ARRL 10 GHz and Up Contest 2020 Results

By Rus Healy, K2UA (k2ua@arrl.net)

Like many of you, I've been operating this contest annually for several years. In a normal year, in the Northeast, we experience warm, humid weather both weekends, often with rain assisting us in making long-haul QSOs. Hot, summery weather is great for 10 GHz propagation, but high humidity impairs 24 GHz. This also tends to be the calmest period of the year in New England and the Northeast in general, which makes portable operating quite enjoyable and often rain-free for nearly all four days of the contest.

Similarly, in a "normal year," there is no pandemic, and a moderate fire season in the West. For sure, 2020 was a difficult year in many ways. Like many unusual events of 2020, a change in what's normal reminds us just how good we have it most of the time. Case in point: Both weekends in the 2020 10 GHz and Up Contest dealt many of us unusual and unwelcome conditions.

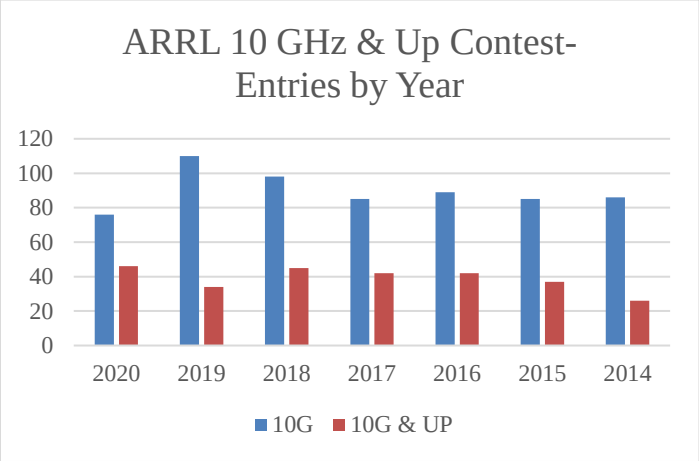
In August, the Northeast experienced coastal storms that made portable operating nearly impossible along the coast. Fires ravaged the West Coast, making air quality dangerous and travel difficult. And COVID-19 kept a lot of people at home.

In September, the Northeast experienced cold, dry weather with morning temperatures below freezing, and the West Coast experienced some rain! Some operators in the West reported making their first-ever rain scatter QSOs. The upside in the Northeast was better than normal 24 GHz-and-up propagation thanks to low atmospheric water vapor. But no ducting or rain scatter took place in the Northeast, hitting 10 GHz totals and distances, and the associated scores, hard.

The only really "normal day" for many operators in the contest was Saturday of the August weekend. That said, many ops put up fairly big totals and entries were strong, particularly on the higher bands.

The Logs

In 2020, the ARRL received 122 logs for the event-- down 20 from last year, but still better than any year prior to 2016. COVID-19 travel restrictions, self-imposed and otherwise, certainly affected the turnout. The 10 GHz category suffered the most, with 76 entries (down from 110 last year and the fewest since 2013). However, 46 ops submitted logs in the 10 GHz and Up category-- the highest number ever recorded for this contest!



In part, the uptick in 24+ GHz logs was attributable to the massively successful 122 GHz project sourced by Tim, VK2XAX, which is now in its second round. According to a post-contest survey I conducted, which received 45 responses (nearly half the contest participants), ten people active in the contest who responded to the survey added 122 GHz this year in time for the contest. However, more respondents (14) added 10 GHz than any other band. We welcome them all to the 3 cm and up realm! In third place was 24 GHz, with five new entrants reflected in the survey results. More on the survey results in the sidebar, 2020 10 GHz and Up Survey.

Distances and Activity

Because of the weather, fewer long-distance QSOs took place this year, especially in the Northeast. Many paths that have been reliable in previous years failed to yield good results. For example, K2DH and I have operated from a site in FN23 for several years in a row that has worked reliably to Block Island and Martha's Vineyard, both in FN41, at more than 450 km. This year, not a peep-the cold, dry weather didn't allow the usual atmospheric stratification to give us the boost we needed. However, unlike any other year, the 240-km path from FN32 on Mt Greylock, Mass, and FN41 in Martha's Vineyard, Mass, worked great on 24 GHz between K2DH and the W1MKY/AF1T husband/wife team.

This year's best distances were quite compressed on most bands. The best DX of the two weekends on 10 GHz was

673 km by Pat, N6RMJ. But his was not the longest by much-it took a whopping 669 km to make the top ten!

Similarly, on 24 GHz, N9JIM and W6QIW, also on the West Coast, completed a 248-km QSO-- but again, the race was close, as the #10 distance on the band was 240 km by K2DH.

On 47 GHz, our only exclusive Amateur Radio allocation among the microwave bands, distance results were also tight. KA1NKD, W1FKF, KA1OJ, and N1JEZ share the top DX of 126 km. At the other end of the box, four stations shared the 98-km best DX. Impressive all around!

At 76 GHz, things began to open up, but still the truly impressive 93-km best DX is shared by K8ZR, KA1NKD, and W1FKF. In this case, these QSOs took place on Saturday morning of the September weekend between FN22 and FN33. Tony, K8ZR, was at the south end and KA1NKD and W1FKF were at the north end. It was a treat to witness these contacts in person from FN22.

Finally, at 122 GHz, several stations made noteworthy QSOs. Five stations completed 8-km QSOs on the band during the contest, and the balance of the top-distance box was made up of three ops who completed 4-km QSOs. In 2021, I expect these numbers to grow significantly, as some ops have made 20 km and longer QSOs with the same setups, which is sure to grow as people improve their skills and equipment.

Table 1 compares top distances for this year's contest with the 2019 results. The numbers allow us to draw some conclusions about conditions.

Band	***2020 Average from Top Ten***	***2019 Average from Top Ten***
10 GHz	670 km	705 km
24 GHz	252 km	269 km
47 GHz	111 km	86 km
76 GHz	50 km	16 km

Table 1- Top Distance Averages from Top Ten Distances by Band

From Table 1, and the published results of the 2020 and 2019 contests, it's evident that more operators made more and longer QSOs on the 47 and 76 GHz bands in 2020-- a fact also supported by the slightly higher number of 24 GHz+ logs that were submitted for the 2020 contest. However, combining the data in Table 1 with anecdotal evidence in the form of comments from many 2020 entrants, we can conclude that the 10 GHz band suffered more from conditions than the higher bands did. In many years, one single opening or large rain event can greatly influence the 10 GHz results in particular. In 2019, Sunday of the first weekend experienced just such an event, and at least the top five 10 GHz QSO distances took place during that time. In 2020, there was little in the way of beneficial rain during the contest weekends, and what there was was suppressed by strong coastal storms.

With regard to rain (or snow) scatter, it's great when it occurs somewhere near the middle of a path between two stations-- but it's very bad when one of the two ends is inside the storm. This is what AF1T, W1MKY, K1RZ, and K3WHC experienced on Block Island, FN41EE, the first weekend.

On the other side of the coin, the second weekend was cold and dry in the Northeast, significantly improving "normal tropo" distances, especially on 24 GHz, while at the same time suppressing long-haul opportunities on 10 GHz.

Joel, KD6W, noted that conditions for the August weekend of the contest were "some of the best we had ever seen in California." [Joel Wilhite, KD6W, photo]

Top Ten Analysis

Geographically and strategically, the 10 GHz and Up Contest tends to be more like two very different contests- an eastern and a western one. In the Midwest and Northeast, there's enough activity to drive a lot of QSOs with many different stations. By contrast, in the West, activity is a bit lighter, but the availability of high-elevation, drive-up locations and low atmospheric moisture allow for long tropo contacts. Stations operating in the West need to use a different strategy, which is more distance-driven, compared to those in the East and Midwest, where operating from more locations and making QSOs with the same stations in as many locations as possible is at a premium. The result is an interesting mix of eastern and western stations in the top-ten boxes,

with very different operating profiles and average distances.

Average QSO distances across the top ten finishers by category highlight some of these differences. These are shown in Table 2. Note especially the differences in average QSO distance for western stations, especially in the 10 GHz and Up category.

10 GHz Top Ten Finishers	*Average DX*	*Unique Calls*	*10 GHz and Up Top Ten Finishers*	*Average DX*	*Unique Calls*
WB0LJC	197 km	14	W6QIW	240 km	38
N6RMJ	194 km	35	N9JIM	260 km	27
W6DL	258 km	34	AF1T	243 km	48
KB8U	233 km	22	W1MKY	233 km	47
W9FZ	199 km	19	K9PW	157 km	35
N5BF	221 km	35	KD6W	235 km	24
KA9VVQ	196 km	17	K2UA	162 km	49
K6WCI	185 km	31	VA3ELE	140 km	32
N0KP	211 km	10	K2DH	173 km	52
AF6NA	239 km	29	VA3TO	139 km	31

Table 2- Average QSO Distances for Top Ten Finishers

Table 2 also hints at strategy differences between stations in the East. For example, VA3ELE and VA3TO make many stops comparatively close together on each day of the contest. K2DH and K2UA operate from fewer sites and focus on longer-distance QSOs-- a strategy that works well in a "normal year" but not as well in an unusual propagation year like 2020. AF1T and W1MKY operate from only two general geographic locations (both islands) for the entire contest, and most of their QSO distances are comparatively farther away as a result. The West Coast stations operate mostly from high locations that are far apart, comparatively, so they make relatively few close-in QSOs less than 100 km or so.

On the subject of operating locations, many operators take their gear to high, clear locations for the 10 GHz and Up Contest. Comparatively few operate from home. Some, however, can do both. In the top ten, KB8U and VA3ELE both operate portable but have the ability to remote into their home stations to use them as additional operating locations-- a novel strategy that takes much more work to get set up, but helps them and other entrants to make more contacts in the contest. Perhaps as remote operating continues to become easier, we'll see more stations adopt this strategy.

An interesting aspect of this contest is its 100-point bonus for working a new call sign on each band. I am always interested in who works the most different stations, so that I can learn more about how they do it. Table 3 breaks down the top anglers of different call signs.

10 GHz Only	*Calls Worked*	*10 GHz and Up*	*Calls Worked*
N6RMJ (SJV)	35	K2DH (WNY)	52
N5BF (LAX)	35	K1RZ (MDC)	50
W6DL (ORG)	34	K2UA (WNY)	49
K1GX* (CT)	32	K8ZR (OH)	49
K6WCI (SJV)	31	AF1T (EMA)	48
W1AIM (VT)	30	W1MKY (EMA)	47
AF6NA (ORG)	29	N2MG (WNY)	47
WA3GFZ* (DE)	28	W1GHZ (RI)	44
VE3KH* (ONS)	27	W6QIW (SJV)	38
KB8U (MI)	22	K3WHC (RI)	38

*All QSOs completed from home station

Table 3-Top Call Signs Worked by Category

Congrats to Dave, K2DH, on repeating his top calls-worked spot in 2020 in the 10 GHz and Up category. In line with most of the contest's totals, Dave's 52 calls this year was down slightly from 56 calls in 2019, but still at the top of the heap. Dave has been my microwave mentor for 30 years and my operating partner for the last four 10 GHz and Up Contests. I couldn't ask for a better mentor and friend- more to come on the subject of mentors later.

What's striking about the breakdown in Table 3 is the strong presence of Northeast and West Coast stations, with little else represented aside from Kevin, VE3KH, and Russ, KB8U, in the 10 GHz category and Tony, K8ZR, in the 10 GHz and Up category. Tony's strategy clearly helped in this regard--he spent part of the contest in Ohio and WNY, and the other half in New England so the Ohio section (go Bucks) doesn't tell the whole story in this table. In the same vein, Dave, K2DH, Mike, N2MG, and Rus, K2UA, operated half the contest in WNY and the other half in New England, making those extra QSO points easier to achieve.

A few stations on the list, marked with asterisks, also operated from home. This notable difference makes their entries more impressive-- their stations are really getting

the job done. Working a large number of different stations is certainly easier to achieve if you operate from multiple locations that are geographically diverse; the combination of station equipment, operator, and location need to be top-notch to make this list from home. As mentioned earlier, Russ, KB8U, operated portable and remoted into his home station, so he gets an honorable mention in this category.

Top Ten Scores

10 GHz Only		10 GHz and Up	
WBØLJC	45,662	W6QIW	53,001
N6RMJ	37,663	N9JIM	45,753
W6DL	35,899	AF1T	41,643
KB8U	28,329	W1MKY	39,165
W9FZ	25,149	K9PW	38,485
KA9VVQ	24,078	KD6W	36,981
K6WCI	22,821	VA3ELE	33,288
N5BF	21,419	K2UA	33,159
AF6NA	19,240	K2DH	32,514
NØKP	18,707	VA3TO	31,765

Top Ten QSO Leaders

10 GHz Only		10 GHz and Up	
WBØLJC	166	K9PW	200
N6RMJ	148	VA3ELE	198
W6DL	112	W6QIW	197
KB8U	110	VA3TO	188
W9FZ	98	K2UA	159
KA9VVQ	95	N9JIM	155
NØUK	88	VE3SMA	150
K6WCI	88	AF1T	145
NØKP	83	K8ZR	142
KØHAC	77	K2DH	140

Geographic Distribution

In the 2020 running, the places to be for the most QSO opportunities were New England, where the W1 call area produced 22 logs, and California, which garnered 21. The W0 and Canada regions were in next with 14 each. Every call area produced at least three logs, and the average was 11 logs per region.

Regionally, the West Coast saw strong top entries from Pat, N6RMJ, with 37k on 10 GHz, and Steve, W6QIW, with 53k in the 10 GHz and Up category. In the Midwest, Gary, WB0LJC, moved up to the top of the heap with a very strong 45k on 10 GHz, and Al, W5LUA, put in the best entry on 10 GHz and Up with 8k.

West Coast Region

(Pacific, Northwestern and Southwestern Divisions; Alberta, British Columbia and NT Sections)

10GHz		10 GHz & Up	
N6RMJ	37,663	W6QIW	53,001
W6DL	35,899	N9JIM	45,753
K6WCI	22,821	KD6W	36,981
N5BF	21,419	N6TEB	21,489
AF6NA	19,240	K6ML	16,625

In the Central region, Russ, KB8U, led the field with 28k on 10 GHz. Pete, K9PW, put in a solid 38k effort to lead the 10 GHz and Up field. The Southeast region, a field of three 10 GHz logs, was headed up by W3IP with a 5.9k score.

Central Region

(Central and Great Lakes Divisions; Ontario East, Ontario North, Ontario South, and Greater Toronto Area Sections)

10GHz		10 GHz & Up	
KB8U	28,329	K9PW	38,485
KØKFC	18,271	VA3ELE	33,288
VE3KH	16,064	VA3TO	31,765
WA2VOI	15,205	K8ZR	25,621
WA9TT	12,416	VE3SMA	22,703

Dale, AF1T, and Mickie Clement, W1MKY, operated from grid square FN41ql on Martha's Vineyard, MA. They reported rainy, windy, and cold conditions during both weekends of the contest. "Not as good as last year, but we persevered," Dale commented in the soapbox. [Mickie Clement, W1MKY, photo]

The Northeast region 10 GHz winner was Chip, W1AIM. Dale, AF1T, took the 10 GHz and Up crown with a superb 41k score, closely followed by Mickie, W1MKY. Especially considering the weather adversity that Dale and Mickie experienced both weekends of the contest,

these are notable achievements. Their island locations on Block Island and Martha's Vineyard both suffered from weather and propagation disadvantages in this year's contest, which affected all the operators at those two popular locations and along the Northeast coast.

Northeast Region

(New England, Hudson and Atlantic Divisions; Maritime and Quebec Sections)

10GHz		10 GHz & Up	
W1AIM	14,255	AF1T	41,643
WA3GFZ	13,869	W1MKY	39,165
KØSM	13,053	K2UA	33,159
N2WK	12,964	K2DH	32,514
K1GX	10,431	K1RZ	29,223

Ed Shekleton, K1ZE, setting up at Fox Hill in Vernon, CT (FN31su). A relay failure caused him to cease Sunday operations on the second weekend of the contest early. [Robert Cohen, K1CPJ, photo]

In most regions, scores were down from 2019 highs, due to the weather and lower participation in some areas. The differences were notable especially in the top three regions, which in last year's running produced scores of 50-70k in the 10 GHz category and 44-73k in the 10 GHz and Up category. Contrast this with 2020 scores of 41-45k on 10 GHz and 38-53k scores in the 10 GHz and Up category. If 2021 is a more normal year in both pandemic and weather terms, we should see returns to the 2019 highs as well as more activity on 24 and 122 GHz, especially, further boosting scoring.

Midwest Region

(Dakota, Midwest, Rocky Mountain and West Gulf Divisions; Manitoba and Saskatchewan Sections)

10GHz		10 GHz & Up	
WBØLJC	45,662	W5LUA	8,156
W9FZ	25,149	AA5C	6,969
KA9VVQ	24,078	AA5AM	3,929
NØKP	18,707	WAØCNS	390
NØUK	16,637	AF4JF	390

Southeast Region

(Delta, Roanoke and Southeastern Divisions)

10GHz		10 GHz & Up	
W3IP	5,963	----	----
N9ZL	5,143	----	----
W5VY	3,339	----	----

Activity-- and How to Boost It

In terms of driving activity, especially on the higher bands, 16 of the 45 operators who responded to the contest survey flagged an increase in points for contacts on bands above 10 GHz, to be the greatest factor in encouraging people to put in the effort to get on more bands. Time and expense to get on new bands, as well as time required to make QSOs on the higher bands, are all greater than what it takes to do well on 10 GHz.

Many operators feel that this change is overdue. It's especially important to encourage more activity on the higher bands. In the US, we've already lost one microwave band-- let's not allow a lack of activity to cost us more of them.

Another opportunity to drive more activity comes in the form of mentoring. Because the 10 GHz and higher bands present different challenges than the lower bands, the techniques, equipment, and operating skills are all different. Most, if not all, operators who are successful on these bands learned from one or more key mentors. In the sidebar, Mentoring Microwave Newcomers, Dave, K2DH, talks about what mentoring has meant to him in his 40-year microwave journey.

If each of us would choose just one person to mentor, in two or three years we could drive activity to twice the current levels, or even higher. Let's take that as a challenge and make it happen!

Log Checking

All of the ARRL contests benefit from a robust, well-administered contest program that includes log checking. Much of the heavy lifting and software development for this effort is handled by dedicated volunteers.

The ARRL 10 GHz and Up Contest has not had the benefit of log checking until this year. That said, it will be fully implemented for the 2021 contest. Logs were fully cross-checked this year and log-checking reports (LCRs) were generated for it. The scores, however, do not reflect the reductions that a fully implemented log-checking program allows to be accurately computed.

This year, 50 of the 122 entrants had no score reduction (0.0% error rate). These we refer to as Golden Logs. Congrats to all of those who met this goal! Of the remainder, 38 logs had score reductions of 5% or less, and another 17 had reductions from 10-40%.

The main message here is that nearly all logging errors in this contest are avoidable. Most result from logging incorrect calls or grid squares, when the operator doing the logging clearly knows the correct information but doesn't exercise enough care in getting them in the log. Many of us operate portable and log on paper, then enter our logs into a computer later for submission. Take the time to cross-check what you entered into your computer from your paper log!

Errors ranged from transposition errors such as logging, say, FN21 as GN21, resulting in a huge delta in distance points for one QSO, to carrying the last two digits of the six-digit grid down from one entry to one or more others, to simply not logging the QSO and causing the other op to lose the distance points (and potentially QSO points) as a result. There were also the classic logging errors that the Contest Program sees in all contests: miscopied calls, incorrect reports, transposed characters in call signs, and various other kinds of "busts." It's important to get it right, and in this contest, nobody is making more than a few hundred contacts. Please focus on this for 2021 so you don't suffer an unexpected score reduction!

If you'd like to see your log-checking report for the 2020 contest, which I highly encourage so you can have the benefit of understanding what goes into it and how you can improve your logging for next year's contest, please request your log checking report here: https://contests.arrl.org/logcheckreports.php

Golden Logs: WA3GFZ, N6KLD, WA9TT, K1GX, WQ5S, N1DPM, WA3PTV, NN3Q, VE3FN, K1TR, K1ZE, N9ZL, N9LB, AF1R, W3EKT, W1RGA, W1JR, W7GLF, AA1I, VA3CW, W6YX, KA1ZD, N3OC, K6JEY, KI6LQV, KD7UO, VE3OIL, WA5TKU, VE2GT, K5SOP, W2RMA, K9YR, KH6HTV, N0YE, N5RJX, NJ7A, VE6SM, AF1T, K1RZ, W1GHZ, K3WHC, W3SZ, AA9IL, K9JK, KB6BA, AA5AM, N1SAI, W3HMS, N8CGY, AF4JF

As unusual as 2020 was, and as widely felt are the consequences of the year's major events, the 2020 ARRL 10 GHz and Up Contest was a success by many measures. Good participation, growth in stations on the air across the entire microwave spectrum, and strong efforts by many entrants characterized this year's event. As we continue our vigilance, many are preparing for the 2021 contest while the ground is still frozen in the northern climates. Spring and summer are not far away!

Be sure to request your log checking report (LCR) at https://contests.arrl.org/logcheckreports.php and study them to see what you can do to improve your accuracy. Logging accuracy is not only important for those who are seeking awards through LoTW, it can also make the difference between a top-ten log and a poor showing!

Finally, bring your friends! Please take the time to seek out, and become more aware of, those who show signs of interest in and willingness to get into the microwave realm. Mentoring starts with just one conversation, and can cascade to a much broader audience in a few short years, ensuring the long-term health of this contest and our frequency allocations. It's also a remarkably gratifying experience!

I look forward to working you and your mentorees in the 2021 contest, which is scheduled for the weekends of August 20-21 and September 18-19, 2021.

2020 ARRL 10 GHz and Up Contest- Call Area Leaders

Call Area 0

10 GHz Only		10 GHz and Up	
WBØLJC	45,662	WAØCNS	390
W9FZ	25,149	AF4JF	390
KA9VVQ	24,078		
NØKP	18,707		
NØUK	16,637		

Call Area 1

10 GHz Only		10 GHz and Up	
W1AIM	14,255	AF1T	41,643
K1GX	10,431	W1MKY	39,165
N1DPM	6,606	W1GHZ	26,845
K1TR	6,033	N1JEZ	22,819
K1ZE	5,601	W1FKF	20,888

Call Area 2

10 GHz Only		10 GHz and Up	
KØSM	13,053	K2UA	33,159
N2WK	12,964	K2DH	32,514
N3RG	9,458	N2MG	25,796
		KA2LIM	14,128
		W2FU	11,216

Call Area 3

10 GHz Only		10 GHz and Up	
WA3GFZ	13,869	K1RZ	29,223
WA3PTV	6,335	W3SZ	11,141
NN3Q	6,195	W3HMS	2,685
K3WGR	3,949		
W3EKT	2,879		

Call Area 4

10 GHz Only	
W3IP	5,963
N9ZL	5,143

Call Area 5

10 GHz Only		10 GHz and Up	
WQ5S	8,620	W5LUA	8,156
W5VY	3,339	AA5C	6,969
WA5TKU	712	AA5AM	3,929
K5SOP	435		
N5RJX	242		

Call Area 6

10 GHz Only		10 GHz and Up	
N6RMJ	37,663	W6QIW	53,001
W6DL	35,899	N9JIM	45,753
K6WCI	22,821	KD6W	36,981
N5BF	21,419	N6TEB	21,489
AF6NA	19,240	K6ML	16,625

Call Area 7

10 GHz Only	
W7GLF	2,221
KD7UO	903
NJ7A	241

Call Area 8

10 GHz Only		10 GHz and Up	
KB8U	28,329	K8ZR	25,621
WA8VPD	925	WB8TGY	14,611
W8RU	687	K3SIW	14,098
		K2YAZ	13,179
		KB8VAO	9,617

Call Area 9

10 GHz Only		10 GHz and Up	
KØKFC	18,271	K9PW	38,485
WA2VOI	15,205	W9SZ	14,901
WA9TT	12,416	AA9IL	9,968
W8BYA	10,730		
K9TMS	5,385		

Area 15 (Canada)

10 GHz Only		10 GHz and Up	
VE3KH	16,064	VA3ELE	33,288
VE3FN	6,048	VA3TO	31,765
VE3EG	4,162	VE3SMA	22,703
VA3CW	1,613	VE2UG	19,988
VE7FYC	1,352	VE3FHM	10,264

Sidebar 1- 2020 10 GHz and Up Survey

I launched a survey in the fall of 2020 to help collect information about a number of topics of interest to the ARRL 10 GHz and Up Contest, but also to microwave operators in general. The questions and the responses I received are described in this sidebar.

Question 1: Did you make any personal-best DX contacts in the contest this year? If so, what were they?
Of the positive responses, here is a sampling:
10 GHz--209 km
10 GHz--"rain scatter, 642 km"; 24 GHz--"rain scatter, 285 km, a new NA record!"
10 GHz "from home QTH, over 8000 ft mountains, 489 km"
10 GHz--672 km; 47 GHz--93 km; 122 GHz--4.8 km
10 GHz--365 km
10 GHz--350 km; 122 GHz, 1 km
10 GHz--572 km
10 GHz--231 km
122 GHz--1 km (first time on the band); 47 GHz--113 km
10 GHz--448 km
122 GHz--1 km
122 GHz--2 feet (first time on the band)

Question 2: Did you use https://rainscatter.com during the contest to help you find rain cells and aim antennas?
Yes: 45%
No: 55%

Question 3: If you used https://rainscatter.com during the contest, did it help you make a new personal-best DX on any band?
Yes--10% (one op also reported that it provided two new grids)
No--90%

Question 4: Which new band(s) did you add for this contest?
10 GHz--14
24 GHz--5
47 GHz--1
76 GHz--1
122 GHz--10
Another band--2

Question 5: What planning tools did you use before the contest to help you plan your locations or paths?
K1RZ/W3SZ database--24
https://k7fry.com/grid --7
https://rainscatter.com --11
groups.io 10 GHz group--18
Amateur Radio Microwave Community Facebook page--14
Something else--14

Question 6: What tools did you use during the contest to track and coordinate or otherwise support your contest activity?

https://rainscatter.com --13
w3sz.com/maps --10
k7fry.com/grid --4
DMR (TAC 316)--9
Cell phone (voice)--31
Cell phone (text)--31
2-meter SSB (144.260)--13
Something else--10

Question 7: What was your most memorable moment of the contest?
"Working rain scatter (from a W6 station)."
"Making a 122 GHz contact."
"Working KØSM/2 at 200 km on the first call with 10 mW and a horn antenna on 10 GHz."
"The rain on the first weekend."
"Finding a place to get food after 9 PM in small-town Vermont."
"Making my first 10 GHz contact."
"Super strong rain scatter on W6QIW on 10 GHz pointing the opposite direction at 422 km. And a new 24 GHz record of 285 km."
"Talking with my old friends again on microwave."
"Conditions were terrible."
"Working Gedas, W8BYA, at 672 km A new personal best by 130 km!"
"At home the second weekend when it was freezing outside."
"Making a contact on 122 GHz."
"Just making a contact with my "baby rig" as I had my shoulder replaced. 10 GHz and Up is my favorite contest and everyone is out for the fun!"
"Discovering that one of my IF radios doesn't like to work at below-freezing temperatures!"
"State-to-state contact." (from California)
"Hearing stations quite far away across Lake Michigan, plus talking with the public who was asking what we were doing."
"Hanging out with great ham friends who are also microwave addicts like myself."
"Working K8ZR on 78 GHz."
"Rain scatter on 24 GHz."
"Working W3IP late Sunday evening--best DX and last QSO."
"Watching Pete, K9PW, and Garry, K3SIW, make the first ever 47-GHz QSO across Lake Michigan."
"Making my first QSO on 10 GHz."
"Making my first 76 GHz QSO."
"Hearing VA3ELE mobile on 10 GHz via rain scatter."
"Unexpected tropo across Lake Erie to work K2UA and others at over 670 km."
"10 GHz QSOs with K2UA and N2MG from the south shore of Lake Erie. A personal-best distance."
"The freezing cold mountaintops in New England! Though the weather did seem to limit the number of curious onlookers this year."
"Weak-signal QSOs to New England."
"Lunch."
"Encouraging Mike, KMØT, in EN13VB, to get his portable rig out of storage, and then rag chewing with him for 15 minutes on FM via a midpoint storm cell. It's been about ten years since we last spoke to each other and we had a little catching up to do! This 313 km QSO was also my best DX of the entire two weekends."

“First contest QSO on 122 GHz.”
“Almost new personal bests on rain scatter with W8BYA in EN70JT from FN03VW at 672 km in August.”
“Dinner with K1OR and K1CA.”
“Hearing something as I was RX only. Working on TX next.”

Question 8: Would you suggest any rule changes or scoring changes for the ARRL 10 GHz and Up Contest? Please include your reasoning for any suggestions.
This question received the following grouped responses:

a) Increase points for 24 GHz and higher bands to account for the higher level of difficulty in getting on them, and the longer time it typically takes to make QSOs on them.--15 responses
b) The “10-mile rule” (that requires moving at least 10 miles between portable locations) should be changed to a “new 6-digit grid” rule, especially since that is the reporting method.
c) “Get rid of the stupid 24-hour rule.”
d) Maybe consider handicapped scoring based on antenna size and power.
e) Minimum distance between portable operating locations is 10 miles, but distance scoring is in km. Why?
f) One respondent provided a suggested distance multiplier by band, as follows: 10 GHz--1 point; 24 GHz, 2 points; 47 GHz, 4 points; 76 GHz, 8 points; 122-241 GHz, 10 points

Question 9: In this contest, did you operate from home, or did you operate portable?
Home on 10 GHz only: 21%
Home on 10 GHz and at least one higher band: 0%
I operated portable only on 10 GHz and up: 59%
I am on from home, but I operated portable for the contest. 21%

Mentoring Microwave Newcomers

Many hams today are discovering the fun and excitement of making long-haul QSO's on our microwave ham bands. With available transceivers covering up to 1296 MHz and several companies offering transverters that cover the bands above 1296, one might think it would be easy. But it can be a daunting task to understand what other equipment (antennas, feedlines, etc) is necessary to enable making that first microwave contact. Add to that the uniqueness of some of the propagation modes on the upper microwave bands and a ham just starting out on those bands has a lot to think about!

Those of us who are active on the bands and have experience with the nuances of microwave radio communications have the opportunity to share our knowledge and experience with the newcomers to the bands. In my experience, most of us have had help of one form or another (been mentored) by another ham and, I think that's the best way to further growth in this part of the amateur spectrum.

Personally, I got my start when I was invited to be one of the 6-meter ops at the WB5LUA (now W5LUA) multi-op in June of 1983. As everyone knows, Al was (and still is) a serious microwave enthusiast and pioneer, and of course he had all his gear running for the contest. Kent, WA5VJB, who was also part of the team, brought along some simple FM gear for 10 GHz and asked me to work him for a contest QSO. I had no idea how any of the stuff worked (using a 2-meter HT for the IF), but both he and Al took the time to explain frequency conversion and multiplication to me, I made the contact with Kent and I was hooked. Over the next several years, Al helped me build gear for the microwave bands, patiently explaining the critical techniques to me.

After I moved from Texas back to New York State, it became my turn to help others get on these exciting bands, and with the help of my good friend Steve, N2CEI, of Down East Microwave, the Rochester VHF Group (RVHFG) built a huge quantity of 3, 5, and 10 GHz DEMI transverters as club projects. Those of us with the experience helped the "newbies" get their gear built, troubleshot (when necessary) and operational, and helped with antennas and other gear needed to actually put these new rigs on the air.

Later, a small group of us within the RVHFG decided to make an assault on the bands above 10 GHz-- 24, 47, and 78 becoming our focus, with a goal of each team member achieving VUCC on each band. None of us knew much about these bands, but by sharing information we each picked up and mentoring the others over the "rough spots," we all became knowledgeable and active on these higher bands.

Today, there's renewed activity within the club and the region (Rochester and Toronto) on 10, 24, and 47 GHz. Thanks to DEMI, we again have a transverter club project underway and again, we're mentoring the people starting out. Our Toronto neighbors are also doing a club project with W1GHZ's 10 GHz transverters. Due to the efforts of some of our friends "down under" there is also excitement within the club getting people on 122 GHz. Because only a few of us have any knowledge about operations there, it is a sharing/learning experience for all of us, and we're using that to make contacts and have fun on this new band!

The point to all of this is this: Our microwave amateur allocations are seriously underused and if we have any hope of keeping those allocations, we need to be active there-- experimenting, learning, and operating.

Each of us who is active on the microwave bands needs to take the effort, giving our time helping with equipment sources and parts, getting on the air to test, and teaching operating techniques to help interested newcomers along. Think of how you got your start and pay it forward! --73, Dave Hallidy, K2DH