



WRTC 2014 in Review

“The World Cup of Contesting”

Westborough, MA
July 9-14, 2014

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Overview



- World Radiosport Team Championship Basics
- The Directors, their Goals, and the Volunteers
- Wed. – Fri.: Pre-Contest Activities
- Saturday: The Contest Itself
- Sunday: Post-Contest Activities
- Monday: Awards Ceremony
- Analyzing the Results
- Lessons Learned
- The K1L (W0YK) Wine Award

WRTC is Different



- All operators located in the same geographic region on flat ground
- All operators have identical antennas
- All operators used 100-Watt transmitters
- All operators have a referee looking over their shoulder to ensure fairness

World Radiosport Team Championship Basics



- Like The **World Cup** and The **Olympics**, WRTC is held every 4 years (mostly)
- A Contest within the IARU HF Championship
 - “As equal-as-possible” locations, antennas
 - With all else equal, who are the best operators?
- Two-operator teams
 - Team Leaders selected on the basis of performance in contests in “Qualifying Period”
 - Team Leader selects Team Member

Previous WRTC Locations



WRTC2014 Directors



K1DG

Chairman



K5ZD

Communications



KM3T

IT



N2NT

Competition



N6TR

Log Checking



K1RX

Beam Teams



K1KI

Site Teams



K1AR

Hospitality



WC1M

Finance



K1TO

Qualifying



ADVISORY COUNCIL

W1UF, K3LR, NR5M, K9CT, OH8NC

Judging Committee

K1ZZ
Chief Judge



K1TO



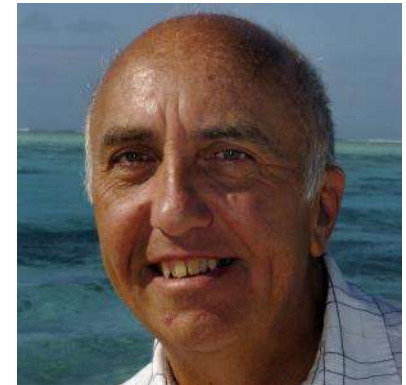
N6AA



EY8MM



G3XTT



Goals for WRTC 2014



- Hold a fair competition



- Ensure that all participants have an excellent experience



- Promote ham radio to the public in the region and beyond



Team Selection: 59 Teams



- 29 Qualifying Regions
- 55 Qualifying Events between CQWW 2010 and ARRL DX SSB 2013
- 51 Team Leaders were selected on scores
 - May select Team Member from anywhere
- 8 Special Teams
 - WRTC2010 Champions (RW1AC, RA1AIP) - Finished 16th
 - 1 Youth Team (under age 25) - Finished 29th
 - 2 Wild-card teams (WRTC2014 Committee selection)
 - 4 Sponsored Teams

Americas (20)

Area	Team Leader	Team Mate
NA1	“Krassy” Petkov, K1LZ	Mladen Bogdanov , YT6W
NA2	Ray Higgins, W2RE	Lee Imber, WW2DX
NA3	Ken Low, KE3X	Scott Redd, K0DQ
NA4E	Nathan Moreschi, N4YDU	“Kam” Sirageldin, N3KS
NA4W	Julio Henriquez, AD4Z	Dan Thompson, W4UH
NA5	Kevin Stockton, N5DX	Steve London, N2IC
NA6	Daniel Craig, N6MJ	Chris Hurlbut, KL9A
NA6	John Barcroft, K6AM	David Hodge, N6AN
NA7	Mitch Mason, K7RL	Jon Kimball, KL2A
NA8	Jim Stahl, K8MR	Mike Tessmer, K9NW
NA9	Michael Wetzel, W9RE	Mark Beckwith, N5OT
NA10	Alex Tkatch, KU1CW	Yuri Sakalouski, EA5GTQ
NA11	Jeff Briggs, VY2ZM	Patrick Briggs, KK6ZM
NA12	Lee Sawkins, VE7CC	Dale Green, VE7SV
NA13	Fred Kleber, K9VV	John Sluymmer, VE3EJ
SA1	Hamilton Martins, PY2YU	Rafael Martins, PY2NDX
SA2	Jorge Diez, CX6VM	Lucas “Luc” Maiorov, LU1FAM

← Finished 1st
Finished 34th

Area	Team Leader	Team Mate
Sponsor 2	Tom Georgens, W2SC	Dave Mueller, N2NL
Sponsor 3	George Demontrond, NR5M	John Crovelli, W2GD
Sponsor 4	Soni Leite, PY1NX	Atasnas “Nasko” Koitchev, LZ3YY/LZ9R

← Finished 12th

Over 400 Volunteers!

- Mission: Build 65 stations in <72 hours



For each station, the volunteers...

- Built and raised antennas
 - Competitors not allowed to touch antennas
- Provided support for the team
 - Tent/food/water
 - Generator refueling if needed
 - Site security
 - Answer questions from visitors, press

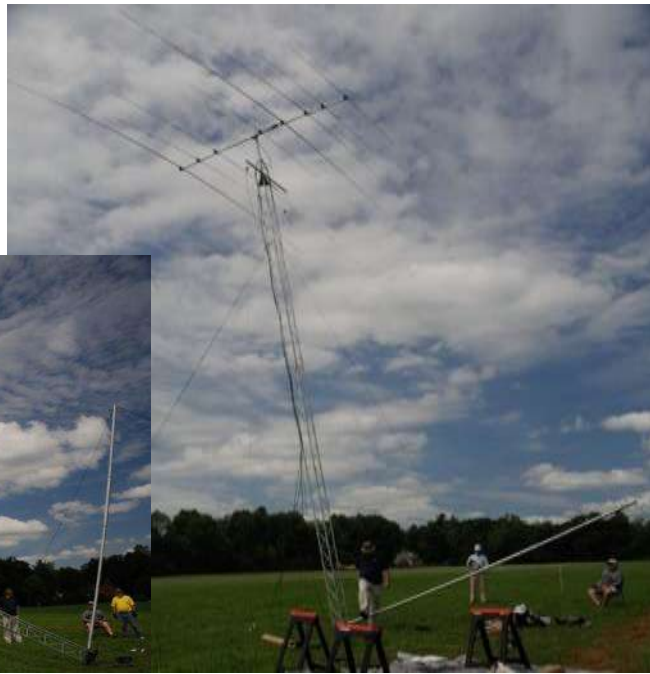
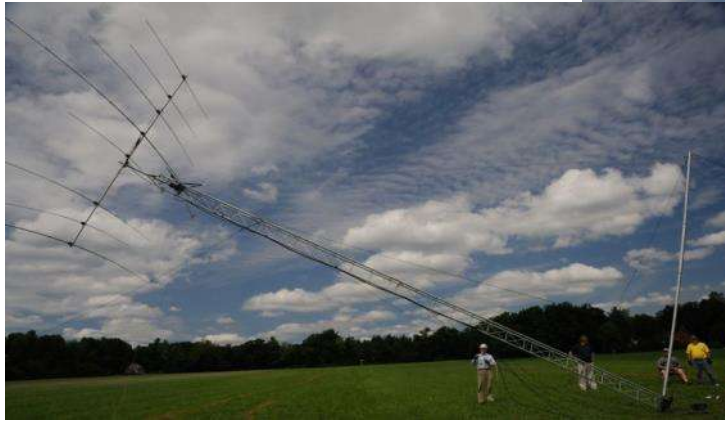


It takes a lot of stuff (x65)!



Falling Derrick Method

- Can be handled by 5 person “Beam Team”
- No climbing



Wednesday - Arrivals



The Russians Are Coming?



Welcome "Barbeque"



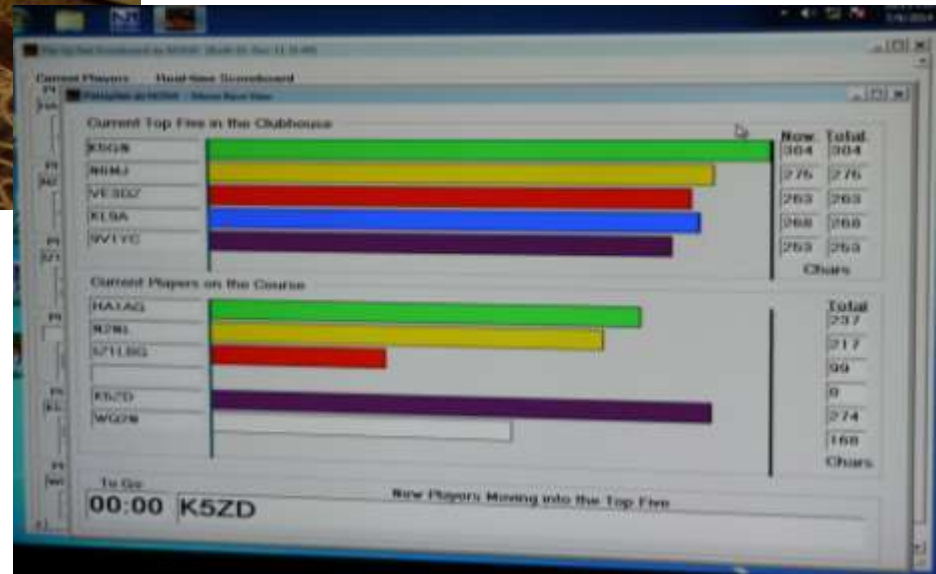
Famous and Familiar Faces



Meeting New and Old Friends



CW Pileup Competition



Pileup Results & Prizes



Prizes for top 3 in CW Skills Competition sponsored by Vibroplex (W4PA photo)



Rank	Callsign	Score	Characters
1	K5GN	60	304
2	K5ZD	57	274
3	N6MJ	56	275
4	VE3DZ	55	263
5	KL9A	54	268
6	9V1YC	54	253
7	YT6W	52	251
8	OH6KZP	52	247
9	N4YDU	49	232
10	N6TV	49	232
11	HA1AG	48	237

Captions?



“Everyone Loves a Winner”



“It’s good to be tall”

NK7U, KC7V, K5RZA, N5RZ



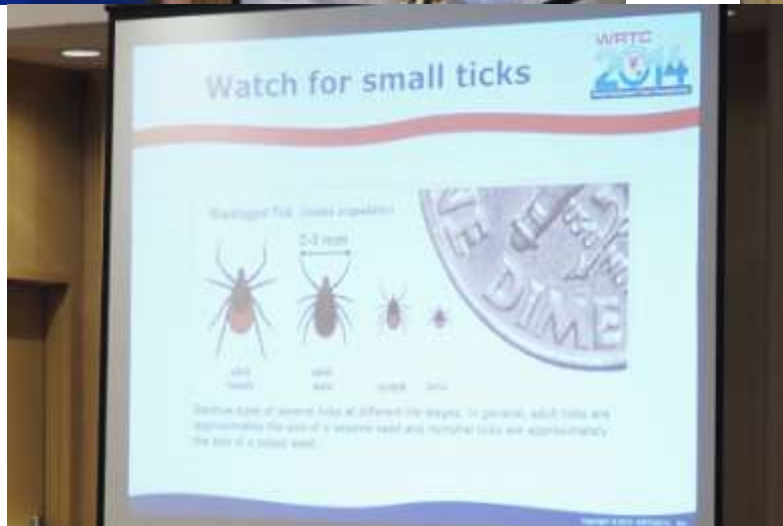
Ham Widows' Ball



Ham Widows' Ball

WRTC will be offering a wonderful meet and greet event exclusively for spouses and significant others. Plan on attending and get to know your fellow "widows" at this free event from 5-7 PM at the Doubletree HQ hotel. ***Please join the fun in a first ever, hosted, radio-free mixer for friends and spouses!***

Thursday – Briefing for Competitors & Referees



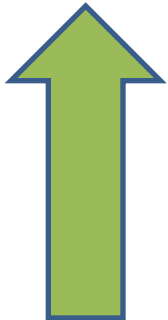
Q&A About the Rules



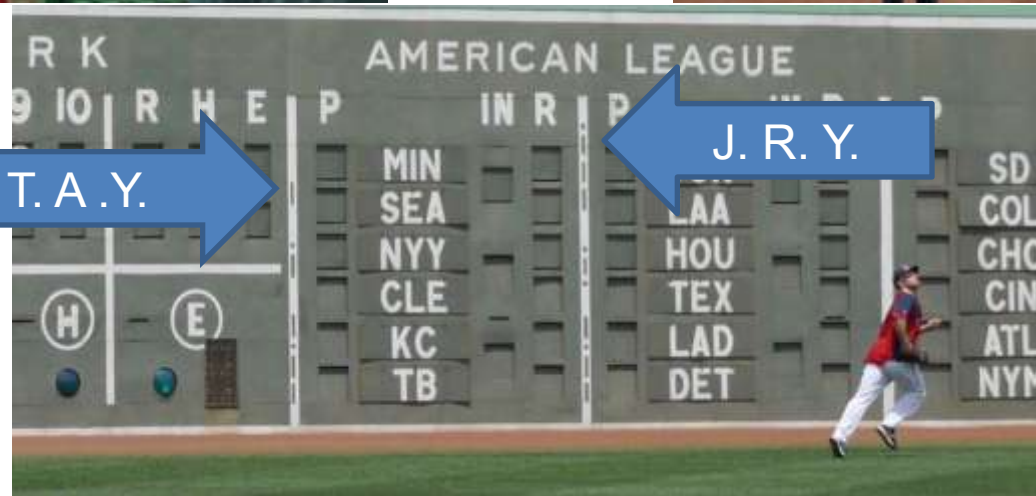
For Guests: A “Duck Boat” Tour of Boston



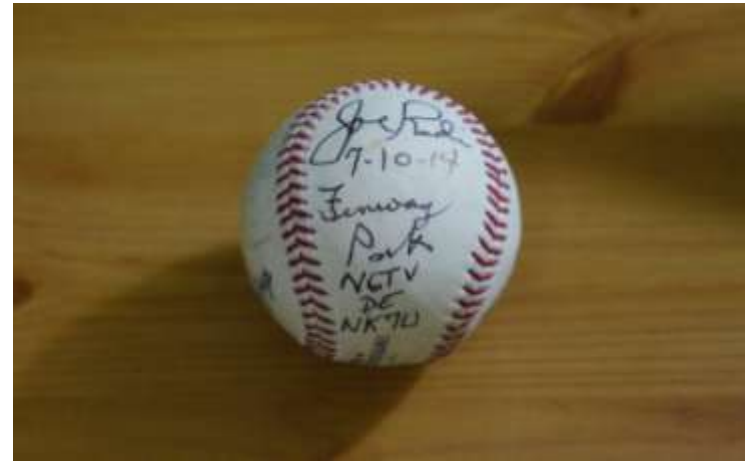
No Drought Here



VIP Tour of Fenway Park



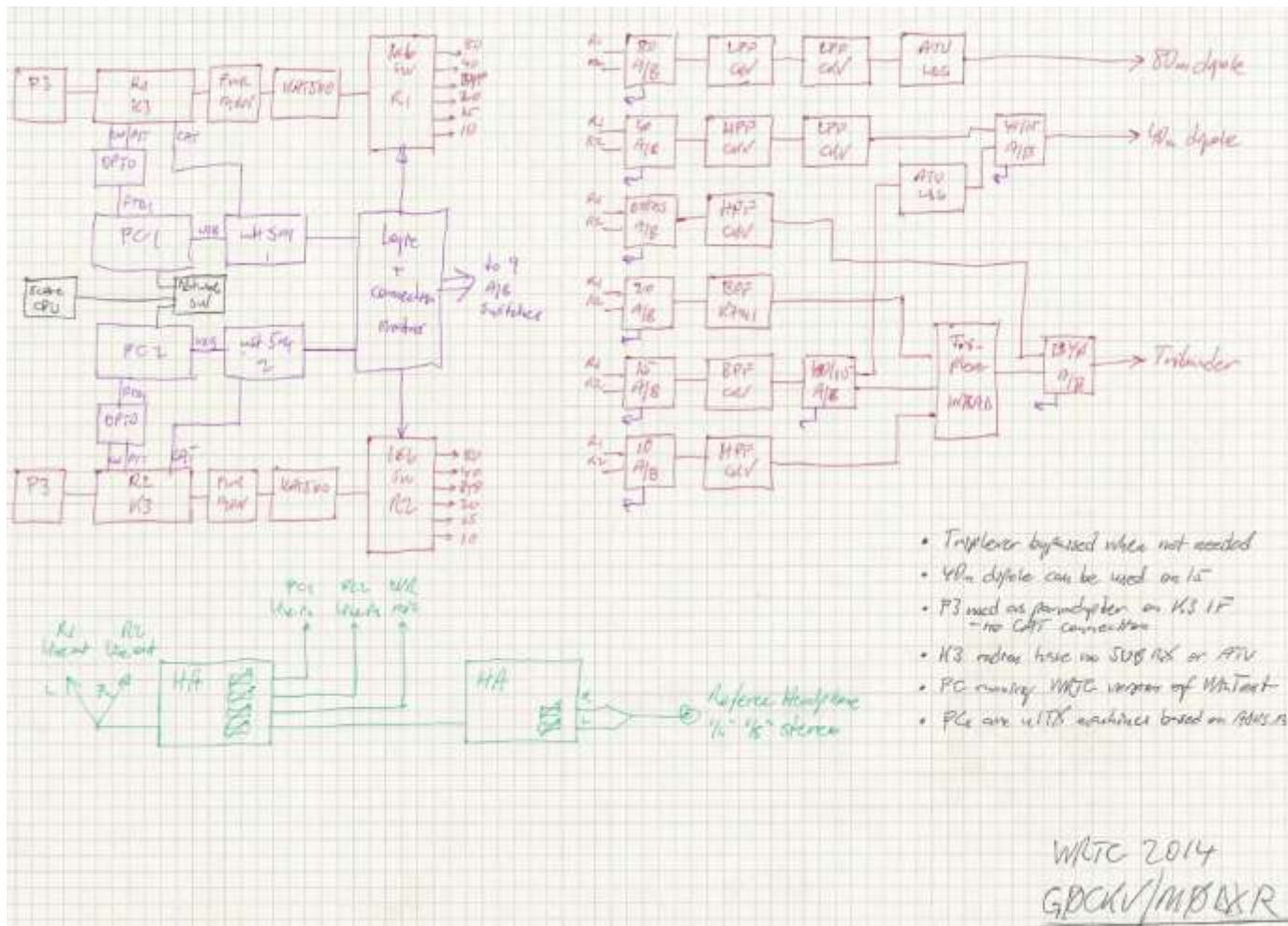
I Caught a Baseball During Batting Practice 😊



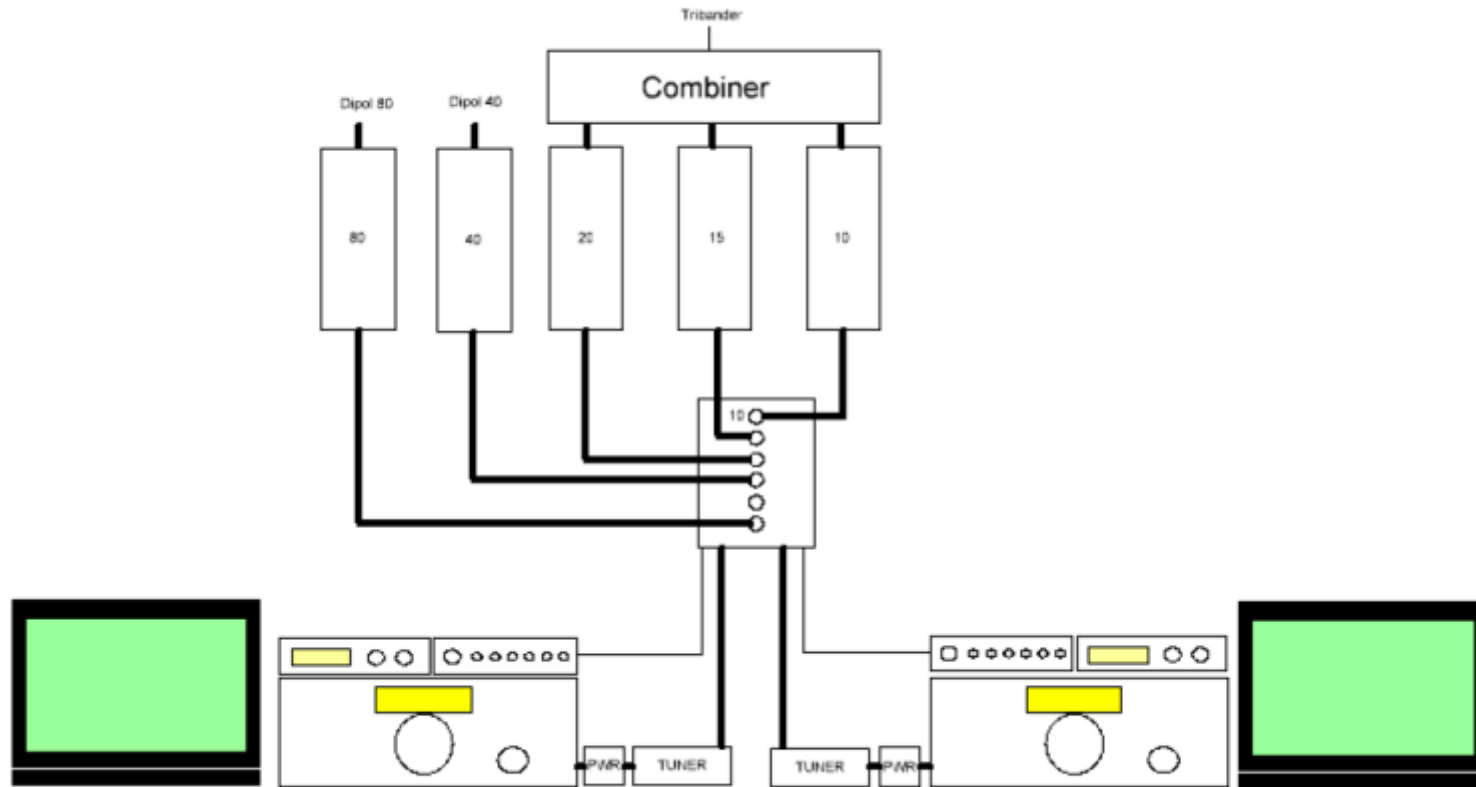
Meanwhile, some competitors set up everything on a "Test Bed"



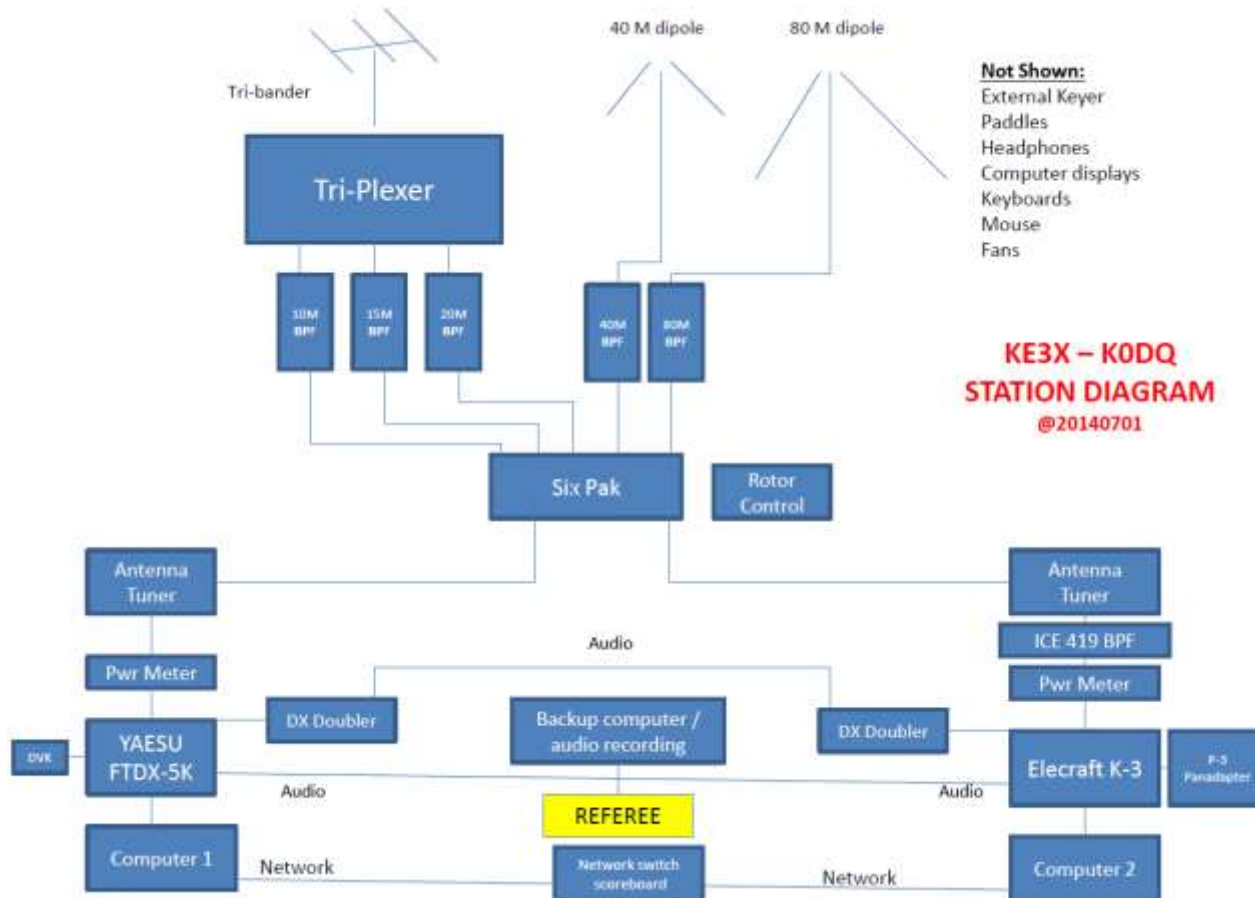
Station Diagram (G0CKV)



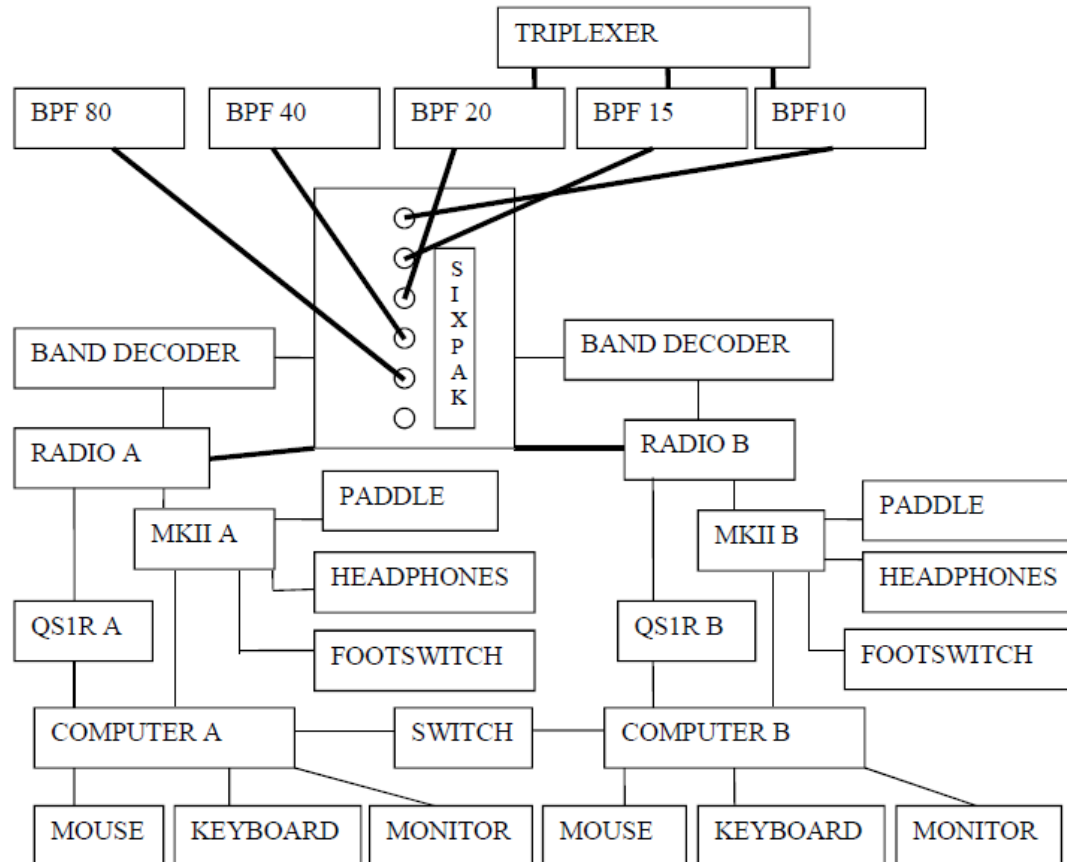
Station Diagram (403A)



Station Diagram (KE3X)



Station Diagram (ES5TV)



ES5TV and ES2RR Station Configuration.

Opening Ceremonies



Referees in Red



Referees in Red



Competitors in Blue “Olympic Style” Entrance



In the Audience



Welcome To All Guests



The No. 1 Team's Radios



Friday – The Station Draw



Defending Champions Draw First



Envelopes

Referee

Callsign Not Revealed Until 15 Minutes Before The Start



Photo by EY8MM

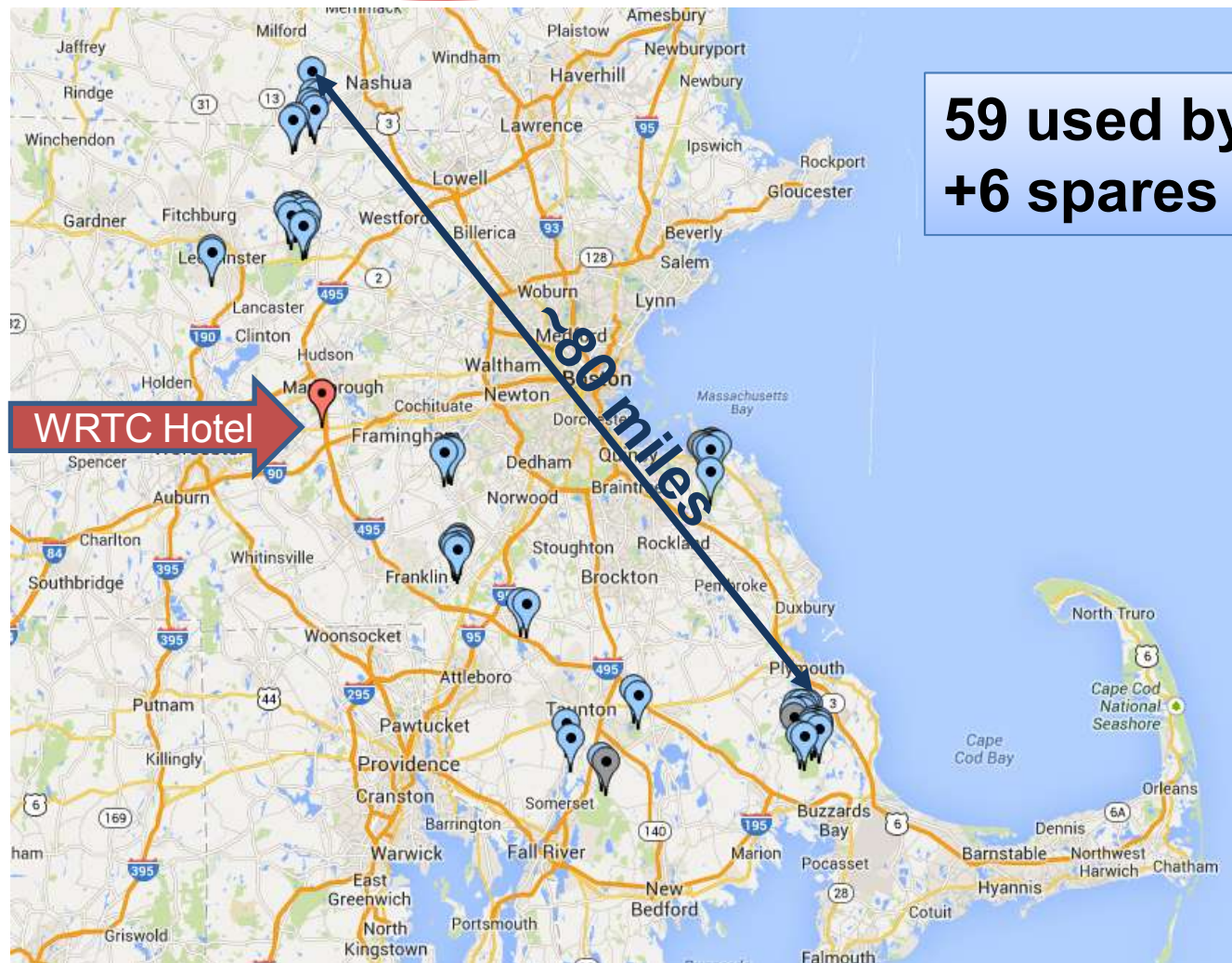
NCCC Ops & Sponsored Tents



Brilliant Referee Assignments



65 Operating Sites



**59 used by teams
+6 spares**

Out to the Sites To Set Up



Site of 4th Place Team N2IC & N5DX



Site of 5th Place Team VE3EJ & K9VV



Site of 31st Place Team ES5TV & ES2RR



DL8DYL, W6OAT, DL1QQ



Photo by EY8MM

Site of 39th Place Team CT1BOH & CT1ILT



Site of 12th Place Team W2SC & N2NL



Photos by W2SC

“They Call it Wireless”



Photo by W2SC

Saturday – Contest Begins

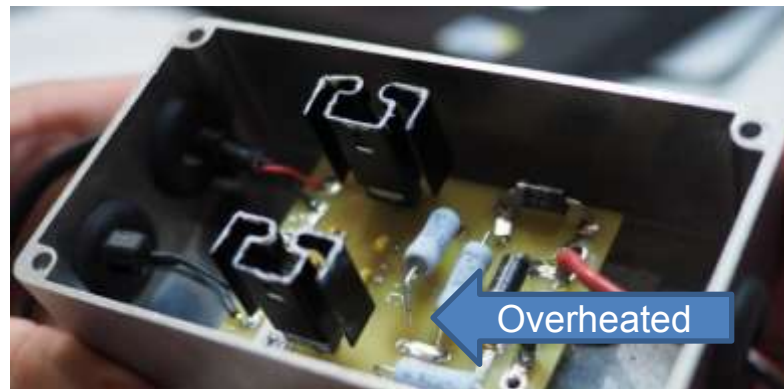


VK2IA

GI0RTN & M0CFW



It Gets Too Hot in Some Tents (Mylar® foil not installed as instructed)



Site of 2nd Place Team OM3BH & OM3GI



Site of 1st Place Team N6MJ & KL9A



Photos by EY8MM

1st Place Team KL9A & N6MJ



Photo by EY8MM

S50A & S57AW w/W0YK



Photo by EY8MM

My Navigators W1RC and N6XI (not shown)



Sunday Afternoon – Time for the War Stories



Time to Unwind



N3BB is Writing a WRTC Book



It's a Close Race for the Bronze Medal



WRTC 2014 World Radiosport Team Championship Live Scoreboard

HOME LEADERS TEAM DET

13-07-2014 19:30z - Now posting raw unchecked claimed scores.

Place	Team	Last Report
1	N6MJ / KL9A	12:...
2	OM3BH / OM3GI	12:...
3	N5DX / N2IC	12:...
4	K9VY / VE3LJ	12:...
5	DJ5MW / DL1IAQ	12:...
6	OK6XZ / DK9IP	12:...
7	LY9A / LY4L	12:...
8	K3LZ / YI6W	12:...
9	UR0MC / YE3DZ	12:...
10	G0CKY / M0DX8	12:...

A close-up photograph of a hand pointing at the third row of the scoreboard table, which corresponds to the team N5DX / N2IC.

After Log Checking

(N5DX/N2IC missed Bronze by 0.6 mults.)



		HOME	LEADERS	TEAM DETAILS	COMPARE TEAMS	ABOUT		
Place	Team	CW	SSB	DX	HQ	Score		
1	N6MJ / KL9A	3,827	745	260	176	7,184,844		
2	OM3BH / OM3GI	3,585	923	258	164	6,816,144		
3	DJ5MW / DL1IAO	3,250	1,097	252	165	6,421,383		
4	N5DX / N2IC	3,338	1,134	253	163	6,413,056		
5	K9VV / VE3EJ	3,509	990	242	160	6,302,958		
6	LY9A / LY4L	3,109	1,192	250	157	6,129,420		
7	K1LZ / YT6W	3,485	707	240	157	6,126,504		
8	DK6XZ / DK9IP	3,327	971	232	173	6,096,060		
9	UR0MC / VE3DZ	3,370	1,046	236	154	6,064,890		
10	G0CKV / M0DXR	3,397	761	243	160	6,008,327		
11	S50A / S57AW	3,102	1,098	229	170	5,935,524		
12	W2SC / N2NL	3,245	925	248	162	5,923,270		
13	RL3FT / RA3CO	3,164	847	247	170	5,896,797		

Awards and Closing Ceremony



DL1QQ & DL8DYL – 21st



N2IC with prior WRTC teammates



Site Volunteer WO1N

(Injured, stitched up, returned to site to help)



Special Awards



- **Highest SSB** (with >35% QSOs on CW)
 - K1M (IK1HJS/I4UFH) SSB – 2063 CW – 1233
- **Highest CW** (with >35% QSOs on SSB)
 - N1S (LX2A/YO3JR) CW – 2391 SSB – 1302
- **Highest Multiplier**
 - K1A (N6MJ/KL9A) 436
- **Best Accuracy**
 - W1P (DJ5MW/DL1IAO) 1.0% error rate

Special Awards



Medalists

Gold

Daniel Craig, N6MJ – United States
Chris Hurlbut, KL9A – United States



Silver



Rastislav Hrnko, OM3BH – Slovakia
Jozef Lang, OM3GI – Slovakia

Bronze



Manfred Wolf DJ5MW – Germany
Stefan von Baltz DL1IAO – Germany

Bronze: DL1IAO & DJ5MW



Silver: OM3BH & OM3GI



Gold: N6MJ & KL9A



The Medalists



Analysis (TNX K6MM)

	QSOs	Mult	Score	Error Rate	CW	SSB	Total	% CW	% SSB	HQ	DX
Ave Top 3	4,476	425	6,807,457	1.1%	3,554	922	4,476	79%	21%	168	257
Ave Top 20	4,235	405	6,035,438	1.5%	3,327	908	4,235	79%	21%	161	244
Ave All	3,934	383	5,279,138	1.9%	3,029	904	3,934	77%	23%	150	233

Rank	Team	QSOs	Mult	Error Rate	CW	SSB	Total	%CW	%SSB	HQ	DX	Radio1	Radio2	Software
1	N6MJ / KL9A	4572	436	1.2%	3827	745	4572	84%	16%	176	260	IC7800	IC7800	WINTEST
2	OM3BH / OM3GI	4508	422	1.2%	3585	923	4508	80%	20%	164	258	K3	IC7600	WINTEST
3	DJ5MW / DL1IAO	4347	417	1.0%	3250	1097	4347	75%	25%	165	252	IC756-3	IC756-3	WINTEST
4	N5DX / N2IC	4472	416	1.5%	3338	1134	4472	75%	25%	163	253	K3	K3	N1MM
5	K9VV / VE3EJ	4499	402	2.2%	3509	990	4499	78%	22%	160	242	K3	K3	N1MM
6	LY9A / LY4L	4301	407	1.7%	3109	1192	4301	72%	28%	157	250	FT3000	FT1000MP	WINTEST
7	K1LZ / YT6W	4192	397	1.3%	3485	707	4192	83%	17%	157	240	IC7800	IC7800	WINTEST
8	DK6XZ / DK9IP	4298	405	2.1%	3327	971	4298	77%	23%	173	232	K3	K3	WINTEST
9	UR0MC / VE3DZ	4416	390	1.4%	3370	1046	4416	76%	24%	154	236	K3	K3	N1MM
10	G0CKV / M0DXR	4158	403	1.7%	3397	761	4158	82%	18%	160	243	K3	K3	WINTEST
11	S50A / S57AW	4200	399	1.6%	3102	1098	4200	74%	26%	170	229	K3	K3	N1MM
12	W2SC / N2NL	4170	410	1.3%	3245	925	4170	78%	22%	162	248	K3	K3	WRITELOG
13	RL3FT / RA3CO	4011	417	1.4%	3164	847	4011	79%	21%	170	247	K3	K3	WINTEST
14	F8DBF / F1AKK	4132	407	1.4%	3249	883	4132	79%	21%	165	242	TS590	TS850	WINTEST
15	4O3A / HA1AG	4021	396	2.0%	3402	619	4021	85%	15%	153	243	K3	K3	WINTEST
16	RW1A / RA1A	3932	415	1.7%	3305	627	3932	84%	16%	164	251	FTDX5000	FT1000MP	WINTEST
17	RX3APM / RV1AW	4080	411	1.5%	3474	606	4080	85%	15%	160	251	K3	K3	WINTEST
18	PY1NX / LZ3YY	4152	399	1.1%	3213	939	4152	77%	23%	162	237	K3	K3	N1MM
19	UA3DPX / UA4FER	4219	388	1.3%	3390	829	4219	80%	20%	145	243	K3	K3	WINTEST
20	N4YDU / N3KS	4363	387	1.9%	3301	1062	4363	76%	24%	156	231	K3	K3	N1MM

Radios Used

Summary Table – Radios

K3	75	63.56%
IC7600	6	5.08%
TS590	7	5.93%
FTdx5000	8	6.78%
FT1000MP	6	5.08%
IC7800	4	3.39%
FT1000D	2	1.69%
IC756-3	4	3.39%
IC7700	1	0.85%
FT3000	2	1.69%
TS850	1	0.85%
ORION II	2	1.69%
TOTAL	118	100%

Source: <http://www.wrtc2014.org/radios-and-software-used/>

Software Used

Summary Table – Software

Wintest	40	67.80%
N1MM	15	25.42%
SkookumLogger	1	1.69%
Writelog	2	3.39%
Dxlog	1	1.69%
TOTAL	59	100%

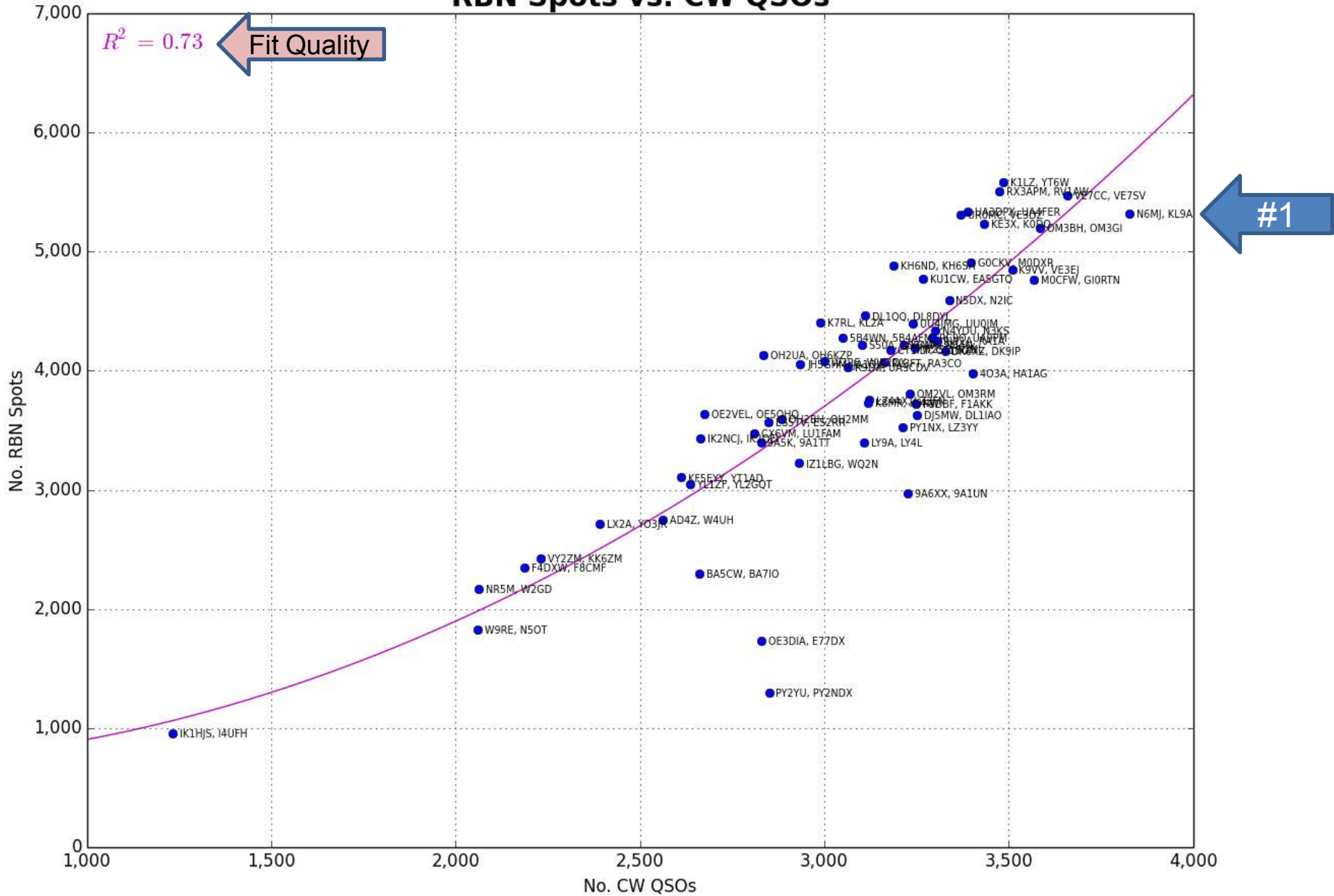
Source: <http://www.wrtc2014.org/radios-and-software-used/>

Analysis – Seeing Spots

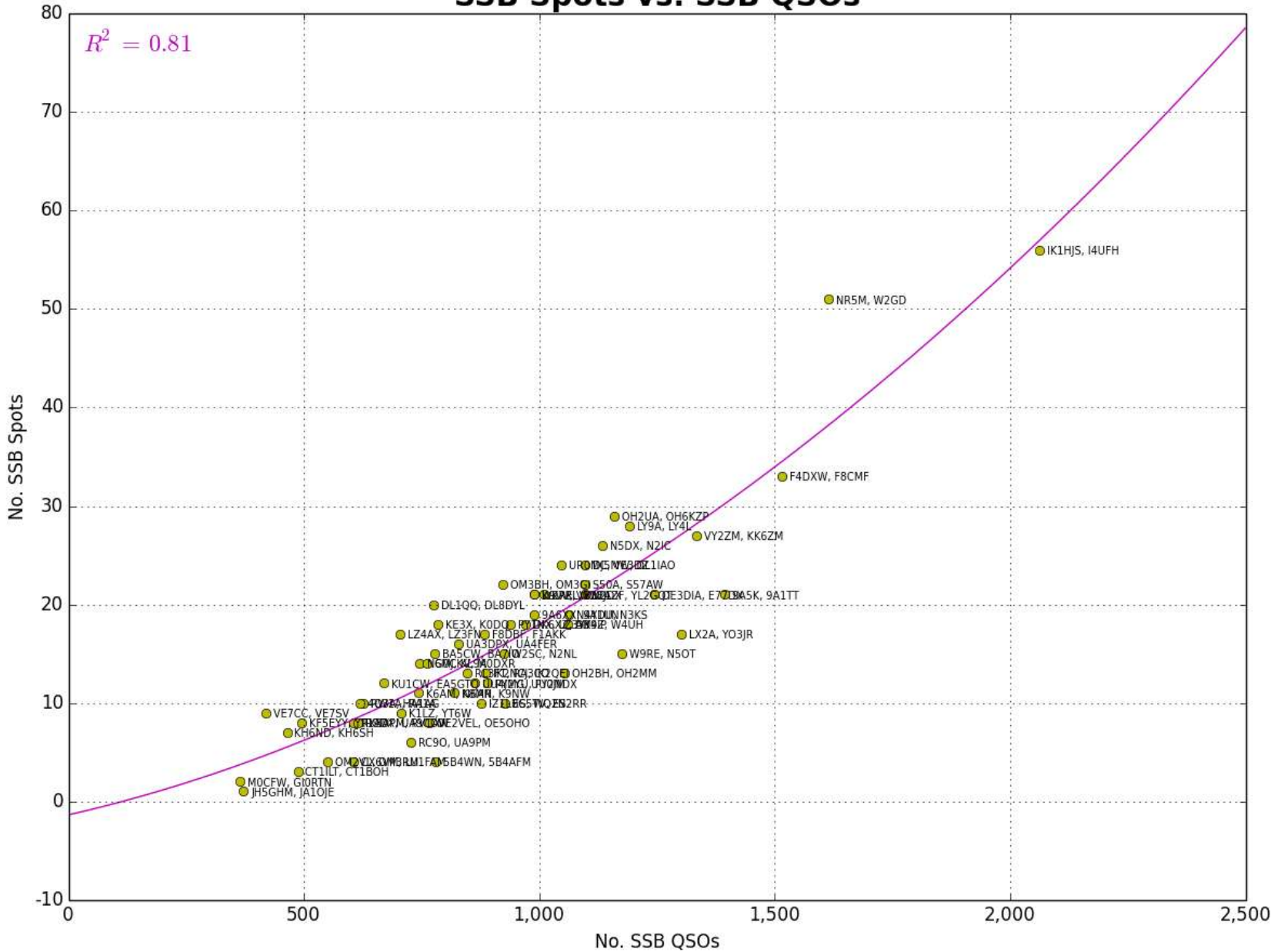


Rank	Ops	CW Spots	SSB Spots	Human Spots	RBN Spots	CW QSOs	SSB QSOs	HQ Mults	DX Mults
1	N6MJ KL9A	114	14	128	5324	3827	745	176	260
2	OM3BH OM3GI	108	22	130	5199	3585	923	164	258
3	DJ5MW DL1IAO	110	24	134	3631	3250	1097	165	252
4	N5DX N2IC	124	26	150	4596	3338	1134	163	253
...									
12	W2SC N2NL	114	15	129	4189	3245	925	162	248
...									
39	CT1ILT CT1BOH	128	3	131	4176	3179	487	162	232

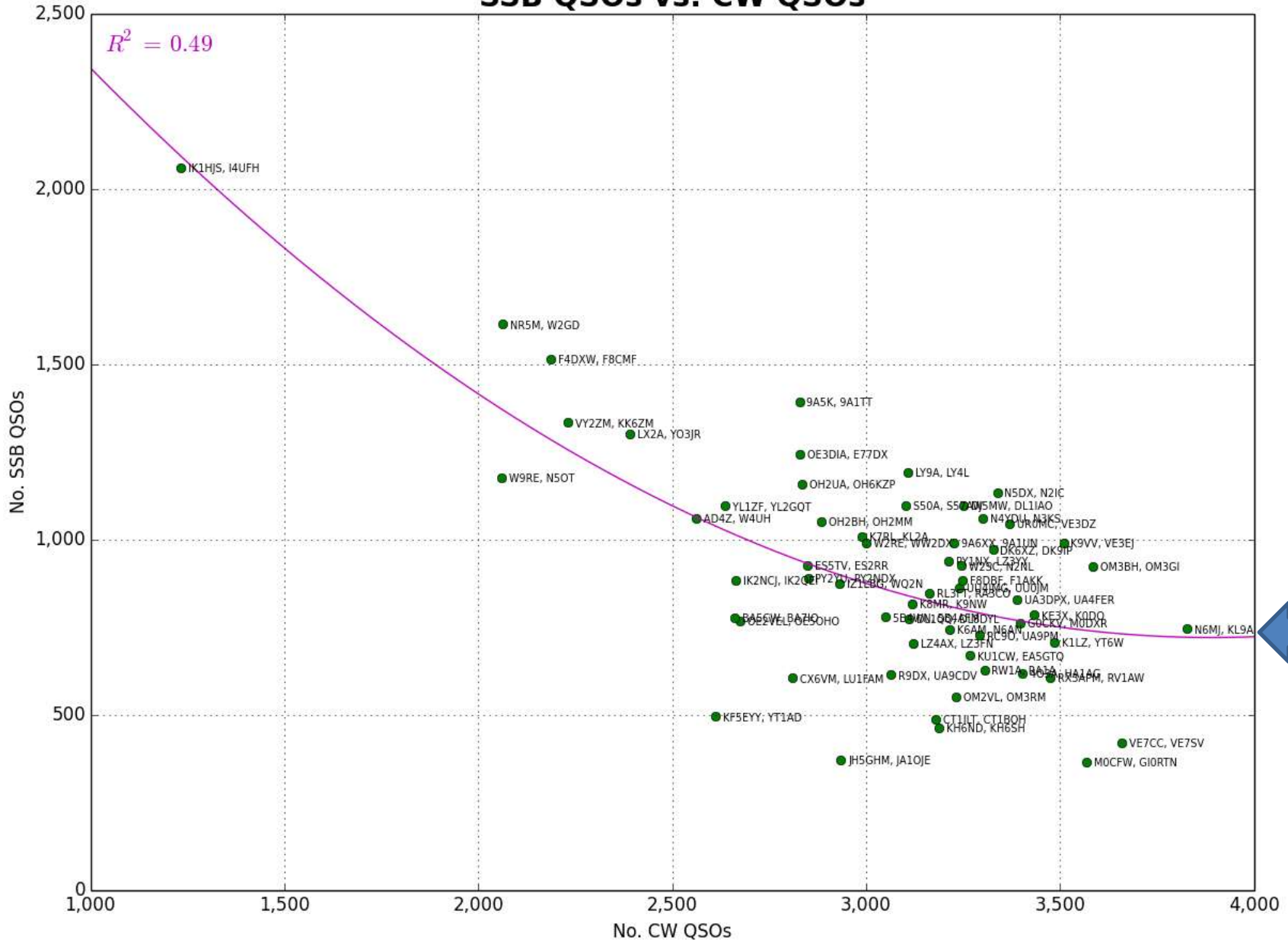
RBN Spots vs. CW QSOs



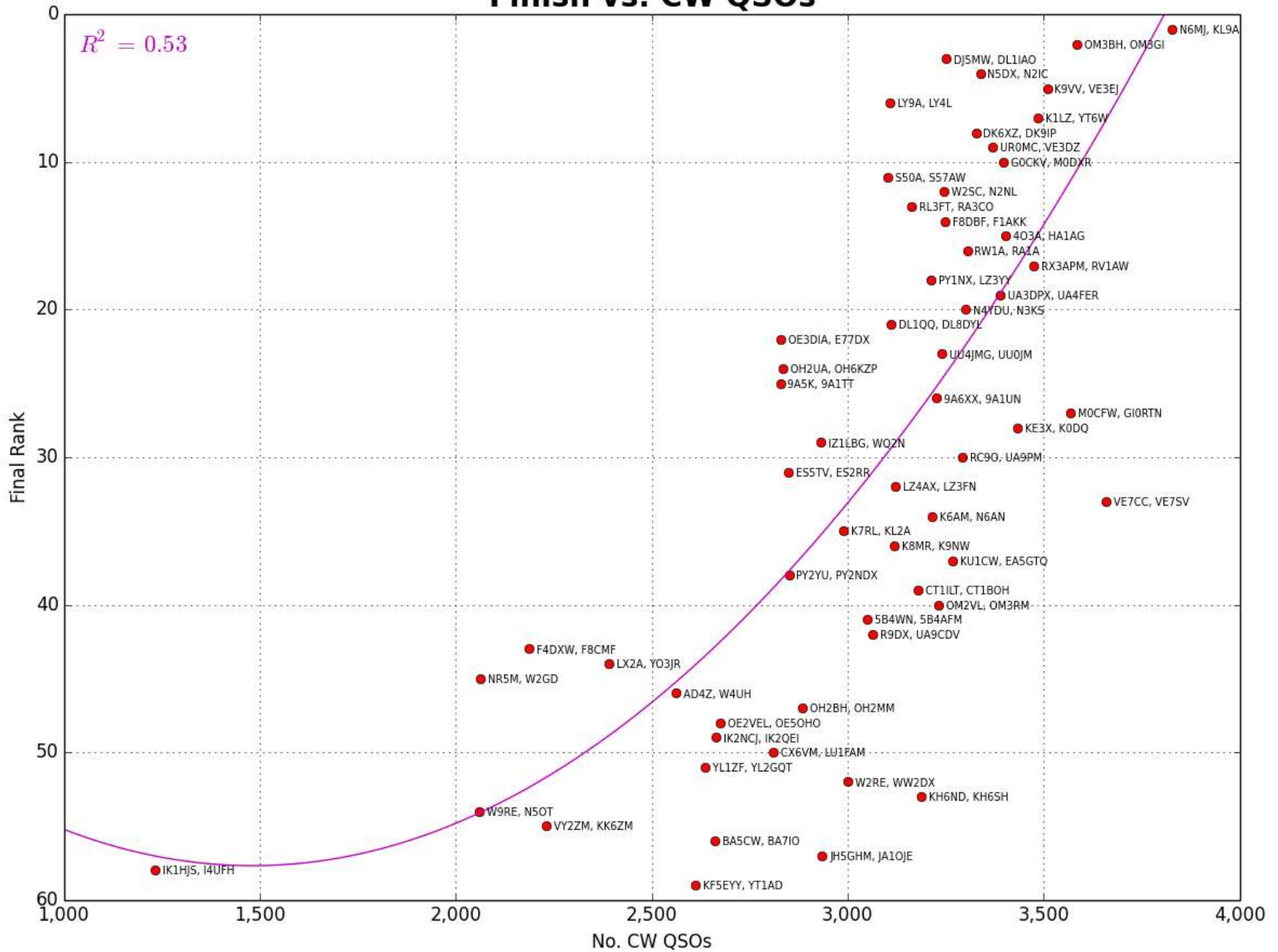
SSB Spots vs. SSB QSOs



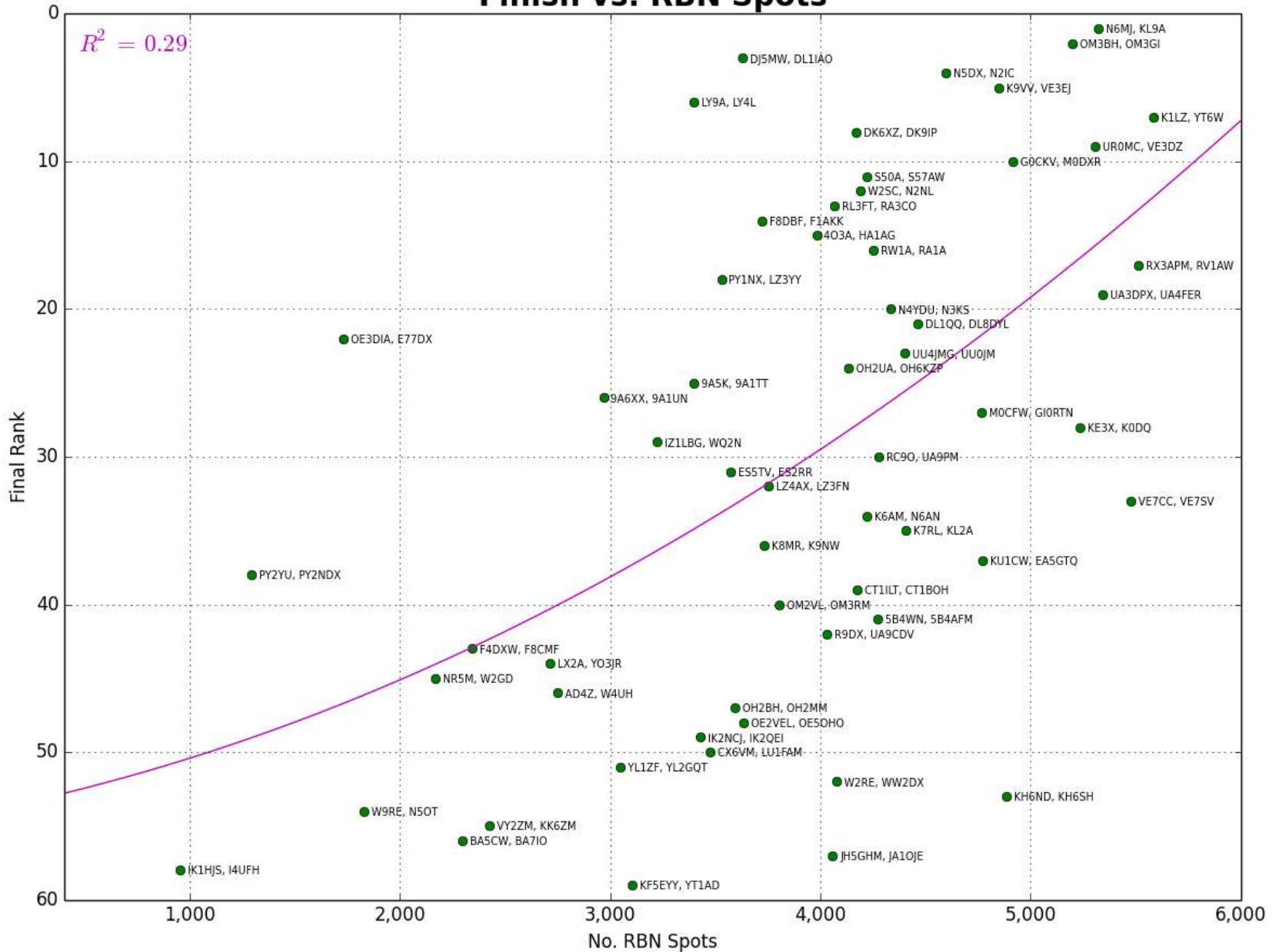
SSB QSOs vs. CW QSOs



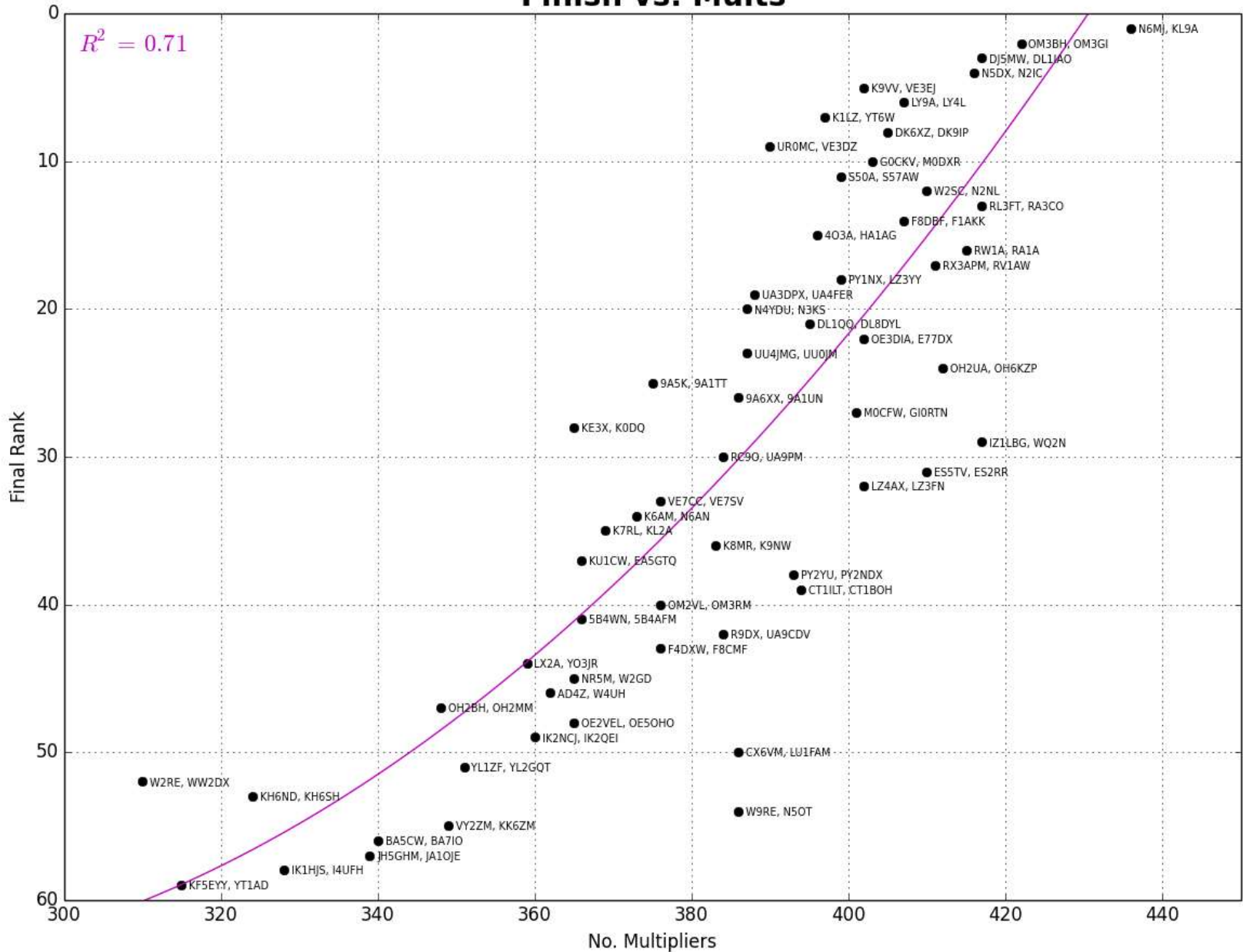
Finish vs. CW QSOs



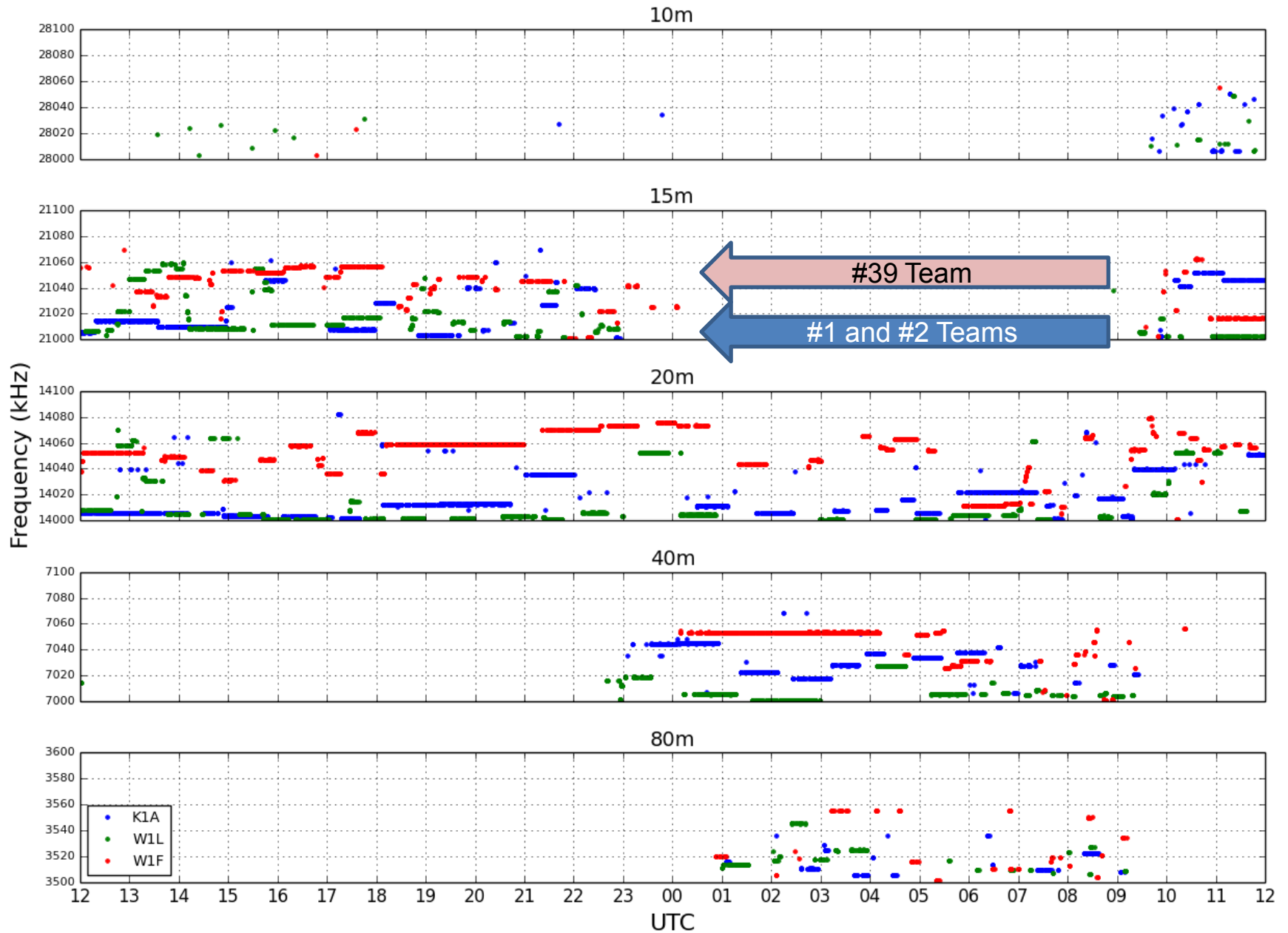
Finish vs. RBN Spots



Finish vs. Mults

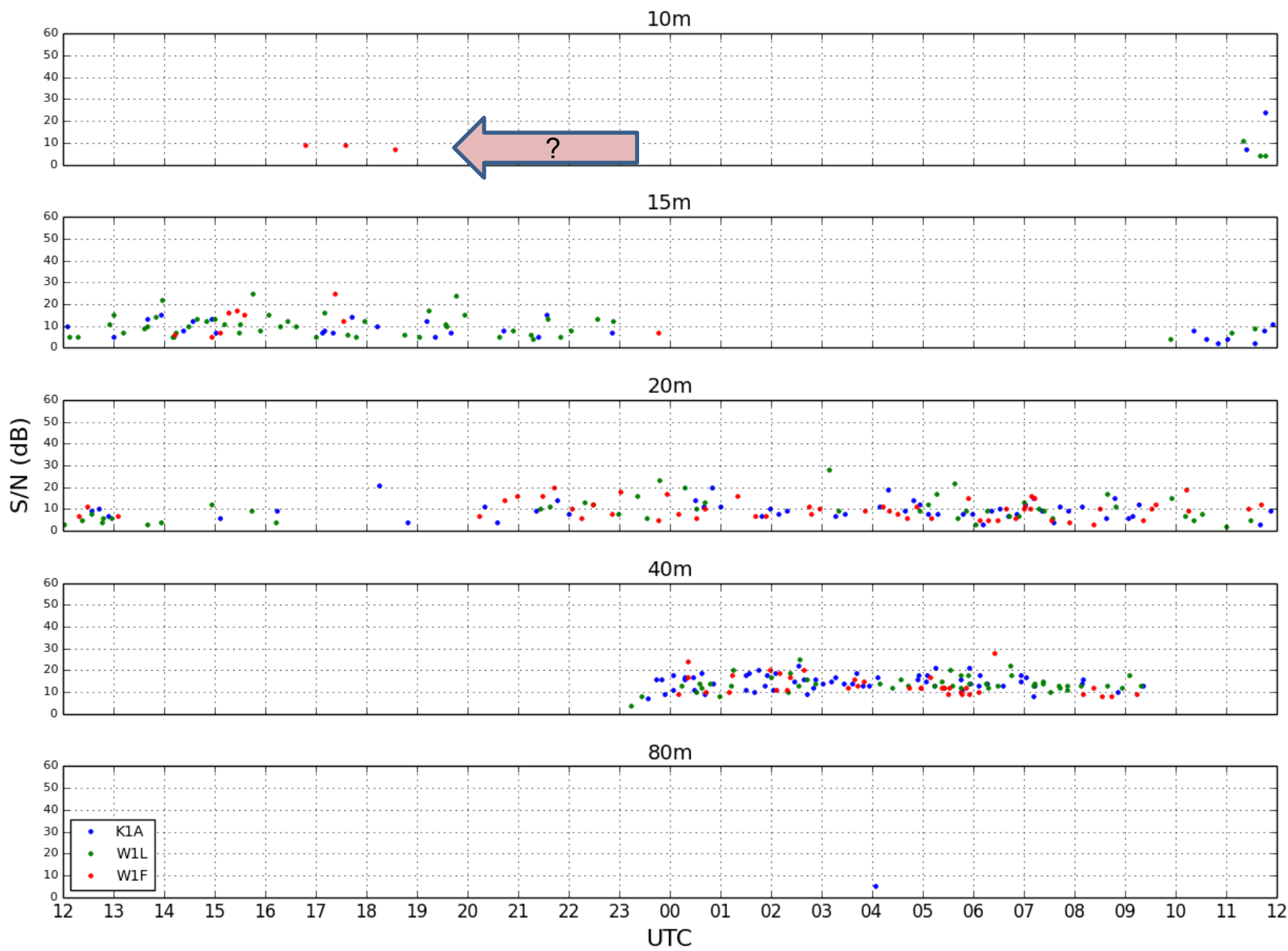


All Skimmer Spots WRTC 2014





South America Skimmer Spots WRTC 2014



WRTC Lessons Learned



- Getting spotted is helpful, but moving multipliers is *critical*
- Do not vary CW speeds if you want to be spotted by the Skimmers
- Don't CQ way up high in the band
- Don't spend too much time on Phone
- Winners react well when things go wrong
- WRTC events are fun!

Thank You!

WRTC Photographers N6TV & EY8MM



<http://bit.ly/n6tvphotos>



<http://www.ey8mm.com/pictures/view-album/63>



K1L Wine Award

Ed Muns, WOYK

W0YK Wine Award



- 2013 Muns Vineyard Rosé of Pinot Noir
- Any NCCC member who works the team that W0YK refereed
 - Call sign not revealed until after contest
 - Must work all 59 stations to be sure 😊
- Send QSO line from Cabrillo log to W0YK

Wine Award Side Bet



- W6OAT → “You’re in for over 50 bottles of wine! Are you nuts?”
- W0YK → “No way that many NCCCers will get on and be able to work an unknown WRTC2014 station!”
- “The Bet”: W6OAT to treat W0YK and XYL to dinner if less than 50 NCCCers work Ed’s team.

K1L Team – 11th Place

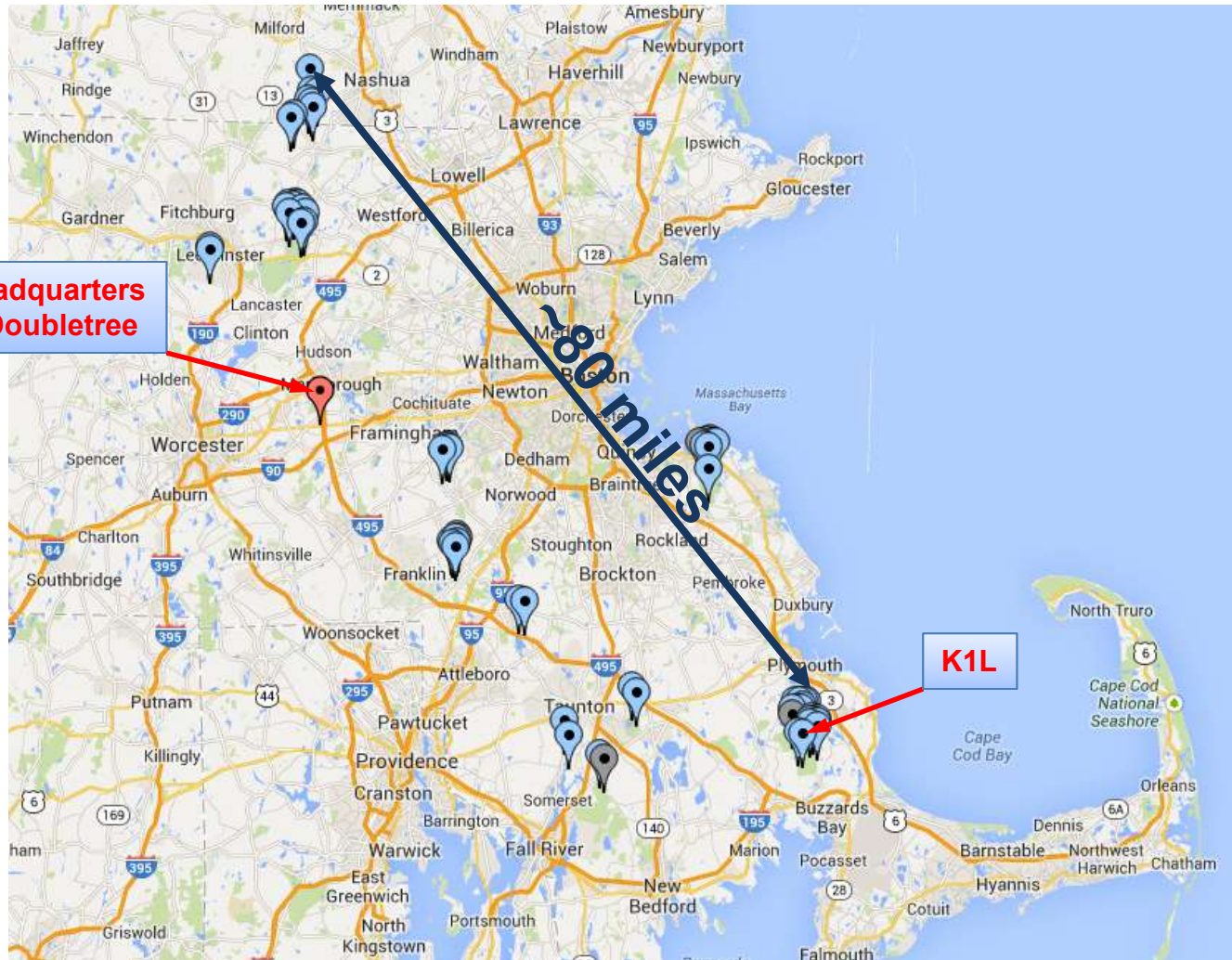


(left to right)

- Robert, S57AW (K1L Team Mate)
- Tine, S50A (K1L Team Leader)
- Ed, W0YK (K1L Referee)
- Norm, W3IZ (15F Site Host)
- Debbie, XYL W3IZ (15F Site Hostess)
- Jack, W1WEF (15F Beam Team Captain)

K1L Operating Site 15F

Myles Standish State Park



WRTC 2014 Headquarters
Westborough Doubletree

K1L

K1L During Contest



Results

- 46 NCCC members on the current roster are in the K1L log (TNX N6TV)
 - Plus KH6RR (AD6E)
 - Maybe N7MH, NF1R (W6YX) & W2SC (K1S) & KX7M, W6NV (VP9HQ)
 - At least 2 NCCers tried, but missed K1L
 - Net count = 47-52
- 28 submitted log excerpts
- W6OAT/W0YK side bet was a tie

47-52 NCCers worked K1L



- AD6E (KH6RR)
- AG6V
- AJ6V
- K1TW
- K3EST
- K4VU
- K6AAB
- K6JEB
- K6MM
- K6MMM
- K6MR
- K6SRZ
- K6TD
- K6UM
- K6XX
- K9YC
- KA6W
- KB8VAO
- KM6I
- KX7M (VP9HQ)
- N3ZZ
- N5KO
- N6DE
- N6DQ
- N6EE
- N6JV

- N6ML
- N6NF
- N6NU
- N6RD
- N5RK
- N6TU
- N6XG
- N7MH (W6YX)
- N7NG
- N7TR
- ND2T
- ND6S
- NF1R (W6YX)
- NW6P
- W1RH
- W1SRD
- W2SC (K1S)
- W6CYX
- W6JZH
- W6KH
- W6NV (VP9HQ)
- W6SX
- W6SZN
- W7SW
- WB6JJJ
- WX6V

28 Wine Award Winners



1. AD6E (KH6RR) (2)
2. K4VU (2)
3. K6SRZ (1)
4. K6MR (3)
5. K6MM (4)
6. KE1B@K6MMM (2)
7. K6LRN (1)
8. K6MI (2)
9. K6RK (2)
10. K6TD (2)
11. K6UM (1)
12. K9YC (3)
13. N3ZZ (2)
14. N5KO (1)
15. N6DE (4)
16. N6EE (2)
17. N6XG (1)
18. N6NU (1)
19. N7MH@W6YX (2)
20. N7TR (2)
21. ND2T (2)
22. NF1R@W6YX (?)
23. NW6P (+ WX5S) (1)
24. W1RH (1)
25. W6SX (1)
26. W6SZN (1)
27. WB6JJJ (2)
28. W7SW (2) → K6UFO/KB6EZB

Special Awards



- Rusty W6OAT for “The Bet”
- Bill Vinci for “The Ham Widow’s Ball”
- Bob N6TV for the great WRTC2014 photos