

The 2010 ARRL 10 GHz and Up Contest Results

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Silver Anniversary event yields thrilling “Tropo” for the Midwest

The ARRL 10 GHz and Up contest, held Aug 21-22 and September 18-19, 2010, yielded fun and adventure for many who participated.

Microwave contesting is different from contesting on lower frequencies – UHF, VHF, or even HF. The number of operators on the air within a region is somewhat limited. CQ’ing is not the predominant way to land new contacts. Rather, operators make efforts to alert other operators of their presence and participation in the event by announcements on

144 or 432 MHz liaison frequencies during or by Internet means before the event. On these microwave bands the thrill comes

from conquering all the interceding challenges that should make a contact impossible. Tight antenna beamwidths, low transmit power levels – and most troublesome – obstructing terrain and foliage make completing microwave contacts difficult. When an operator considers the significant barriers to making a contact – yet there is the signal in the rig – the reward is the “zing” of success.



Figure 1 - Mike, WA3TTS operating from EN91kt at Perry Park, OH making QSOs with VE3SMA and VE3FHM across Lake Erie. (Photo submitted by WA3TTS)

Top 10 Scores

10 GHz Only	Score	10 GHz and Up	Score
KK6MK	58,803	AA6IW	57,919
WØZQ	55,769	N6RMJ	54,215
WBØLJC	55,130	W6BY	45,481
KCØIYT	53,933	KI6TWT	43,302
NØKP	50,938	N9JIM	35,020
WA2VOI	47,054	N1JEZ	30,372
KE6HPZ	44,107	W6QIW	27,629
W6SR	37,530	KC6QHP	23,328
AF1T	36,369	W1GHZ	23,144
KØKFC	33,811	AD6FP	23,133

This event is also different from other contests because many of the participants operate portable. The reason to go portable is to reduce the barriers to successfully completing contacts. By operating from clear locations, the signal-killing aspects of terrain and foliage are reduced. Of the participants who operate from home stations, some of them enjoy using panadapter “waterfall” displays that let them “see” activity – even if off frequency – and somewhat down in the noise.

Since this contest occurs on two separate weekends, there are actually four complete days of activity. Some operators hit the entire event hard while others show up to get a dose of microwave activity on just one of the days. Whatever the level of involvement, every completed contact is a thrill.

2010 Contest Highlights

Some areas of the nation had below average conditions while the Midwest enjoyed a rare tropospheric ducting event. On the September weekend, John, W3HMS and Joe, WA3PTV visited their favorite site in FN00wc. This year, they experienced the worst conditions they've yet seen in five years of 10 GHz activity. At the other extreme, the Upper Midwest experienced the finest tropo opening yet seen during a 10 GHz contest. Winnipeg, Manitoba, the eastern edge of the Dakotas, Minnesota, Iowa, and Illinois enjoyed a real thrill as frontal boundaries spun through the area on Sunday morning of the August weekend. Several overland contacts were made in the 700 km range. The longest one reported was between Barry, VE4MA (EN19lu) and Steve, N4PZ (EN52gb) at a whopping 1046 km! (See the sidebar at the end of this article for a report on the opening from VE4MA.)



Figure 2 Jim, KØKFC operates in eastern South Dakota from the Summit Rest Area (EN15lj). Here he is beaming north to Barry VE4MA in EN19lu. (Photo by W9FZ)

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There were pockets of activity across the nation. Out in California the mountaintops and long valleys sported 10 GHz operators. Several New England mountaintops were again activated on each weekend of the contest. Mike, N1JEZ and Larry, K1LPS went to the top of Mt Washington for Saturday of the September weekend. They had pleasant weather conditions on top of the mountain – this time. They observed a steady haze/cloud layer throughout the day and noticed fine conditions coincident with that layer. Mike made three contacts over 700 km and a real gem of 845 km with Greg, NA4N.

During the September weekend, Lake Michigan again had activity along both shores. As in several past years, Bob, K2YAZ near Glen Arbor, MI hosted a group of operators consisting of NE8I, WW8M, NN9X, WB8TGY, K8JA, WA8VPD, and W8ISS. The visiting operators explored many of the shoreline locations in the northwest corner of Michigan's Lower Peninsula. In addition to working each other, they found operators like WA9O, W9FZ, W9SNR, and W9SZ activating various locations along Lake Michigan's western shore. Additionally, home stations

like W9ZIH – well inland from Lake Michigan – were able to work K2YAZ and the other Michigan operators.

The August weekend found Lake Erie particularly hopping. On the northern shore, a group consisting of VE3KH, VE3NPB, VE3SMA, VE3FHM, VE3RKS, and VE3ZV activated several locations. They found success working targets along the southern shore and well inland.



Figure 3 Scenic locations (EN63bf) draw wedding photos as well as 10 GHz operations. Although the hams were there first, they knocked off and relocated for everyone's well-being. Photo W9FZ

The Red River Valley – basically the border between North Dakota and Minnesota – was busy for the August weekend. First, a portable group consisting of KØKFC, WØLCP, W9FZ, W7XU, and WBØTEM setup both days as a portable operation in eastern South Dakota at a rest area along Interstate I-29 called “Summit”. Also, a rover group consisting of WØZQ, KCØIYT, NØUK, KØHAC, WBØLJC, and WA2VOI operated from many locations between Fargo, ND and Grand Forks, ND. Fixed stations in the region like VE4MA, WØPHD, NTØV, KØMHC, and KMØT made a point of finding the rover group at as many of their stops as possible. The Red River Valley’s flat terrain makes overland 10 GHz contacts fairly easy. The key is to get clear of foliage and have a horizon a mile or more away. The rover group reconvened for the September weekend but tracked across south-central Minnesota from west to east.

2010 Contest Results

Participation by Call Area			
Call Area	Entries	Call Area	Entries
6	37	9	5
Ø	21	5	4
1	16	2	3
VE	11	3	3
8	10	DX	1
4	7	7	0

This 25th anniversary event received 119 submitted logs – a nice increase over last year’s 107 logs. Of the 119 logs, 6-land led the way with 37 followed by Ø-land with 22 and 1-land with 16. These three call areas, as in previous years, continue to yield two-thirds of the submitted logs. Total number of QSO’s represented by the submitted logs was approximately 9100 – down slightly from last year’s 9500 and well below the high water mark of 14,500 in 2005.

10 GHz Only

In the 10 GHz Only category, Rex, KK6MK led all 88 operators in this class with a score of 58,803. Rex topped Jon, WØZQ in second place with 55,769 by having more unique call signs (59) worked despite Jon's slightly greater distance point total. Third, fourth, and sixth places went to WBØLJC, KCØIYT, and WA2VOI who traveled with WØZQ in eastern ND on the first weekend and southern MN on the second weekend. In fifth place was Dave, NØKP who operated both weekends from Buck Hill near the Twin Cities.

Top 10 QSOs Completed

10 GHz Only	QSOs	10 GHz and Up	QSOs
KCØIYT	280	AA6IW	287
WBØLJC	249	N6RMJ	283
WØZQ	247	W6BY	213
KK6MK	238	KI6TWT	189
KED6HPZ	230	N9JIM	175
WA2VOI	222	WA6CGR	133
NØKP	194	W6QIW	130
KØMHC	168	KC6QHP	120
WB6JDH	155	KA1OJ	112
KØKFC	151	N1JEZ	109

The highest number of unique calls worked in the 10 GHz Only category goes to KK6MK with 59. Glen, KE6HPZ was close behind with 58. California operators are doing a good job of getting participants on-the-air and having fun during this event. Longest DX in the 10 GHz Only category goes to VE4MA with his 1046 km shot mentioned earlier. K1LPS and NA4N tied with excellent DX of 845 km.

10 GHz and Up Category



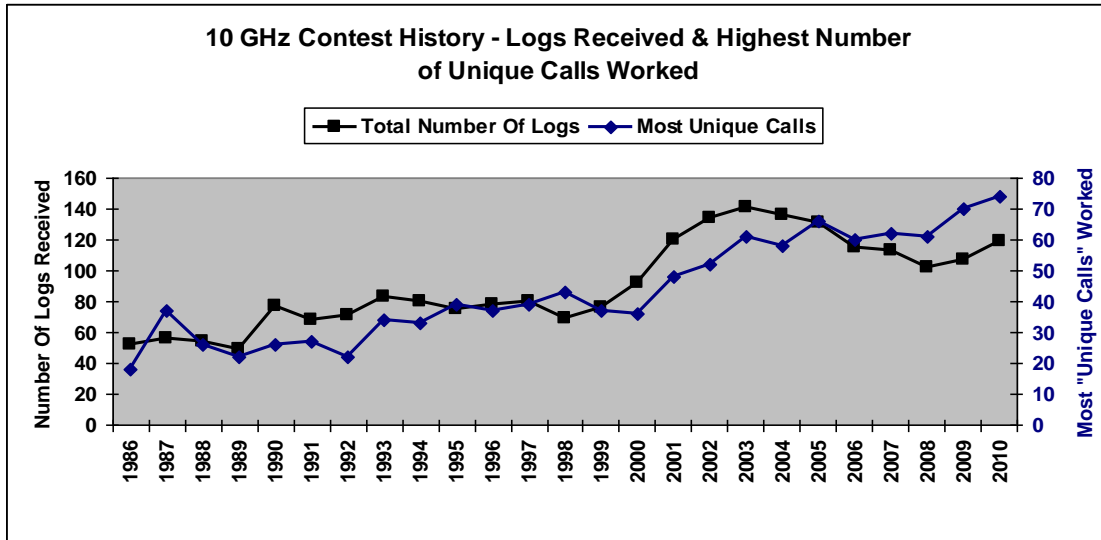
Figure 4 N1JEZ's view from Mt. Washington. (N1JEZ photo) The haze layer existed most of the day and was coincident with good propagation conditions.

Just like last year, the “And Up” category received 31 logs. Topping this category in points is Lars, AA6IW with 57,919 points. The most unique call signs worked was achieved by Pat, N6RMJ with 74. Close behind were AA6IW with 66 and KI6TWT with 63. Of the logs submitted in this category, all made contacts on 10 GHz and 24 GHz. Five operators submitted contacts on the 47 GHz band. In the 10 GHz And Up category, N1JEZ had the longest 10 GHz distance with 845 km. Gary, AD6FP had the longest distances on 24 GHz at 526 km and also on 47 GHz at 181 km. No activity was submitted for 78 GHz and above this year.

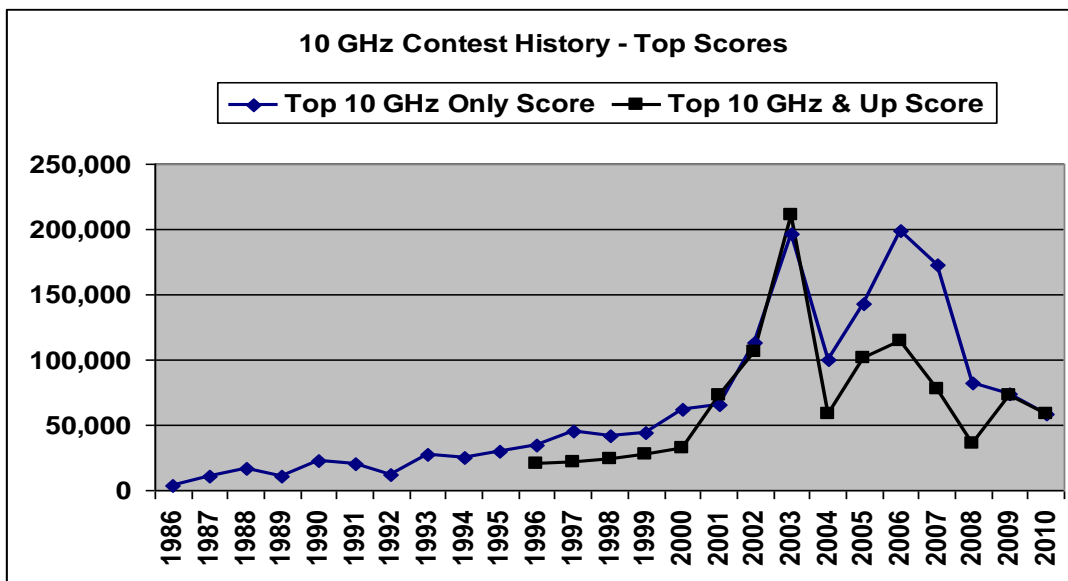
Analysis

For those of you who like to analyze participation and distances over time, it is interesting to look for causes such as weather or organizational efforts by clubs. These charts were initiated by WØZQ and I thank him for them.

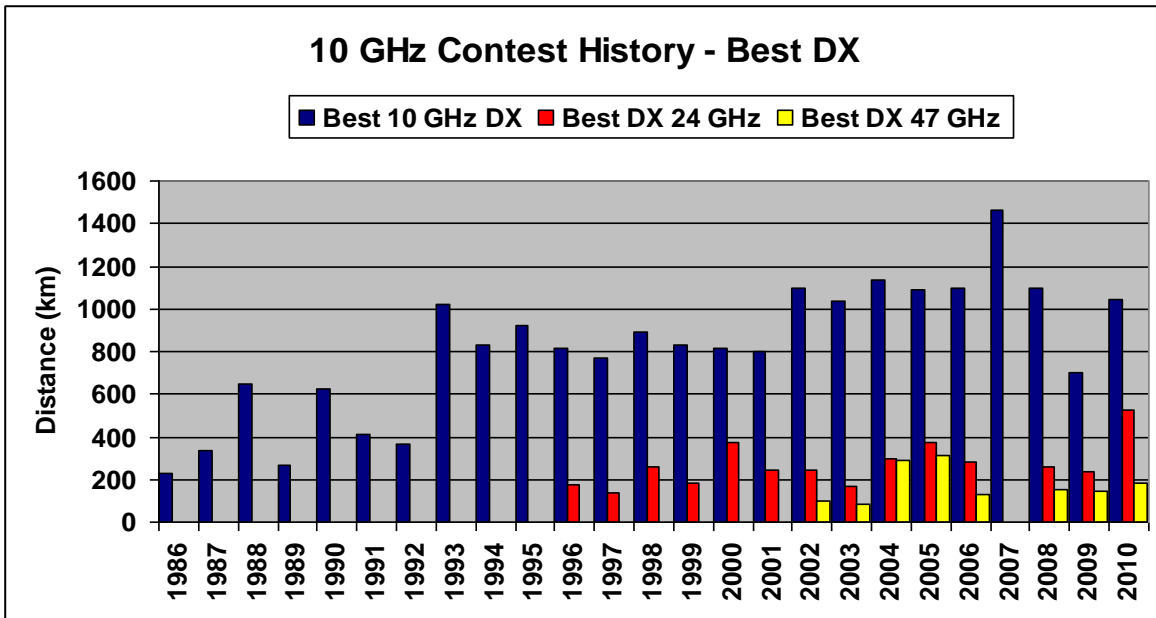
Participation remained healthy this year. You can see an upward trend of logs submitted (119) for the past three years. Pleasantly, the long and steady upward trend of unique calls continues with a new record of 74.



Top Scores continue in a downward trend. This tends to correlate with total QSO's represented in the submitted logs. The volatility seen since 2003 may be due to weather impacts during the designated contest weekends or perhaps variations in organizational efforts at the local level.



Lastly, DX distances were slightly up on the 10, 24, and 47 GHz bands this year. The 24 GHz distances were records for in-contest distances.



Looking Ahead – The Next Quarter Century

Congratulations to the 119 microwave operators who met the challenges for the 2010 contest. For 2011, make a point to get on the air for this event. Put it on your calendar for August 20-21, 2011 and September 17-18, 2011. Plan a new adventure different from past years. Also, include new operators in your plans to expand the fun!

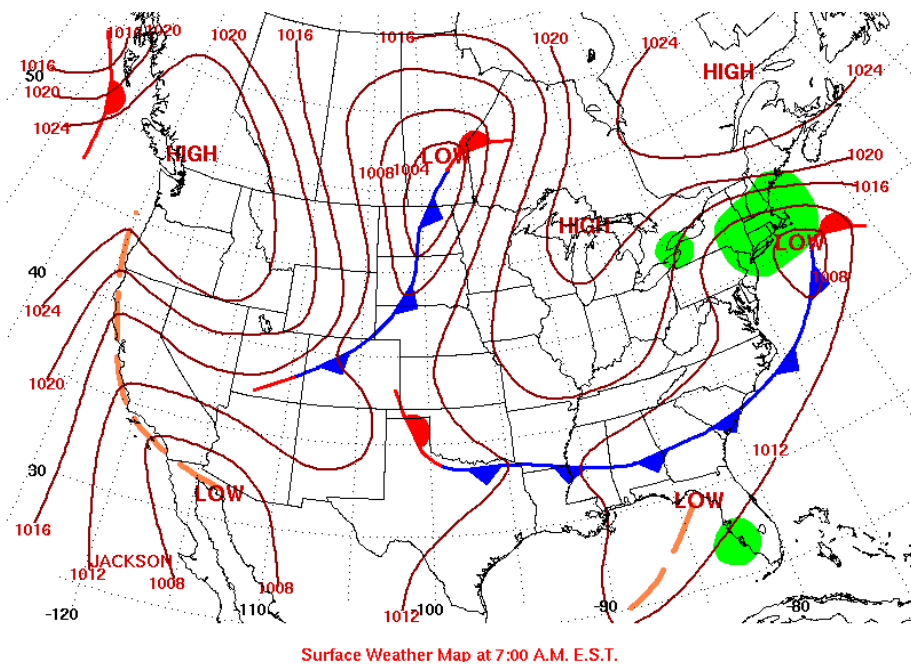
Memorable Tropo, by Barry Malowanchuk, VE4MA

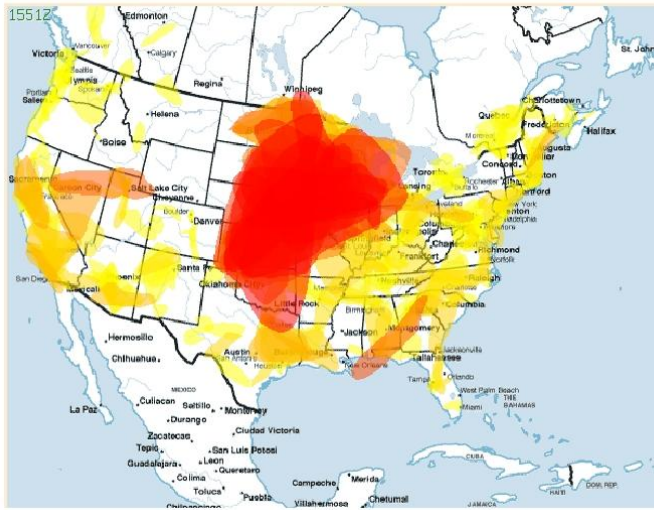
My first experience with a tropo event like this was in 1978 when I worked (from Winnipeg, MB) Chicago and, Detroit on 144 MHz and one week later Kentucky on 432 MHz at 1600 km! Over the years similar openings have occurred but not quite as good. Living at 50 degrees north latitude, the tropo openings only come in the last two weeks of August – if at all.

For me, I need the center of the low pressure system to be just north of me as a minimum. Then I am able to see the tropo enhancement between the leading warm front and trailing cold front. I do not see the opening until the warm front reaches me and it's gone as soon as the cold front passes. When the low pressure center passes close to my location the opening is often short-lived. The progression of frontal passages is quite rapid as the system passes from west to east.

In the late 70's there was a system of 430 MHz radars along the US northern border. I was able to hear the radars indicate an opening to the west (VE4/VE5 border) where there was no ham activity. I could watch the opening move and swing over to the south and, finally, southeast before it disappeared. In the past, the openings regularly extended down as far as Salina, KS with S9 signals up to 1296 MHz (my highest terrestrial band at the time). Over the years the openings always seemed to exist on 144 MHz and progressed upwards in frequency. Often there was no activity heard but if you called CQ people would be there. I recall working KBØHH in MO on SSB using an otherwise dead 2 meter band.

It has been a long time since I have had a good tropo opening like this. Often the weather did not work its way far enough north or there was not enough humidity in the system to get the atmospheric density high enough to do any refracting. This year, like many years before, I saw the weather system coming. I captured a weather map for Sunday, Aug 22nd, in the figure to the right – you can see the cold front coming towards me. (*Winnipeg is just north of the junction of Minnesota, North Dakota, and Manitoba. It is just below the "O" of "LOW" on this map – Ed.*) Fortunately this coincided with this year's 10 GHz contest! Extraordinary signals were seen initially on the southern paths to the rover packs and then to the southeast later. I did not spend time on the lower VHF/UHF bands until the 10 GHz rover packs were gone for me.





I had not made much use of the APRS maps before but it certainly showed where the signals were possible--even if no one was on. I captured one map at 1551Z on Aug 22nd, late in the event, and shown here to the left.

I made many contacts during the tropo opening on 10 GHz. Two stand out for me in particular. On Sunday, Aug 22nd from 1030-1200 UTC with KMØT. He is in EN13vc and I am in EN19lu making this a 753 km path. Mike's signal was solid during this entire period and we ragchewed between attempts

with other stations.

Sunday, Aug 22nd at 12:28 UTC, I worked N4PZ with signal quality of 339 (his) and 439 (mine), improving later to 539 and 559, respectively, at 12:35. He is in EN52gb and I'm in EN19lu, so that's 1045.5 km! (I tried with W9ZIH (EN51nl) later with no success – just a few minutes too late.) I commend Steve for being persistent while trying to make this QSO. If we had not tried when we did, we would not have made it. The QSO happened at just the right time! My 50 W on transmit allowed Steve to hear me before I could find him. Frankly, for a few minutes, I was afraid that I had a receive problem! In the Midwest, 1046 km on 10 GHz over land is a real thrill!

I made numerous contacts in the 400 to 600 km range. Additionally, I made numerous contacts with the rover pack operating in eastern ND with S9+ signals at over 300 km – that was easy! I know other 10 GHz operators south of me got into the opening, as well, and it lasted longer for them. Additionally, some of them made VHF and UHF contacts while enjoying the opening.

To summarize, enjoying this tropo opening on 10 GHz was a real thrill and I'm glad there were operators on the air ready to experiment. It was a real rush to work a station 1046 km away and I eagerly await the next opening!