn't a loud station for sure). So I went to a friends 'super station' – AA5NT. Contest winning station. Multi -op/multi position. 200 foot towers. Stacked HF beams. Slopers on 160 for transmit. Beverages for receiving. KW amps. Tough to work 160m at 800 miles at 5-6pm but we managed a 3x3 QSO. Oh, I didn't use my 'own' station. Ha – remember, doesn't matter where I was. Only thing that mattered was where HE was. Was that cheating? Nope, using my brain and a friend's super station. All fair in CH. Now, maybe I could have used a remote station closer to him? Dunno. Wasn't an option then.

Oh, and when I wanted to work the 30M mobile station in Second District AK– W6TMD - I headed north to South Dakota to be closer to him. Got him. All that is 'fair' in county hunting. I'm not sure why all the hullabaloo about 'remote stations'. Yeah, it's different. But legal.

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Are awards 'easier' with self credit.. Yeah, a bit – **but most awards are still earned by mobiles going to a county and dozens working those mobiles.** Few are going to hop a plane to Nome AK to get self credit for Second District. Or Kalawao. Or Wallowa OR. Or Nantucket. Upper tier awards such as MP, Diamond, Double Diamond have always allowed self credit (if you work another station with one lower award level). You bet I want that mobile that wanders to rare places to get self credit as a reward for putting all those miles on the car, dollars for air flights, dollars in the gas tank and car upkeep. Not

all that many mobiles out there compared to 30-40 years ago. Kalawao gets on maybe once every year and a half. Maybe less.

If you look at the results- not that many finish up awards each year. It's great when you see a dozen awards after a major mobile's trip. Send in those LC's.

Half a dozen mobiles have been out there really putting out the counties. Used to be dozens and dozens but now it's not even a dozen a year putting out more than 100 counties. Then again, every county helps. If you can run 20-30 a year to help out, great.

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Sure , you are free to do it 'no relays'. Do it all CW, all SSB. Now 'digital'. Many have done it SSB and CW. No one yet for all on 'digital'. . Many use relays. Some don't. That's been a county hunter tradition since way way way back when. You are free to do it without 'self credit'. Or relays. Whatever rocks your boat. Is there a separate listing for 'no relays'? Nope. Same for 'without self credit'. Would it make a difference? Only your certificate might say 'no relays'.

The endorsements on USA-CA got lost as custodians changed. Same for those issued by the B&B Shop and Mobile QSL Bureau. Some got it all on 75M 35 years ago but who knows who now? All on 10M? Dunno. Only lately is that info available with MARAC for awards issued by MARAC Some worked all counties on a band/mode and didn't ask for an endorsement. Could have been all 80M CW or 2M FM but we'll never know from the first half or more of numbers issued – and maybe later. Heck, first time around for me had contacts from 160M to 432 MHz, CW, FM, SSB maybe even a dozen 6M AM contacts in there. Second time was mostly cw and SSB with a handful of 2M in the mix.

So.....what's the bottom line? Good question. I think the answer is 'do it the way you want'. Relays or not. Self credit or not. Remote or not. Working a mobile from 10 feet away or not. Your choice. A big part of county hunting has always been mobile trips, working other mobiles while out on those trips for needed counties, county hunters getting together to get needed counties, etc.

We need all the incentive possible to keep those mobiles running.

- -

Now, the fastest growing areas of ham radio are digital (FT-8) and parks on the air. Over 10,000 new hams were created and got on the air for Parks on the Air. A couple dozen a week and thousands of upgrades a year. There are over 25,000 registered in the POTA database. Whoa..... that outnumbers county hunters about a thousand to one. Let's hope we can convert a few of them to county hunting!

CQ Magazine issues a bunch of 500 counties worked every few months– mostly through FT-8 contacts confirmed on E-QSL – which is accepted for USACA. Many overseas. An occasional 1,000 counties confirmed.

Bottom line: Do your own thing. The way you want. Work on the Awards you want, the way you want. If you're not having fun, feeling a sense of accomplishments, maybe it's time to do something a bit different? Run parks? Get on digital? Go on county hunting trips?

Kentucky QSO Party

Looks like a good amount of fixed station activity and a few mobiles. Many 'parks' on the air activated during the QP. Digital contacts were allowed in this one.

From the 3830 contest reflector:

OM2VL - fixed - DX - 80 cw 28 ssb 5 digi 47 counties

Thanks for the QSOs! The best band was 15m, with excellent strong signals. Thanks to everyone who back to my CQ!

Excellent activity from K4KCG bonus station.

Most QSOs with:

KM4CH/M 15/13

N4TY/M 7/5

KM4FO/M 2/2

K4KCG 14/3

W4WKU 7/2

(6): N4QS

(4): KG8Y, KY4KY, N4SS

73, Laci OM2VL

KA6BIM - fixed - OR 71 cw 20 ssb 2 digi 44 counties

Looks like Thunderstorms limited some of the operations, especially the mobile operators. Better to be safe! Fun contest, but was hoping for more counties represented. Thanks for the qso's

Dave ka6biim

WN4AFP - fixed - SC 36 cw 11 ssb

Found KY ops on three bands and 29 counties. Thanks for the Qs. 73 Dave WN4AFP

KM4CH mobile 288 cw 5 ssb qso

16 counties. 400 mi.

KC4TUC DRIVING.

New set up 7100 tarheel 2

And Hustlers for backup.

Band conditions rough all day.

KM4FO mobile and driver - 107 cw qso

Had no comments

W4WKU - portable/home in KY 89 cw 190 ssb

Portable in Hancock County for 5 hrs; operated from home QTH in Daviess County for 4 hrs

N8II fixed WV 61 cw 34 ssb 51 counties

There was just enough activity to keep plugging along. The mobile QSO count was disappointing: KM4FO 9 (good), KM4CH 3, N4TY 0. For a long time there were no spots of KM4CH on 40, only one QSO after 3rd hour for me. From 1826Z until 2303Z I made no new QSO's on 20M, the band was pretty well closed except for a few weak stations I had already worked. By 23Z by far most of the activity was down on 40M. But 20 remained open from central KY westward until the end working KM4RO at 0050Z. What saved my mult total was calls and QSO's from rare counties on 40 SSB, many thanks! A few counties I worked may have been a first ever for me. 75/80M was noisy, but of course many more Q's could have been made there with more KY activity. I called 2 rounds of CQ's on 75M and also some on 80 CW.

Thanks for all of the QSO's.

73, Jeff

Mobile Activity in June

At the beginning of the month:

N9JF and KA3QLF running parks this day – June 1

WD4OIN noted in PA

He had the KY QSO Party with several mobiles out – see above - but only dozen spots for whole contest.

KB6UF down in south TX, across the state, then into AZ. Had to hurry home to LA to get a plane to ME to help out at BIL campground there for emergency repairs.

WY0A headed out on 9th on long trip to AK. From CO to UT to NV to OR to WA. A few days later made it to AK,

On the 18th - Put out 3rd and 4th on SSB with poor conditions.

W4SIG spotted in MO counties

Fairly quiet until WV QP with 4 mobiles out there – see below report

K4YT flew to AK. Put out 4th and 3rd on cw. Then hopped plane to Deadhorse AK (Prudhoe Bay) in 2nd AK to meet up with WY0A in day or two. Met WY0A and worked each other.

N3MRA running counties in KY, MO,

K5GE popped up up north in SD, then over into MT and WA.

K8ZZ headed out and wound up in MT - both K5GE and K8ZZ in Meagher and Park MT and likely more to come. K8ZZ posted multi-week trip on K3IMC web page for trips. Over to WA, down through CA, into NM. TX. OK. Somewhere I saw he has 900 counties left to run as of 2015 – should be whole less than that by now after major trips to New England and elsewhere. Over 240,000 miles of county running in 2015. Is this the last trip to get them all done?

WY0A made it to Fourth AK and headed up road to Second. No further report as of press time 6/27.

West Virginia QSO Party

from 3830 contest reflector – or direct emails

W8V mobile (WA5POK opr) 146 cw

My score includes the bonus points for 10 counties. Note: my operating time ... 10 hours driving, 2 hours operating. I had never been in that part of the state and my route was mostly driving in canyons and looking for that rare place where I could stop and operate ... closed post office, closed gas stations. I had only three operating locations where I was on top of a ridge and great location. Rig is Icom 7200, 100 watts to either a 20 meter or 40 meter Hustler antenna that was bumper mounted on my F150 ... need to get the HiQ fixed. The only county I missed OM2VL was Boone county. I CQed for 30 minutes and received only two calls. I drove on looking for another spot (now it is after

dark) and the next thing I know is that I am in Raleigh county. I entered my last county with 5 minutes left, hit the brakes and pulled off onto the shoulder, CQed and worked OM2VL for my only Q in Greenbrier county. Next time ... a much different route.

W8OP mobile 145 cw

Terrific weather for the WVQP. Drove 482 miles and only made 145 Q's. I ran the entire Eastern Panhandle of WV. 40 meters was not very productive but 20 meters was good. I had a 5 hour period with absolutely no cell service, so was unable to spot myself and that was a major hindrance. As usual, I do not operate in motion. I really need to go to computer logging and a memory keyer. Many thanks to the folks that worked me from some difficult counties. Had a good time but need to make mobile station improvements.

73 Alan

WB8III mobile

Weather was perfect, sunny, 68-70 degrees all day. I did well on 20CW and SSB. 40 meters was tough both SSB & CW, noise level seemed to always be S3-S4. I wish I had taken my 30M hustler resonator off and put 15M on for the contest. Worked OM2VL 16 times! Laci always had a great signal even on 80CW.

Next was KA6BIM with 7 QSO's, then many with 5 & 6.

73

Steve WB8III

W4GO mobile 200 cw 326 ssb

Thanks for the QSOs. It was fun, despite a couple of problems that caused my numbers to fall well short of last year's WVQP trip. The first issue stemmed from modest participation from western NA (WNA), exacerbated by too many relying on spots to work stations on SSB.

Pre-contest,

I had taken measures to announce my plan to focus on the high HF bands and encourage

QSO partiers out west to find and spot me. It didn't work. When I finally got spotted on 20 m SSB for the first time (after 3.5 hours of CQing on essentially the same frequency as I traversed eight counties!), I got a flood of callers in WNA not yet worked to that point. Presumably, they would have wanted to grab the previous seven counties too, many of which were rare ones. This was a classic case of everyone assuming that "someone else" will find and spot the SSB activity.

On a positive note, this was my first trek with a second HF antenna on the vehicle. I used the main antenna for 20 m, and later 40 m, and kept the small antenna tuned to 15 m for quick CW sessions on that band. Fortunately, a handful out west (plus OM2VL) were watching the RBN spots. It was nice to be able to change bands instantly, draw callers within a minute of the first CQ, then flip back to my run frequency on the previous band.

The second problem of the day can be laid on the rough terrain and serpentine roads of the Mountain State. In Jackson County, the 10th on my route, a tractor trailer had run off US-33 in a curve and struck a utility pole, bringing the power line down across the road. I was told that it would be three hours before the road would reopen. Looking at the map, I saw no feasible detour around the wreck on roads that could be trusted not to have low tree limbs that would de-antenna-fy my vehicle. Given the late hour, I opted to backtrack and hit the few counties within easy reach of highways. The closure ended up costing 7 of the 19 counties on my intended route.

For the remainder of the contest, I did 40 m SSB when in motion and ran through 40, 20 and 15 m on CW when parked. The number of callers from eastern NA on 40 m SSB and CW was tremendous, reinforcing my usual policy of focusing on bands serving ENA.

The 12 WV counties activated: HAN, BRO, OHI, MAR, WET, TYL, PLE, WOO, WIR, JAC, RIT, DOD

Distance driven during contest hours: 289 mi QSOs, SSB: 326 QSOs, CW: 200

WV counties worked: 10 States worked, counting WV: 39 VE provinces worked: 6 DXCC entities worked, not counting US, Canada: 7 Call signs worked: 313

Top five chasers: OM2VL (20 QSOs), KA6BIM (15), K5MAY (9), KD2KW (7), KS4GW (6)

OM2VL fixed DX 65 cw 28 ssb 39 counties

Great opening on 15m, which was open here till 02Z with great signals. Unfortunately only 2 WV back to my CQ on SSB. 10m was open also so long and I heard bunch of US station, but no any WV was here ... but I wkd new DXCC on 10m - VP6A, at 19:13Z! Thanks for the QSOs, especially who was also on 15m!

Most QSOs:

W4GO/M 18/10

WB8III/M 16/7

W8OP/M 11/9

W8V/M 10/9

K8AAT/M 2/2

(7): W8WVA, N8II

(5): WA8KAN

(4): K3JT

73 LACI

KA6BIM fixed OR 41 cw 18 ssb 29 counties

Comments: Wish there were more stations on, It was fairly slow pace. Averaged 5 qso's/hr.... The Rover stations did a good job of covering many counties. 40 meters did not open to here in the West coast until nearly the last hour of the contest. Many of the WV stations had already gone to 80 meters by then. Please cycle thru the bands!! Thanks for the qso's

Dave ka6bim

K4BAI fixed GA 20 cw 17 ssb 17 counties

Generally horrible band conditions from GA to WV Saturday. 20M was mostly too long and 40M was mostly too short during the day. Late after signals were better on 40 and gone on 20. QRN from nearby storms was terrible on 40 and almost impossible. I worked all but one WV station I heard. Tried running mainly on 40 SSB and there was one WV station who called and i couldn't get his call. Sorry about that. Thanks especially to the mobiles for making the effort on a very poor propagation weekend. 73,

John, K4BAI

N8II - fixed WV 262 cw 558 ssb qso

It is encouraging that in state WV activity seems close to the 2020 high and mobile activity was probably the highest ever! I heard two mobiles I have never worked, K8AAT and K8TAC (both SSB). Other mobiles were Matt W4GO, Alan W8OP, Steve WB8III, and W8V.(WA5POK, opr). It was a little disappointing that Matt was not very active on 40 until 00Z as activity was high from 20Z onward. Perhaps we should send out a few mobiles to MO which has had almost no mobiles the last 2 years, Hi! Driving the WV roads and operating can be quite a challenge as many counties have no "modern roads" and our terrain is probably the most rugged of any US state. Curves and hills are the norm with many spots in a "hole" surrounded by mountains suppressing signals. Thanks to all of the mobiles for their efforts.

Despite starting off well with 122 QSO's in the first hour (40CW/20CW first 30, then 20 SSB), this year's WVQP will be noteworthy for it's lack of sporadic E and very high noise on 20M in the evening from Midwest storms. There was no Es to the NE or any direction for most all of the QP. I don't think I worked any W1/W2 area stations on 20 at all. Skip was pretty long to the west the entire time with Nashville about on the edge of the skip zone at best. IL was about the closest west worked to some degree and they were gone in the evening. Activity on 20 from WI and AR (worked more different stations than in ARQP) was unexpectedly high. I also had local line noise (windy day) during most of the daylight hours which took out some weak signals as did the storms on 20. Activity after 24Z on 40 and 20 seemed better than last year. Other high rate hours were 18Z with 93 Q's, 20Z 95 Q's mostly on 40, 00Z 92 Q's with a nice pile up on 40 CW for about a half hour. I lost a lot of high population East Coast/W8 QSO's on 20 compared to normal, but 40 helped fill in the vacuum. Even the 01-02Z hours were pretty busy with rates in the 70's operating on 20/40/80M. My Q total on 80 was better than expected, got to 75M too late. The great majority of WV QSO's were on 40M both modes. I didn't think I would make 100K, but came close around 03Z and went shopping on 20 CW for 4 DX mults to boost the score just above the 103K I made last year.

Many thanks to all who called and spotted me. I had good support. Congrats to OM2VL for working 39 counties! I also connected with K5CM for a sweep of 80 thru 10M both CW and SSB and XYL N5KW for most of those slots as well. The 10 and 15M QSO's were after dark on Es despite the usual long skip on 20. I worked OM2VL on 80 thru 15 CW and 40-15 SSB.

73, Jeff

K3JT - fixed WV 242 cw

Always fun --All CW - all the way!

station: IC7300, 80M & 40m wire, 20M & 15M & 10M Quad. N1MM+,

1945 Telegraph Apparatus CP-810 bug.

73 Terry .

W4GO mobile

planned to run HAN, BRO, OHI, MAR, WET, TYL, PLE, WOO, WIR, JAC, ROA, CAL, GIL, LEW, HAR, MRN, MON, MRN(2), HAR(2), DOD, RIT

OM2VL worked him in 10 counties with 18 contacts but W4GO did not post breakdown, total QSOs or score. Runs mostly SSB but also some CW.

Solar News

Solar maximum could hit us harder and sooner than we thought. How dangerous will the sun's chaotic peak be?

By Harry Baker

The sun is quickly approaching a major peak in solar activity. Experts warn it could potentially begin by the end of 2023, years before initial predictions suggested.

From a distance, the sun may seem calm and steady. But zoom in, and our home star is actually in a perpetual state of flux, transforming over time from a uniform sea of fire to a chaotic jumble of warped plasma and back again in a recurring cycle.

Every 11 years or so, the sun's magnetic field gets tangled up like a ball of tightly wound rubber bands until it eventually snaps and completely flips — turning the north pole into the south pole and vice versa. In the lead-up to this gargantuan reversal, the sun amps up its activity: belching out fiery blobs of plasma, growing dark planet-size spots and emitting streams of powerful radiation.

This period of increased activity, known as solar maximum, is also a potentially perilous time for Earth, which gets bombarded by solar storms that can disrupt communications, damage power infrastructure, harm some living creatures (including astronauts) and send satellites plummeting toward the planet.

Some scientists think the next solar maximum may be coming sooner — and be much more powerful — than we thought.

Originally, scientists predicted that the current solar cycle would peak in 2025. But a bumper crop of sunspots, solar storms and rare solar phenomena suggest solar maximum could arrive by the end of this year at the earliest — and several experts told Live Science we are poorly prepared.

Approximately every 11 years, the sun goes from a low point in solar activity, known as solar minimum, to solar maximum and back again. It's not clear exactly why the sun's cycles last this long, but astronomers have noted the pattern ever since the first, aptly named Solar Cycle 1, which occurred between 1755 and 1766. The current cycle, Solar Cycle 25, officially began in December 2019, according to NASA.

So what causes our home star's fluctuation? "It all comes down to the sun's magnetic field," Alex James, a solar physicist at University College London in the U.K., told Live Science.

At solar minimum, the sun's magnetic field is strong and organized, with two clear poles like a normal dipole magnet, James said. The magnetic field acts as a "giant forcefield" that contains the sun's superheated plasma, or ionized gas, close to the surface, suppressing solar activity, he added

But the magnetic field slowly gets tangled, with some regions becoming more magnetized than others, James said. As a result, the sun's magnetic field gradually weakens, and solar activity begins to ramp up: Plasma rises from the star's surface and

forms massive magnetized horseshoes, known as coronal loops, that pepper the sun's lower atmosphere. These fiery ribbons can then snap as the sun's magnetic field realigns, releasing bright flashes of light and radiation, known as solar flares. Sometimes, flares also bring enormous, magnetized clouds of fast-moving particles, known as coronal mass ejections (CMEs).

A few years after the maximum, the sun's magnetic field "snaps" and then completely flips. This ushers in the end of the cycle and the beginning of a new solar minimum, James said.

To determine where we are in the solar cycle, researchers monitor sunspots — darker, cooler, circular patches of our local star's surface where coronal loops form.

"Sunspots appear when strong magnetic fields poke through the surface of the sun," James said. "By looking at those sunspots we can get an idea of how strong and complex the sun's magnetic field is at that moment."

Sunspots are almost completely absent at solar minimum and increase in numbers until a peak at solar maximum, but there's a lot of variation from cycle to cycle.

"Every cycle is different," James said.

Solar Cycle 25

In April 2019, the Solar Cycle 25 Prediction Panel, which is made up of dozens of scientists from NASA and the National Oceanic and Atmospheric Administration (NOAA), released its forecast for Solar Cycle 25, suggesting that the solar maximum would likely begin sometime in 2025 and would be comparable in size to the maximum of Solar Cycle 24, which peaked unusually late between mid-2014 and early 2016 and was quite weak compared with past solar maximums.

But from the beginning, the forecast seemed off. For instance, the number of observed sunspots has been much higher than predicted.

In December 2022, the sun reached an eight-year sunspot peak. And in January 2023, scientists observed more than twice as many sunspots as NASA had predicted (143 observed versus 63 estimated), with the numbers staying nearly as high over the following months. In total, the number of observed sunspots has exceeded the predicted number for 27 months in a row.

While the bounty of sunspots is a major red flag, they are not the only evidence solar maximum could be here soon.

Another key indicator of solar activity is the number and intensity of solar flares. In 2022, there were fivefold more C-class and M-class solar flares than there were in 2021, and year on year, the number of the most powerful, X-class solar flares is also increasing, according to SpaceWeatherLive.com. The first half of 2023 logged more X-class flares than in all of 2022, and at least one has directly hit Earth. (Solar flare classes include A, B, C, M and X, with each class being at least 10 times more powerful than the previous one.)

Solar flares can also bring geomagnetic storms — major disturbances of Earth's magnetosphere caused by solar wind or CMEs. For instance, on March 24, a "stealth" CME hit Earth without warning and triggered the most powerful geomagnetic storm in more than six years, which created vast auroras, or northern lights, that were visible in more than 30 U.S. states. An overall increase in the number of geomagnetic storms this year has also caused the temperature in the thermosphere — the second-highest layer of Earth's atmosphere — to reach a 20-year peak.

Rare solar phenomena also become increasingly common near solar maximum — and several have happened in recent months. On March 9, a 60,000-mile-tall (96,560 kilometers) plasma waterfall rose above and then fell back towards the sun; on Feb. 2 an enormous polar vortex, or ring of fire, swirled around the sun's north pole for more than 8 hours; and in March, a "solar tornado" raged for three days and stood taller than 14 Earths stacked on top of each other.

All this evidence suggests that the solar maximum is "going to peak earlier and it's going to peak higher than expected," James told Live Science. This opinion is shared by many other solar physicists, experts told Live Science.

The exact start to solar maximum will likely only be obvious once it has passed and solar activity decreases. However, one research group led by Scott McIntosh, a solar physicist and deputy director of the National Center for Atmospheric Research in Colorado, has predicted the solar maximum could peak later this year.

Past cycles suggest the solar maximum may last for somewhere between one and two years, though scientists don't know for sure.

Potential impacts on Earth

So, the solar maximum may be coming on stronger and sooner than we anticipated. Why does that matter?

The answer primarily depends on whether solar storms barrel into Earth, Tzu-Wei Fang, a researcher at NOAA's Space Weather Prediction Center who was not part of the Solar Cycle 25 Prediction Panel, told Live Science. To hit Earth, solar storms must be pointing in the right direction at the right time. Increases in solar activity make this more likely but don't guarantee the planet will be slammed with more storms, she added.

But if a solar storm does hit, it can ionize Earth's upper atmosphere and fuel radio and satellite blackouts. Big storms that block the planet's connections to satellites can temporarily wipe out long-range radio and GPS systems for up to half the planet, Fang said. On its own, that is just a minor inconvenience, but if a lengthy blackout coincided with a major disaster, such as an earthquake or tsunami, the results could be catastrophic, she added.

Strong solar storms can also generate ground-based electrical currents that can damage metallic infrastructure, including older power grids and rail lines, Fang said.

Airplane passengers may also be walloped by higher levels of radiation during solar storms, although it's not clear if the doses would be high enough to have any health impacts, Fang said. However, such spikes in radiation would be much more significant for astronauts onboard spacecraft, such as the International Space Station or the upcoming Artemis mission to the moon. As a result, "future missions should factor solar cycles into consideration," she added.

Past research has also revealed that geomagnetic storms can disrupt the migrations of gray whales and other animals that rely on the Earth's magnetic field lines to navigate, such as sea turtles and some birds, which can have disastrous consequences.

An ionized upper atmosphere also becomes denser, which can create additional drag for Earth-orbiting satellites. This extra drag can push satellites into each other or force them out of orbit. For instance, In February 2022, 40 of SpaceX's Starlink satellites burned up in Earth's atmosphere when they plummeted to Earth during a geomagnetic storm the day after they were launched.

And the number of satellites has exponentially increased compared with past solar cycles, Fang said. Most are operated by commercial companies that rarely factor space

weather into satellite design or launch schedules, she added.

"Companies want to launch satellites as soon as they can to make sure they don't delay rocket launches," Fang said. "Sometimes it's better for them to launch a group and lose half than not launch at all." This all raises the risks of major collisions or deorbiting satellites during the solar maximum, she added.

The chances of a once-in-a-century superstorm, such as the Carrington Event in 1859, also slightly increase during solar maximum, Fang said. While a long shot, such a storm could cause trillions of dollars' worth of damage and majorly impact everyday life, she added.

Humans can do little to shield ourselves from a direct solar storm hit, but we can prepare for them by altering satellite trajectories, grounding planes and identifying vulnerable infrastructure, Fang said. As a result, more accurate solar weather forecasts are needed to help us prepare for the worst, she added

Why were the forecasts wrong?

If so many clues point to solar maximum being stronger and earlier than predicted, why didn't scientists see it coming? Part of the problem is the way the prediction panels come up with their forecasts, Scott McIntosh told Live Science.

NASA and NOAA's models have barely changed in the last 30 years, "but the science has," McIntosh said. The models use data from past solar cycles such as sunspot number and cycle length, but do not fully account for each cycle's individual progression, he added.

"It's kind of like a big game of pin the tail on the donkey," McIntosh said, where the "donkey" is the upcoming solar maximum and the prediction panel has blindfolded themselves by not using all available methods at their disposal.

McIntosh and colleagues have proposed an alternative way to predict the strength of an upcoming solar maximum: so-called "solar terminators," which occur right at the end of each solar minimum after the sun's magnetic field has already flipped.

During solar minimum, a localized magnetic field, which is left behind from the sun's magnetic-field flip, surrounds the sun's equator. This localized field prevents the sun's main magnetic field from growing stronger and getting tangled up, meaning the

localized field essentially acts like a handbrake preventing solar activity from increasing.

But suddenly and without warning, this localized field disappears, releasing the brake and enabling solar activity to ramp up. This drastic change is what the team dubbed solar cycle termination events, or terminators. (Because solar terminators occur at the exact moment solar minimums end, they occur after each solar cycle has officially begun.)

Looking back over centuries of data, the team identified 14 individual solar terminators that preceded the start of solar maximums. The researchers noticed that the timing of these terminators correlates with the strength of the subsequent solar peaks. (The early years of data are sparse, so the team couldn't identify solar terminators in every cycle.)

For example, the terminator at the start of Solar Cycle 24 happened later than expected, which allowed for less magnetic field growth during Solar Cycle 24, resulting in a weaker solar maximum. But the terminator at the start of Solar Cycle 25, which occurred on Dec. 13, 2021, was earlier than expected, which the researchers took as a sign that the solar maximum would be stronger than the previous one. Ever since the 2021 terminator, solar activity has been ramping up faster than expected.

The way Solar Cycle 25 is progressing suggests that solar terminators could be the best way of predicting future solar cycles, McIntosh said. In July 2022, NASA acknowledged the work done by McIntosh and colleagues and noted that solar activity seemed to be ramping up sooner than expected.

Still, NASA hasn't updated its 2025 forecast in light of McIntosh's data and is probably not going to incorporate terminators into future forecasts, McIntosh predicted. "I think they will just stick with their models.

<https://www.livescience.com/space/the-sun/solar-maximum-could-hit-us-harder-and-sooner-than-we-thought-how-dangerous-will-the-suns-chaotic-peak-be>

K4YT TRIP REPORT - AK

Departed June 16th for Anchorage arriving late that night. Next day I picked a rental car and drove to Homer and booked at the Land's End hotel on the beach.



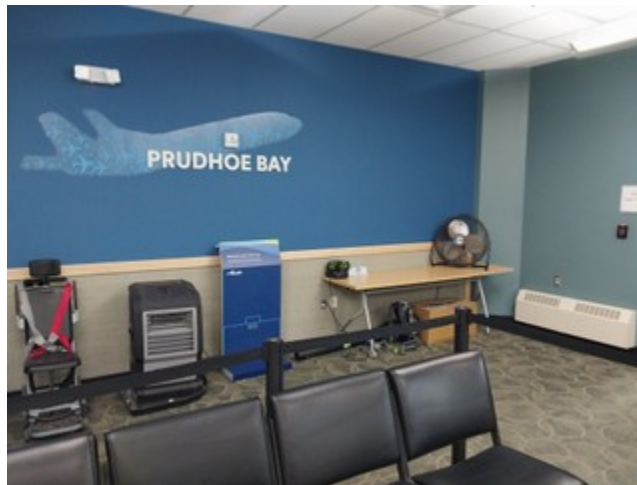
Across from the hotel was a huge parking lot used for cruise ship arrivals. No ships were there and there was zero noise at that location.

Operated the evening of the 17th and morning of the 18th then drove back to ANC. Then drove North to Denali where the District line was at MP199. I thought about running the district line 3rd/4th but there was no cell coverage. I had booked a hotel at Denali so I proceeded there. That night I went to Denali National Park and found some quiet areas to operate from.



Operated that evening and the next morning. It was then raining so I decided to head back to ANC and dump the rental car.

Was booked on Alaskan Airlines ANC to Deadhorse Prudhoe Bay on the 0550 flight on the 26th. Only about a 1 1/2 hr flight. All oil company and support passengers re turning to the North Slope. Most work 30 and 30 off 7 days straight with 12 hour days.



After I arrived I rented a Ram truck from Delta rentals. There are no car rentals in Deadhorse. It was a huge Ram truck and used gas as if there was a hole in the gas tank. There are no real hotels in Deadhorse only worker camps. They were very nice inside. I stayed at Brooks Camp. There are no paved roads in Deadhorse, only the main truckers Highway coming up from Fairbanks and Coldfoot. The paved road ends in Deadhorse. I had 2 days of nice but very cool weather.



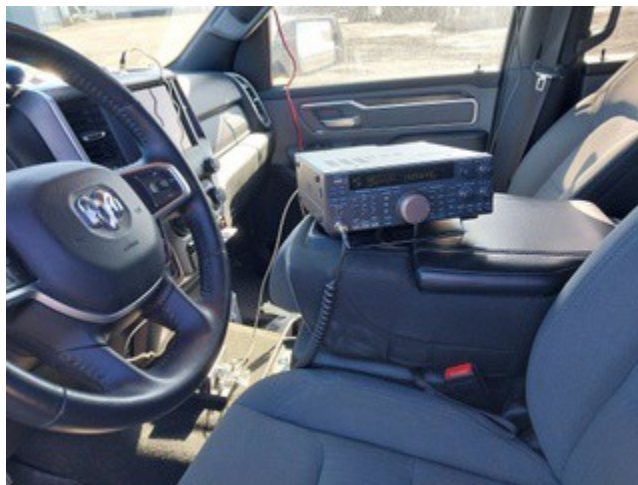
The early morning of the 26th I set up outside the Brooks Camp and it was 37 degrees. The roads are dirt with packed down gravel.



When dry a moving truck creates a huge dust stream. The morning I flew back to ANC it had rained all night and the roads were just a gray slurry. That truck rental was \$300/per day + taxes.. Gas was \$7.27/gal at a no name station, the one and only gas/diesel commercial station in Deadhorse. No Costco in Deadhorse



I operated mostly all CW as conditions for SSB were not great in all districts. I used Hustler coils for 40/30/20/17/15 with a TS450SAT and MFJ keyer. In packing my keyer the wrapping turned on the 9V battery and it was dead.



There is only 1 large general store in Deadhorse to shop for anything and prices are sky high. There is no VHF repeater there either. One YL listed as a tech but only with a PO box. Deadhorse has only 1 police car and 1 officer on duty. He works 2 weeks on and 2 weeks off back in Seattle. The police Officer stopped to chat. He thought I was tracking the brown bears. Most have been caught and a special XMIT collar attached. They roam freely as do caribou throughout Deadhorse. He said only the polar bears are aggressive but the local bears are used to the people in Deadhorse and have their special

dumpsters they like to feed at. Plenty of aggressive mosquitoes as well.

I was able to make contacts on all of the bands on CW and one SSB run on 17m.

During the summer with the tourists coming the hotel prices are sky high. The motel 6 started at \$250 and most all chain hotels were 350 to 800 per night in ANC as well in Denali and Lands End. I guess I spent over \$3500 including flights, car and truck rentals, hotel and food on this trip. Kalawao was a bit cheaper but not by much.

There were many CHers who never called me or maybe didn't need the second. I would have thought there would be many more old timers in my log. AC9GK surprised me and we had a solid contact. I had not heard him in years. Was glad to give him the second.

My last day the 26th WY0A arrived late in the day and we were able to work each other on SSB 160 to 10 as well as a 2m FM QSO.

40M and 30M were very difficult from the 2nd. Only worked maybe 5 on 40 and 10 on 30. The sun was shining 24 hrs straight during my visit.

Deadhorse reminded me of my many trips to Africa during the 70's and early 80's although the Brooks Camp was very clean and modern with wifi, satellite TV and lots of food all included in the room cost. There are no real restaurants in the town.

73 de K4YT

8 Months to Visit all Counties

Operation 3142: Meet the man who went to every county in U.S. in less than 8 months, ending in Ohio

There are 3,142 counties, or county-equivalents, in America. There are boroughs in Alaska, parishes in Louisiana and 42 independent cities.

Hugh Donovan has been to all of them. And he did it in less than eight months.

At the start of the year, Donovan set a goal to visit every county within the year, including the ones in Alaska and Hawaii.

This journey for Donovan began a year ago in Loveland, Ohio. The 65-year-old traveled from his home-state of New Hampshire to visit Tom Byker.

Donovan and Byker are part of The Extra Miler Club, a group that has a shared goal of visiting every county in America.

Within the club, there were 61 who had completed the goal. Most people in the group spend years visiting every county.

On Aug. 24 at 1:50 p.m., Donovan became the 62nd member of the 100% club when he came to Clermont County.

And why end the journey in Clermont County?

"About a year ago, this began in Loveland, which is a special place because it is in three counties," Donovan said.

According to Jonathan Riehl, vice president of The Extra Miler Club, the only other member who came close to visiting every county as quickly as Donovan completed the country in 14 years.

There is no official record for the fastest a person has been to every county in America. How and why Donovan visited every county

Donovan began his journey on Jan. 1 from New Hampshire by driving 5,000 miles to Orlando.

In the first six days, he completed 197 counties.

In total, Donovan traveled over 92,000 miles. He went on 76 flights, rented a charter plane in Alaska and drove his own car as much as possible.

His original goal was to complete all of the counties in one year. He ended up finishing it in 236 days, and that included several breaks within his travels.

He tried to stay at hotels that offered free breakfasts. Every night, he would eat at a

restaurant. Other than that, he says he would drink decaf coffee and snack on sharp cheddar and parmesan Cheez-Its.

"I've never felt fatigue. I've never felt alone. It was the thrill of the chase," Donovan said.

On average, he would drive 12 to 13 hours a day, stopping only once or twice. "One thing I cannot comment on is the cost. I haven't kept an exact number and it's quite deliberate because, yes, it's expensive," Donovan said.

Hugh Donovan with his son Mike, wife Julie, daughter Mary and grandson Will.

A team effort

His family helped, too. His son Mike Donovan, 33, and grandson Will Dellea, 15, helped create the routes that Hugh Donovan took. Mike kept track of Donovan's journey on Twitter.

Donovan's daughter Mary Dellea, 36, created a Facebook page called Operation 3142 and regularly posted maps.

"Part of the pleasure of the trip was the Facebook and interacting with people," Donovan said. "Of the 500 who liked the page, I knew half of them before the trip".

"I feel a commitment to them to get it done," Donovan told the Enquirer ahead of completing his last county.

Will is also a county tracker. He went on two road trips with his grandfather and hopes to have completed all of the counties by the time he is 30 years old.

Donovan's wife, Julie, tracked him daily on an app called FollowMee. Every night the app would send her a report of which counties Donovan had been to. Twice, he had to circle back because he had missed a county.

His favorite county remains Kauai County in Hawaii.

But his favorite county in Ohio is now Clermont.

"I'm finishing it and then I'm going to stop and smell the roses," he said the day before

he completed his trip.

After almost eight months of traveling, Donovan is ready to settle down.

He plans to write a book about his experience, and he also wants to go back and visit some of the counties in places like Southern Florida.

He and his wife have been talking about getting a dog.

Donovan wants to name him Clermont.

Source: <https://www.cincinnati.com/story/entertainment/2019/08/27/extra-miler-club-hugh-donovan-all-us-counties/2097286001/>

That trip included all the 42 Independent Cities and all the boroughs in AK. Some only accessible by float plane.

Too bad he didn't have a ham radio to make it more interesting!

- - - -

More links:

<https://www.dailymail.co.uk/news/article-2991504/Michigan-couple-complete-visit-county-lower-48.html>

Extra Miler Club

<https://extramilerclub.com/>

If you thought Second AK was tough to run, here's the boroughs of AK that the extra milers travel to in order to complete their quest:



There are a dozen in the 'first district' and you have to head out to the far west of the Aleutian Islands chain to Aleutian West, then to Aleutians East. Oh, Kodiak Island, too. Several in the Second, too you can't drive too, either. Plane trips! 19 to hit in AK!

<https://suncatcherstudio.com/uploads/patterns/usa-county-maps/states/colored-maps/png-large/alaska-county-map-fefefe.png>

Optimal County Seat Tour

Optimal County Tour
July 22, 2015

The moto of the Extra Miler Club is Because the shortest distance between two points is no fun!

A grand target of many members is to visit all counties in the USA. To date, forty people

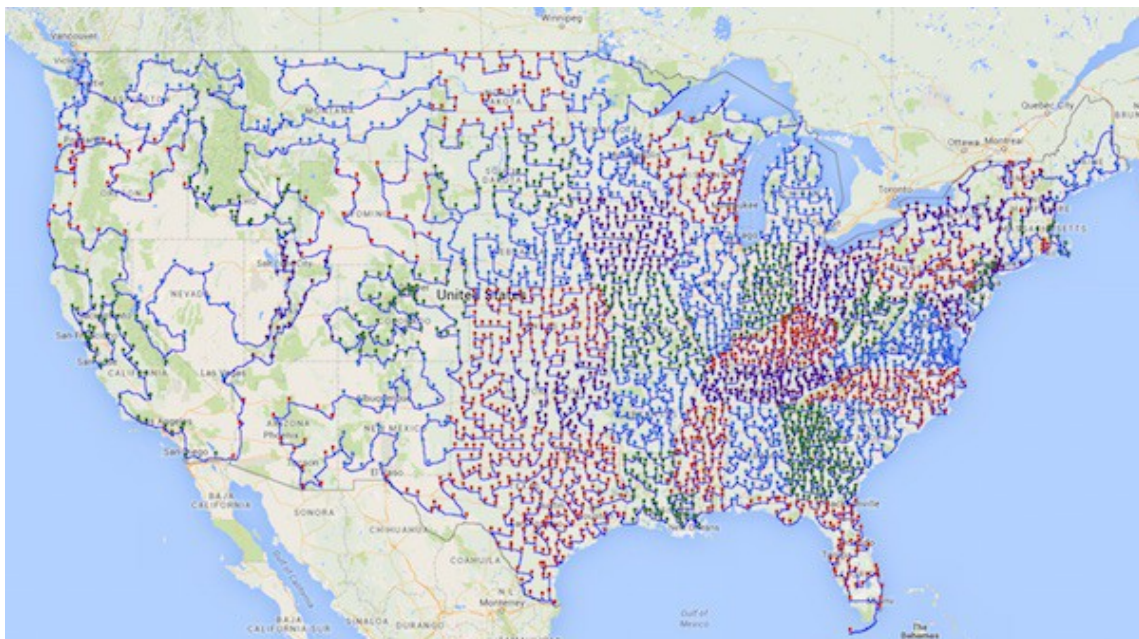
have made it to the elite 100% Club of county completers.

I first heard about the club in February 1998, through an article in the Wall Street Journal: "After 538,427 miles at the wheel: So many counties, so little time". I quickly got in touch with Roy Carson, a co-founder of the club, and traded mail about computing a shortest road trip to visit all US county seats. The shortest distance between two points may not be fun, but, for a fan of the traveling salesman problem, finding a shortest route through 3000+ cities sounded like plenty of fun.

Well, some 17 years later, technology for finding point-to-point distances (Google Maps) and improvements in our understanding of the mathematics behind the traveling salesman problem make computing and displaying an optimal US county route possible.

The optimal tour of 3,100 county seats weighs in at 150,418,864 meters, or roughly 93,466 miles. That is considerably shorter than the 538,427 miles that were covered in the trips reported in the Wall Street Journal, but the Extra Milers no doubt found nice side trips to make along the way.

The 150,418,864-meter trip is the shortest possible, given the point-to-point travel distances we have from Google Maps. Not just a good tour, it is the optimal tour. Here are the distances I used; you can find a drawing of the point set without the solution here. I again offer a \$1,000 prize to the first person who finds a shorter tour with this distance table.



Together with solving the example of the traveling salesman problem, we also needed to get around the fact that asking Google for the 4,803,450 travel distances between pairs of cities (that is, 3100 times 3099 divided by 2) would take over 5 years, given their 2,500-queries-per-day limit. The technique we used to handle the distances is a souped-up version of the method we adopted in the college tour, using geometric shortcuts whenever we can. In this case, we managed to solve the problem after asking only for the travel distance between 48,248 pairs of county seats, and two rounds of the distance-generation method. That is, we solved two 3,100-city TSP examples to arrive at the optimal tour; each of the TSP solves took roughly 3 hours on a fast, single-processor linux server.

When I found the solution, I was excited to contact Roy Carson, for a high-five some 17 years late. Sadly, Roy had passed away later in 1998. But the Extra Miler Club remains in good hands and welcomes new fellow travelers.

<https://www.math.uwaterloo.ca/tsp/county/index.html>

Good map there you can zoom in on and see the route. Of course, you don't have to go to the county seat – so you might be able to shave some miles off this route, too, by just going 20 feet into the county. You have to leave home, and go to all the counties before returning home.

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de N4CD – I'm not planning on the AK counties/boroughs. Running the Second is enough of a challenge! I might have visited all their continental US ones – or missed an Independent City here and there as only interested in the counties. Some independent cities are within a county, some count for 2 or 3 counties around them. If you don't need the county, you might skip the Independent City. NV has one. VA the rest other than DC. Don't know if the Extra Milers count DC either. DC counts for one of two counties.

“Of the 41 independent U.S. cities 38 are in Virginia, whose state constitution makes them a special case. The three independent cities outside Virginia are Baltimore, Maryland; St. Louis, Missouri; and Carson City, Nevada. Baltimore is the most populous

independent city in the United States. “

[https://en.wikipedia.org/wiki/Independent_city_\(United_States\)](https://en.wikipedia.org/wiki/Independent_city_(United_States))

Since county hunters already count St Louis City County, and Baltimore City County, that leaves 38 in VA and one in NV. I guess a few have run all VA as they show up in the VA QSO Party as multipliers. I've run through many – but not sure I made a radio contact from them if they were to count for county hunting. Lived in VA for 20 years. Did I make it to all of them? City of Norton in Wise County? Dunno. If so....

All I'd have to do next is visit all of AK to 'complete' their extra miler list – hi hi. Not going to happen unless someone gives me 500,000 frequent flier miles and a \$20,000 float plane spending account to spend. It's interesting to see what others come up with as the ultimate challenge.

Cycle 25 News

Solar activity may peak 1 year earlier than thought. Here is what it means for us

By Tereza Pultarova published April 20, 2023

A team of researchers who had previously issued an alternative solar forecast that turned out to be better than NASA's claims the sun's activity will peak next year.

The sun may reach the peak of its current activity cycle in 2024, one year ahead of official predictions, new research suggests. But even after the sun reaches its peak, its wrath will continue to threaten Earth for at least the next five years.

A team of researchers who had previously released an alternative solar cycle prediction that turned out to be more accurate than official forecasts by NASA and the National Oceanic and Atmospheric Administration (NOAA) recently published improved estimates of the current solar cycle's strength and progress.

The team's finalized forecast for the current cycle expects it to peak in late 2024, one year earlier than NASA and NOAA had predicted. The cycle, the team thinks, will reach

about 185 monthly sunspots during its maximum and thus be somewhat milder than what the team originally forecasted. . This peak intensity will place this cycle at about the average compared to the historical record.

The current cycle, the 25th since records began in 1755, kicked off in 2019 and, according to official predictions, was supposed to be extremely mild, peaking with about 115 monthly sunspots in 2025. The solar cycle is the approximately 11-year ebb and flow in the sun's magnetic activity that manifests in the number of sunspots, solar flares and eruptions. These cycles vary in intensity, with the weakest on record having produced less than a hundred spots per month during the maximum and the strongest peaking with nearly 300.

Cycle 25 followed the extremely weak Cycle 24, and NASA and NOAA thought it would be just as underwhelming. However, since Cycle 25 picked up momentum in 2022, it has been steadily outpacing the official predictions in line with the alternative forecast issued by a team led by NASA research scientist Robert Leamon and Scott McIntosh, the deputy director at U.S. National Center for Atmospheric Research (NCAR).

But why do Leamon and McIntosh's results diverge so much from the official estimates, and why are they closer to reality than what the bigwigs agreed on? It turns out that solar cycle forecasting is still rather crude and with only 25 cycles on record, the amount of data available for computer modeling is limited.

In their studies, Leamon and McIntosh therefore explore alternative ways of predicting the sun's behavior based on the star's magnetic activity. By analyzing historical records, they found that the strength of every subsequent cycle depends on the time when the magnetic field of the previous cycle completely dies. This event, which the team dubbed the terminator, doesn't happen exactly at the minimum, but up to two years later when the next solar cycle is slowly waking up.

"There's always the overlap between the old and the new," Leamon told Space.com.

The researchers think that understanding solar cycles not as framed by the minimums but rather by the terminator events can produce more accurate predictions.

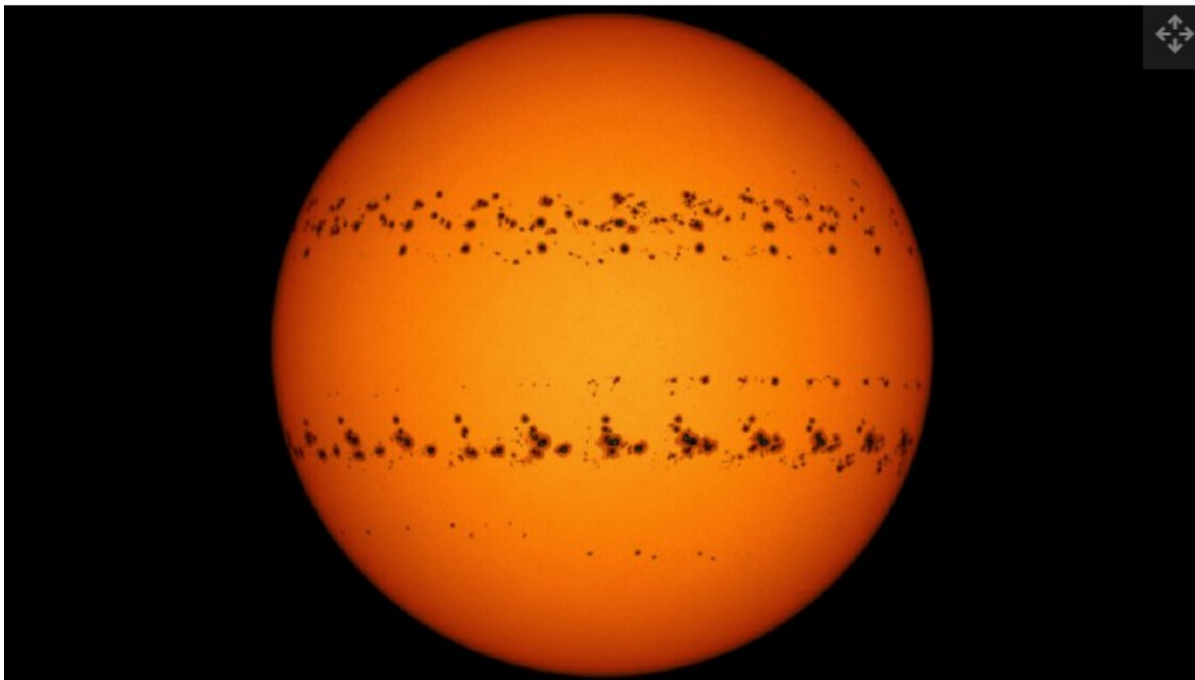
"If you measure how long a cycle is, not the minimum to minimum, but from terminator to terminator, you see that there is a strong linear relationship between how long one cycle is and how strong the next one is going to be," said Leamon.

The original prediction Leamon and his colleagues made was based on the expectation that the terminator event ending Cycle 24 would arrive in mid-2020, which would suggest a very strong Cycle 25. Cycle 24, however, ended up lingering for a year and half longer, with its magnetic field eventually completely disappearing in December 2021.

"When the [terminator] event actually happened, we changed the input and that gave us a somewhat milder prediction than what we expected originally," said Leamon.

The terminator events are part of what scientists call the Hale cycle, a 22-year cycle of magnetic activity that encompasses two 11-year solar cycles. During the Hale cycle, magnetic waves of opposing polarity move from the sun's poles toward the equator where they meet and cancel each other out. When these magnetic field lines are about halfway through their journey, the sun's magnetic field flips, which corresponds with the approximate time of the solar maximum. The Hale cycle is complete when the magnetic field returns to its original state after two solar cycles. The terminator, the canceling out of the magnetic waves at the equator, can be observed in historical records of sunspot generation as a complete disappearance of sun spots in the star's equatorial region.

Based on their calculations, Leamon and his colleagues expect the sun's magnetic field to flip in mid-2024, with the solar maximum of the current solar cycle to arrive a few months later.



Sunspot cycles - Cycle 25

For us on Earth, that means we are likely heading into a period of more frequent and more intense aurora displays, but also of more intense space weather events that can create trouble in Earth's orbit. Auroras are produced from the interactions between material that flows from the sun and Earth's magnetic field. Similar reactions that produce these stunning natural light shows, however, thicken Earth's residual atmosphere at high altitudes where satellites orbit. That leads to increased drag that can cause satellites to fall from orbit, among other problems. In February 2022, SpaceX lost a batch of 40 brand new Starlink satellites after launching them into what forecasters considered to be only a mild solar storm.

The arrival of the solar maximum will not mean that we will be out of the woods when it comes to the risk of disruptive space weather events. Leamon said that according to available data, powerful solar flares and eruptions frequently take place on the downside of odd-numbered cycles, such as the current Cycle 25. In the case of even-numbered cycles, the risk of dangerous solar storms is highest during the first part of the cycle.

"Since Cycle 25 is odd, we might expect the most effective events to happen after the maximum, in 2025 and 2026," said Leamon. "This is because how the poles of the sun flip every 11 years. You want the pole of the sun in the same orientation compared to the poles of Earth so that then causes the most damage and the best coupling from the solar wind through Earth's magnetic field."

The biggest solar storms of the current cycle, Leamon added, are therefore mostly likely going to happen after the maximum.

"We need to be vigilant for about five more years," he said.

The team's latest forecast was published in January in the journal *Frontiers in Astronomy and Space Sciences*.

<https://www.space.com/sun-solar-maximum-may-arrive-early>

Second Alaska

Karl, K4YT, traveled around AK. First flew to 3rd, rented car and went sightseeing – later ran the fourth AK. Returned to Anchorage (3rd) and took plane to Deadhorse/Prudhoe Bay and rented truck there on FD weekend. Successfully put out Second AK.

You can check online the status of the Dalton Highway.

The road goes over Atigun Pass (a problem many months a year with snow/ice as is the highest point on the road from Fairbanks to Prudhoe Bay.

There's a web cam there and pictures posted every few days

<https://511.alaska.gov/region/Dalton>

WY0A made it to Second and self spotted on 6/25 and 6/26 – probably at Prudhoe Bay as there is no cell service for over 350 miles of road. Spotted by at least one other county hunter so he was heard and worked on SSB.



Atigun Pass 6/21



Atigun Pass



Atigun Pass

WY0A on his way to First AK as of press time.

Atigun Pass is 4,739 feet high – highest point in the Brooks Range and the road north. It has 11-12% grades so you know you are climbing, climbing, climbing up the slope.

In the winter time, with the road 'frozen', trucks can carry 4 times the weight as they can in summer, when permafrost does not support the weight. If you've watched Ice Road Truckers, seasons 3 and 4 were on the Dalton Highway – in WINTER! Still being shown on cable TV. Maybe YouTube, too. Gigantic loads of equipment for the oil fields heads north in winter. Temps on the highway can be zero to 40 below.

Nice video going over the pass June 2016

<https://www.youtube.com/watch?v=Y-L1g8eFtYI>

Or if you prefer - Dec trip over the pass

<https://www.youtube.com/watch?v=FzCfQQZg6y4>

It's amazing what videos you can easily find these days!

Atigun Pass web cams – 3 different cameras

<https://www.weatherbug.com/traffic-cam/?latlng=68.12538,-149.512336&camId=435185>

Awards Issued

Could be a bunch more coming now that Second AK was run. W8GU finished up for USA-CA.

USA- CW Awards

AB7NK Completed all CW on 26 May 2023. She received #165

KB6UF completed all CW on 11 May 2023. He received #166

USA- SSB Award

KB6UF completed all SSB on 13 May 2023. He received #7

Bingo Awards

Bingo Award: KB6UF completed Bingo IV on 11 May 2023. He received #15

Road Runner Awards (Last counties given)

N5MLP attained 375 last counties on 16 October 2022. He received #58

N4CD attained 2675 last counties on 5 September 2014. He received #2

K0DEQ attained 225 last counties on 25 May 2023. He received #113

KB6UF attained 2050 last counties on 24 April 2018. He received #2

WD4OIN attained 150 last counties on 26 May 2023. He received #181

County Challenge Award

County Challenge: K8ZZ attained Level 24000 on 22 May 2023

Events for County Hunters

If you missed K4YT and WY0A, N9JF is headed Second AK mid July. Has posted schedule. Will run near Atigun Pass. (south part of Second).

N9JF: Our schedule is pretty loose, but if I to be cornered (or offered cookies), I'd estimate we would be in 4th about July 12-16 and July 18-19, 3rd from July 21-26 and 1st from July 28-August 3. Plus or minus a couple of days.

No other QSO Parties till end of August.

Lots of other smaller events/contests listed here:

<http://www.arrl.org/files/file/Contest%20Corral/2023/July%202023%20Corral.pdf>

Trivia.....there's a Dairy Queen in 49 states. There is no DQ in Vermont. There are almost no chain restaurants there outside of Burlington VT – and no Walmarts.

That's all this month. 73 de N4CD