

ARRL 10 Meter Contest 2016 Results

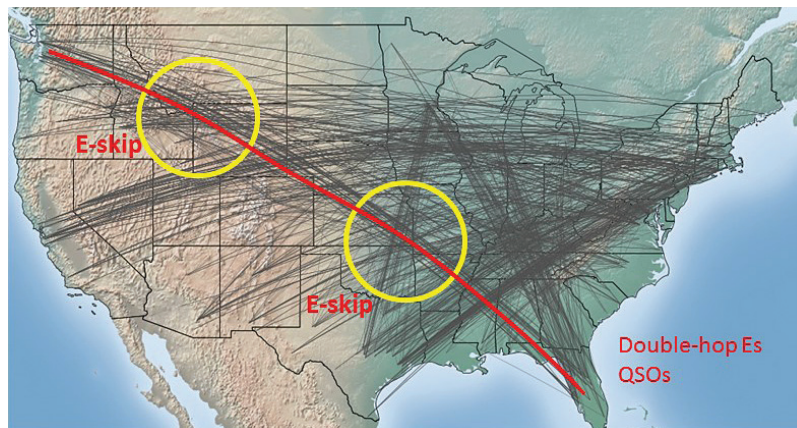
Participants enjoyed highlights during a challenging, low-sunspot year.

Scott Tuthill, K7ZO, k7zo@cableone.net

While participants experienced the challenge of a low-sunspot year for this event, there were plenty of highlights. If you knew what to look for and were in the right place at the right time, there was much fun to be had. The 2016 ARRL 10 Meter Contest took place on Saturday and Sunday, December 10 and 11. Saturday UTC time was exciting — full of wonderful and ever-changing band openings.

Contacts and Strategies

Of all the contacts reported during the contest, 70% were from Saturday. Multiple operators mentioned that when the band was open, it was really open. Contesting “rate junkies” reported high contact rates during these openings. Bob, K2DRH, reported rates above 150 contacts per hour from 2000 to 2200 UTC. Mike, N7MH, operating at the W6YX station, found conditions even better. He reported a couple of hours above 200 contacts per hour on his way to a 1st place US and 2nd place worldwide finish in the Single Operator, Mixed Mode, High Power category. Justin, K9MU, experienced a peak 10-minute rate of 258 contacts per hour. He said, “It was the most fun I



Long-distance contacts were made possible by two sporadic-E clouds — one over Yellowstone National Park and another over southeast Oklahoma. You can see where other clouds are, at the midpoint of clusters of contacts across 1,500-mile distances. [Scott Tuthill, K7ZO, graphic]

had in a long time of radio contesting.”

Other operators reported that even when the band sounded dead, it really wasn't. They just needed to call CQ as an advertisement that the band was open. Tom's, N2CU, experience was typical. He said:

On Saturday, I was calling CQ to a mostly dead band when Texas, Arkansas, Louisiana, and Oklahoma suddenly started booming in around 1400. I worked 34 of them in short order. The same thing happened at 2150 when Illinois became the go-to state. I got 25 [stations] in the log quickly.

As longtime contester Bob, K3EST, said, “The 10 Meter Contest teaches you a lot about propagation.”

Under conditions when “spotlight” propagation is common, what operating strategies work? Generally, you have to actually sit in front of your radio, listen, and then — even if you

don't hear anything — call CQ in case the band is open and everyone else is just listening. Looking at a computer screen interfaced with a spotting network may not do the job. If you want to apply technology to assist you, the most useful hardware will be a pan-adaptor or band scope tied into your own radio and antennas.

Calling CQ can often lead to being called with a surprise contact. Every year, there are a handful of DX operators who spend most of their time “searching and pouncing.” When that little spotlight of propagation from your station washes across them, they give you a call. During 2016, V51VJ, VP8NO, 9J2BO, TZ5XR, A31MM, and V55DX all received mentions of being logged by unsuspecting stations. One typical story is from Mike, VE9AA, who said, “Fairly early on Sunday morning, I was run-

Contest Mapped Out Online

Enjoy the author's maps and videos online in the full contest results at www.arrl.org/contest-results-articles. The write-up has lots of soapbox comments from participants relating their contest experiences.

Affiliated Club Competition

Unlimited	Entries	Score
Potomac Valley Radio Club	72	2,380,662
Minnesota Wireless Assoc.	77	1,636,258
Society of Midwest Contesters	71	1,634,730

Medium

Florida Contest Group	47	2,210,726
Northern California Contest Club	34	1,685,598
Arizona Outlaws Contest Club	42	1,603,992
Yankee Clipper Contest Club	50	1,576,286
Frankford Radio Club	29	1,042,828
Southern California Contest Club	20	857,532
Texas DX Society	8	852,952
Contest Club Ontario	24	673,520
Alabama Contest Group	11	585,400
Central Texas DX and Contest Club	8	530,916
Grand Mesa Contesters of Colorado	15	501,384
Georgia Contest Group	9	494,150
South East Contest Club	12	459,112
Northeast Maryland Amateur Radio Contest Society	13	445,552
North Texas Contest Club	4	434,776
DFW Contest Group	15	432,546
Mother Lode DX/Contest Club	11	336,402
Willamette Valley DX Club	9	254,382
Kentucky Contest Group	12	253,466
Hampden County Radio Association	12	233,406
Rochester (NY) DX Assoc.	7	228,562
Western Washington DX Club	9	221,470
Mad River Radio Club	14	177,286
Hudson Valley Contesters and DXers	9	169,394
North Coast Contesters	5	157,188
Utah DX Association	6	148,944
CTRI Contest Group	4	144,792
Tennessee Contest Group	7	111,068
Carolina DX Association	5	100,598
Big Sky Contesters	6	78,548
Order of Boiled Owls of New York	6	77,966
Orca DX and Contest Club	3	64,866
Saskatchewan Contest Club	3	61,564
Swamp Fox Contest Group	9	46,620
Pacific Northwest VHF Society	3	21,076
Contest Group du Quebec	5	12,214
Six Meter Club of Chicago	6	9,984

Local

Central Virginia Contest Club	9	755,572
Kansas City Contest Club	8	424,414
New Mexico Big River Contesters	3	279,504
Niagara Frontier Radiosport	7	264,668
Redwood Empire DX Assoc.	4	253,456
Sussex County ARC	4	121,956
North Carolina DX and Contest Club	3	106,960
Maritime Contest Club	6	74,170
Delara Contest Team	4	62,754
Sunday Creek Amateur Radio Federation	5	57,844
Bristol (TN) ARC	4	50,484
Contoocook Valley Radio Club	3	49,414
Orange County ARC	4	37,460
Portage County Amateur Radio Service	3	34,716
599 DX Association	3	33,258
Spokane DX Association	4	27,348
West Park Radiops	3	24,030
Skyview Radio Society	6	14,598
Ventura County Amateur Radio Society	3	12,150
Oakland County Amateur Radio Society	3	10,888
Mt. Vernon (OH) ARC Contesters	3	8,638
Stanwood Camano Amateur Radio Club	3	7,764
Hughes ARC	3	3,646
Clark County Amateur Radio Club	3	736

ning 40 WPM meteor scatter into New England and out of the blue came V51YJ, who surprised the heck out of me. Wow!”

Perspective of a South American Powerhouse

The CW5W call sign is familiar to many ARRL 10 Meter Contest partici-

pants. CW5W’s regular participation, strong competitive drive, and booming signal out of Uruguay makes them an entry in many logs. In 2016, their commitment once again powered them to first place worldwide in the Multioperator, High Power category. Jorge, CX6VM, is the leader of this team. Here is his story of the contest:

Winter weather had done a number on the 10-meter arrays, and the ARRL 10 Meter Contest was fast approaching. Our long-term goal of using two radios on the band — one on CW, one on SSB — would have to wait until next year. One by one, the 10-meter antennas were pulled off the towers, repaired, hauled back up the towers, and correctly aimed. The stacks for US east coast/Europe and US west coast/ Japan were up again, and working.

The contest was fast approaching, and few friends had committed to coming to CW5W to work it. A contest date too close to the holidays and too many activities related to work/family/children reduced the team even more. A week before the contest, only Wilder, CX6DRA, and Claudio, CX4DX, had confirmed their participation. The defense of our 2015 Multioperator, High Power category win was in doubt.

The contest started with poor propagation. Contacts came slowly. Our strategy was to ask every contact to work us on the other mode if they were a needed multiplier — we didn’t know if we would ever hear them again. As the contest continued, we had a nice time chatting with friends, eating good food, and monitoring our competition.

We believed our strategy was correct and had great faith in our multiplier total, taking into account the poor propagation. Good friends, good food, good competition! After comparing notes with our competitors after the contest and checking 3830scores.com, it looks like our strategy made the difference — we were 30 multipliers above our nearest competitor! I’d like to thank the operators that have come to El Mangrullo over the years, knowing how far the station is from their homes.

Additional Analysis and Records

This year, I took a deeper look into typical 10-meter propagation through a two-step process. The first step is to



The CW5W team is all smiles after another winning effort. Front to back are Claudio, CX4DX; Wilder, CX6DRA, and Jorge, CX6VM. Missing from the photo is Alan, CX5UA. [Jorge Furest, CX6VM, photo]

construct time-lapse videos of every contact reported in the lower 48 US states. Then, using these maps, I was able to see three typical propagation methods that occur during the 10 Meter Contest: long-distance F2 propagation, regular sporadic E, and double-hop sporadic E. You can watch the videos here: Day 1 — vimeo.com/213927084, and Day 2 — vimeo.com/213927356.

New Records

There were no new records set at a world, W/VE/XE, or DX entity level during the 2016 contest. However, there were multiple records set for individual entities, W/VE divisions and sections, and XE states. You can check out all records, including the new ones, at www.arrl.org/contest-records, and all of the propagation analysis at www.arrl.org/contest-results-articles.

How many more years will these lists go unchanged? The upcoming solar cycle minimum is projected to be in 2019 – 2020. It likely will be 3 years after that until solar conditions will be good enough to allow category records to be set — likely in the 2022 contest. That’s just 5 years from now!

Predictions for 2017

The 45th annual ARRL 10 Meter Contest will be held on December 9 and 10, 2017. What might we expect?

Top Ten

US

Single Operator, Mixed Mode, High Power

W6YX (N7MH, op)	532,416
N4OX	489,160
K0TT	299,676
W4TAA	202,476
W6UE (N6AN, op)	194,238
N4PN	191,136
K5YAA	182,952
K3TC	178,290
K4BAI	177,000
K0XVU	156,780

Single Operator, Mixed Mode, Low Power

K16RRN	299,040
KX4R	189,420
K2PS	133,284
WB8WKQ	124,432
K0OU	96,600
W2RM	92,880
WN6K	84,000
WC4H	81,624
WA8ZBT	81,176
W2TF	70,744

Single Operator, Mixed Mode, QRP

WA6FGV	56,550
ND0C	15,048
N3UR	9,842
K2YGM	9,576
N8BB	7,946
WB2AMU	7,590
WB4GHZ	7,004
W7YAQ	6,076
AF9J	5,508
K1VUT	4,356

Single Operator, Phone Only, High Power

W5PR	179,712
K5TR (WM5R, op)	122,808
NR5M	118,668
W4DD	100,584
AF1T	45,942
K4WDR	31,328
N8BI	28,512
KC8QDQ	21,836
W1LX	20,880
W6LP (K6SCA, op)	19,680

Single Operator, Phone Only, Low Power

K4FCG (K1KNQ, op)	44,688
W4GKF	36,432
WD5DJW	26,240
K2SDS	22,050
WA9BZW	19,880
KB4OLM	19,178
K4PZC	17,802
WB5R	16,456
N2HMM	15,444
W3PAW	15,028

Single Operator, Phone Only, QRP

W6QU (W8QZA, op)	5,984
KB5KYJ	2,814
NO4FX	2,016
KF4BY	1,862
NA4O	1,344
N2WN	1,216
WB0IWG	870
KC9AMM	506
KE4TZJ	340
WB6CZG	308

Single Operator, CW Only, High Power

K5NA	319,680
K1TO	289,772
KD4D	257,920
WD5K	201,620
N5FO	192,432
WJ9B	175,656
W0VTT	161,832
K5LG	156,928
K1KI	147,576
K1PT	142,140

Single Operator, CW Only, Low Power

N4WW (N4KM, op)	178,272
W3BGN	141,984
N7YK	127,120
AE5GT	124,432
K9WZB	93,940
N4IJ	79,800
W2TZ	78,864
W3SM	77,328
N4ZI	62,424
KM4D	61,128

Single Operator, CW Only, QRP

N5OE	48,564
K2YAZ	27,360
N8AP	13,728
W5GAI	13,320
W6JTI	10,540
N4AU	8,960
K54YX	8,236
K2SM	8,008
KR2Q	7,384
WO9S	5,600

Single Operator, Unlimited, Mixed Mode, High Power

N5XZ	451,510
W4ML (W4MYA, op)	386,208
WB9Z	338,040
N2PP	290,928
K5KG	276,060
W3EP	237,286
N4YDU	224,448
W1TJL	220,124
K6SRZ	215,992
KA4RRU	193,536

Single Operator, Unlimited, Mixed Mode, Low Power

K5KJ	183,396
K9OM	143,364
NO4F	78,650
AA0AW	69,552
K7XC	60,720
KS1J	55,296
K7SS	52,394
KE2D	50,592
AB9YC	49,400
K1ZE	47,970

Single Operator, Unlimited, Mixed Mode, QRP

N1CC	37,088
K2GMY	31,694
NK8Q	30,352
KA7T	4,150
AB8FJ	238
N3HCN	182
KB1KXL	170

Single Operator, Unlimited, Phone Only, High Power

K3EST	119,100
W3LL	93,578
K9MU	70,224
W2RD	52,752
WW5TT	40,716
N1XF	29,736
WB9JNZ	23,010
N4MM	22,064
KB1RI	20,650
W0LSD	20,090

Single Operator, Unlimited, Phone Only, Low Power

K2DRH	71,736
W4ZAO	18,880
K3GWK	16,380
KB3KNX	10,032
KT4ZB	9,234
KG7GYI	8,448
N3TD	7,004
NA5NN (K2FF, op)	6,250
KW5RF	5,454
K4LCD	4,836

Single Operator, Unlimited, Phone Only, QRP

N2GBR	1,880
N9NBC	272
K0TEA	224
K7ATN	16

Single Operator, Unlimited, CW Only, High Power

K2SSS	250,432
N6SS	240,368
N4BP	227,840
AA3B	214,488
W7RN (K5RC, op)	208,936
NR4M	180,120
K9YC	163,096
N3RS	144,288
K6IJ	131,736
N1LN	127,872

Single Operator, Unlimited, CW Only, Low Power

KH7M (KH6ZM, op)	192,600
W9XT	92,512
K6WSC	75,348
W2UP	70,144
K2DFC	63,168
K0VBU	41,968
K5WO	35,392
K0QC	32,508
W3KB	25,568
KA2D	20,000

Single Operator, Unlimited, CW Only, QRP

N2KW	29,640
N0UR	17,756
K3TW	11,016
K4FT	7,344
K5NNT	2,508
W6XK	1,456
KU4A	720
K8ZT	540
WT0O	4

Multiplexer, Single Transmitter, High Power

NX5M	544,258
AA1JD	378,312
NX6T	243,318
AA5B	169,608
N2BJ	154,530
KJ4IPF	137,804
W8PR	129,532
W7FSL	111,520
W4YCC	110,808
K3OQ	96,408

Multiplexer, Single Transmitter, Low Power

N4SVC	129,168
W7TVC	101,520
WA1F	93,660
N4MUH	34,430
W7PU	11,580
W3KWH	11,322
WY3P	10,812
N1SOH	5,808
KB5ENP	5,520
K6EI	5,350

Canada

Single Operator, Mixed Mode, High Power

VE3KZ	196,420
VE9CB	17,836
VY2LI	12,876
VA3TIC	11,856
VE3TW	7,598

Single Operator, Mixed Mode, Low Power

VE1ZA	24,768
VE3WG	21,500
VE3IAE	18,522
VE3RCN	3,700
VE7BGP	2,376
VA5LF	156
VY2HF	72

Single Operator, Mixed Mode, QRP

VE6EX	1,430
VA3RKM	540

Single Operator, Phone Only, High Power

VA2KF	1,800
VA6CV	306
VE3AD	260
VE2HAY	150

Single Operator, Phone Only, Low Power

VE3RR	1,848
VE3KTB	504
VA2MO	480
VA3QWW	400
VA2QA	180
VA7AM	108
VA3GD	80
VE2HIT	50
VE6OO	18
VE3CNA	8

Single Operator, Phone Only, QRP

VE3BKM	1,656
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Single Operator, CW Only, High Power

VE3PN	85,644
VE5UF	44,000
VE3FJ	28,224
VE7KW	4,288
VE3EJ	3,496
VE6BBP	3,008
VE1JS	660

Single Operator, CW Only, Low Power

VA3SY	21,140
VA7MM	16,256
VA3GUY	15,908
VA7EU	7,616
VE3ZY	7,440
VA3EC	4,752
VE7XT	4,284
VA7ST	3,904
VE3DZ	3,040
VE9HF	2,100

Single Operator, CW Only, QRP

VE3XT	2,220
VE3DQN	768
VA3PCJ	48
VE3CBK	4

Single Operator, Unlimited, Mixed Mode, High Power

VE3CX	66,096
VE9AA	31,906
VE3RZ	30,800
VA7DX	28,454
VA4GV	25,568
VE1OP	15,780
VE2EBK	7,194
VE3MZD	560

Single Operator, Unlimited, Mixed Mode, Low Power

VA3DF	72,652
VE3PJ	10,332
VA3KAI	9,240
VE7KCY	16

Single Operator, Unlimited, Phone Only, High Power

VE3WPV	216
VE2GT	84
VE6KD	84

Single Operator, Unlimited, Phone Only, Low Power

VA2BN	1,260
VA3IPG	480

Single Operator, Unlimited, CW Only, High Power

VA3DX	88,976
VE7XF	23,828
VE3MA	21,488
VE2FA	4,640
VE1DT	112

At this point last year, the National Oceanic and Atmospheric Administration's (NOAA) Space Weather Prediction Center's forecast for 10.7-centimeter solar radio flux during the 2016 contest was 90. For the 10 Meter Contest, flux is everything. A lot of it generates good propagation, while too little flux means less propagation. Unfortunately, this solar cycle decayed faster than forecasted, and actual flux during December 2016 was

closer to 70, which is really low — almost as low as it can get. Depending on the source, minimum radio flux is stated as being in the 64 – 67 range. Essentially, in 2016, we just about hit bottom. Unfortunately, the forecast for the 2017 contest is pretty much the same.

Remember that, even in 2016, there was fun to be had by being in the right place at the right time, and using your

creativity and knowledge of propagation and operating modes. There were a few periods of traditional F2-layer ionosphere refraction that some operators enjoyed with very high contact rates. There were long periods of sporadic-E ionization encountered by even more operators. An enterprising group made contacts via meteor scatter.

My prediction is that these same opportunities will exist during the 2017 con-

Single Operator Unlimited, CW Only, Low Power

VE2FWW	30,576
VE2ZT	23,056
VE5MX	17,408
VA3MJR	6,700
VE3VSM	5,704
VE3XAT	1,800
VO2AC	64

Multioperator, Single Transmitter, High Power

VE6AO	2,060
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Multioperator, Single Transmitter, Low Power

VA7DZ	42,840
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Mexico**Single Operator, Mixed Mode, Low Power**

XE3WMA	17,794
XE2AU	6,396
XE1H	2,728
XE2MWY	1,408
XE2NK	450

Single Operator, Phone Only, High Power

XE1B	56,544
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Single Operator, Phone Only, Low Power

XE2O	6,396
XE2AA	3,596
XE2PEA	2,530
XE1AO	936
XE2PDZ	750
XE2OK	558
XE1DBE	280
XE2PXZ	80
XE2MZL	72
XE2MRV	28

Single Operator, Phone Only, QRP

XE2NRG	154
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Single Operator, CW Only, Low Power

XE1RZL	9,024
XE1AY	5,040
XE2MVY	4

Single Operator Unlimited, Mixed Mode, Low Power

XE2B	63,216
XE2ST	1,210

Single Operator Unlimited, Phone Only, Low Power

XE2JS	14,350
XE2JTS	1,548

Single Operator Unlimited, CW Only, High Power

XE2CQ	74,100
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Single Operator Unlimited, CW Only, Low Power

XE2S	52,400
XE1EE	280
XE2FGC	48

Multioperator, Single Transmitter, Low Power

XE3RCC	17,680
XE2VHF	930
XE2N	910

DX**Single Operator, Mixed Mode, High Power**

4M1K	556,624
OA4SS	267,168
P4/DL6RAI	175,056
HP3SS	170,724
A31MM (JA6WFM, op)	106,398
A93JA (KE5JA, op)	33,840

Single Operator, Mixed Mode, Low Power

KP4JRS	23,310
LY9Y	12,320
G4FKA	10,112
UA9BA	9,842

Single Operator, Mixed Mode, QRP

PR9M (PY9MM, op)	191,694
LW1EUD	106,106
V55DD	44,298
PY2XIZ	39,760
PY1AX	38,624
LU6FLZ	18,500
PY2EX	14,186
EA8AQV	12,600
ZB2TT	11,026
PV8DX	9,590

Single Operator, Mixed Mode, QRP

HR2DMR	33,894
PU2RTO	2,968
EA6SX	2,440
JR1UJX	1,890
JH7UJU	1,260
VU2UR	1,080
WP4WV	682
UT7MT	490
YO4AAC	160
JR2EKD	110

Single Operator, Phone Only, High Power

CX2DK	283,934
PY5ZD	182,810
KP2XX	65,772
J79WTA	57,908
YV6CR	39,744
LU9FHF	26,950
WP4YL	18,620
TG9IIN	18,400
CT1DVV	13,120
LU3DX	11,340

Single Operator, Phone Only, Low Power

LU8VR	85,008
ZV2C	84,304
LU7DH	56,392
LT7F (LU6FOV, op)	33,280
LU9DDJ	18,300
PU2XDX	17,388
LU1EY (LU6DPP, op)	16,732
LU6FHO	15,744
LU9VD (LU9VEA, op)	15,272
ZP6DYA	14,976

Single Operator, Phone Only, QRP

TG9ANF	41,064
PU2TRX	1,232
DU4DXT	492
7N4WPY	336
JA1NEZ	238
JH3DMQ	140
I5KAP	112
HK4KM	48
VK2FGLB	16
PI35ETL (@PD0PMS)	8

Single Operator, CW Only, High Power

KP2M (KT3Y, op)	228,468
ZM2B	46,060
HS0ZIA	35,256
KP4/K7GM	31,680
VK2GR	24,864
3B9HA (G0CKV, op)	24,000
HS0ZLM	15,480
LU6UO	14,896
JA6GCE	14,432
RA7A	12,876

Single Operator, CW Only, Low Power

NP3A	136,640
XR2K (CE2LML, op)	128,520
CB3R	120,080
PP1CZ	117,952
V51YJ	95,732
LU1ICX	49,500
LU3MAM	49,056
LU5FF	39,576
CO2RQ	27,416
EA8CN	27,416

Single Operator, CW Only, QRP

JQ1NGT	6,984
CO6RD	5,304
JA1YNE (JR1NKN, op)	4,488
4X1IF	3,724
US5VX	1,012
RT4W	720
UT9EZ	288
7K1CPT	280
RW3AI	240
LU6DO	168

Single Operator Unlimited, Mixed Mode, High Power

NP2P	322,014
PX2V (PY2KJ, op)	195,778
NP2X (K9VV, op)	188,496
CE2MVF	157,248
PI4DX (PD1DX, op)	68,080
EA6URA (EA3AIR, op)	23,392
RK4FL	18,920
PA3AAV	15,522
R7AB (R7DA, op)	15,232
DH8BQA	14,400

Single Operator Unlimited, Mixed Mode, Low Power

PJ2T (W0CG, op)	353,078
LU1FAM	145,782
ZW8T (PS8HF, op)	66,992
PP5BZ	58,824
HI3CC	48,990
TI8/AA8HH	45,140
LU2FE	30,866
RU7A	16,640
PP6ZZ	12,648
JA1BPA	11,842

Single Operator Unlimited, Mixed Mode, QRP

JK1TCV	1,064
OT6M	414
UT1DX	288
PE2K	168
YP8W	144

Single Operator Unlimited, Phone Only, High Power

LU1FKR	166,716
CE3WW	84,132
LO7H (LU7HW, op)	78,392
PY5AB	48,816
PY5IN	28,800
DL2ARD	24,288
PY2ZZ	22,366
PY1FI	16,074
PY3PA	14,310
ZP5BVK	14,112

Single Operator Unlimited, Phone Only, Low Power

3G1D (XQ1FM, op)	52,114
PU2PSP	38,592
PP1WW	26,536
ED8B (EA8CZT, op)	21,824
CX4AT	17,888
PY5FO	13,542
YV6YV	12,600
PY2ZR (KP2BH, op)	10,150
PU5BOY	7,920
PP5DZ	7,380

Single Operator Unlimited, Phone Only, QRP

G7KXZ	1,258
CE3WYZ	720

Single Operator Unlimited, CW Only, High Power

PS2T (PY2ZEA, op)	425,088
KP2Q (K3TEJ, op)	196,872
KP3W	151,088
LU7YS	139,060
HK1MW	113,520
EF5Y (EA5FR, op)	51,920
VK4SN	33,480
PP5EJ	28,812
ZS6WN	24,892
S57Q	16,112

Single Operator Unlimited, CW Only, Low Power

CX4SS	240,384
LU4EG	71,400
PY5AKW	67,600
VP5CW (W5CW, op)	65,280
3G3O (CE3OP, op)	56,196
PY4XX	43,616
PY4HO	35,200
LU4HK	26,040
PX1M (PY1MK, op)	11,748
EA7RM	7,592

Single Operator Unlimited, CW Only, QRP

LT7H (LU7HZ, op)	32,832
BA4DL	3,968
UA6ARR	1,512
MW0BRO	252
JG1EIQ	72
HA3HX	60

Multioperator, Single Transmitter, High Power

CW5W	1,064,850
ZW5B	850,108
PP5ME	736,062
CX4AT	723,100
PX2B	646,920
PY3UEB	566,398
LU1DK	145,848
L77D	101,184
PY6AA	59,840
WP3E	34,568

Multioperator, Single Transmitter, Low Power

FY5KE	558,656
VP2VGG	335,400
J68HF	183,992
PW1A	143,524
EA8AH	132,264
PP5BLU	55,902
CW1DC	27,492
LQ7E	17,368
ZW5TR	11,266
PR1M	3,450

test. You will have to work for your contacts though, just as you did in 2016. An ability to operate CW will become more important for Mixed Mode entries or those Single Operators interested in maximum contact totals. CW is a much more effective emission mode in times of marginal propagation. Searching out other propagation modes than traditional F2-layer ionosphere refraction are going to be key for those seeking top scores, meeting your per-

sonal goals, or just having fun. Have patience to find path openings that may exist for only minutes over the whole weekend rather than hours on end. Meteor scatter is ethereal in nature, with the path open for just a few seconds.

Finally, remember that if everyone just listened all the time, no one would know whether the band was open. Even if you encounter a seemingly

dead band, try calling CQ for a while. The key to a successful operating strategy in 2017 will be as much to catch the band openings as it will be to work them. See you above 28 MHz!

