Doug Grant, K1DG

Randy Thompson, K5ZD

Goal of the program

- Analyze some volunteers' stations and logs from 2004
- Suggest areas for improvement
- Inspire others with the same issues

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club


Extreme
MAKEOVER
YCCC Edition

Little Pistol Station – NA2NA

- FT-1000 with all filters, Alpha 78
- DX Solutions SAS-6 (Yaesu interface for antenna control)
- Bird & Drake W-4 wattmeters
- Hygain rotor with brake delay
- Super CMOS Keyer, Bencher Paddles, Beyer DT-109 headset w/ Heil element

- I have not done much with sound card interfaces … have a DVP board
- I have used most all software (CT, TR, NA, WriteLog, N1MM).

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

NA2NA Antennas

- Cushcraft X9 @ 55‘
- 40-2CD @ 62‘
- Cushcraft D3W @ 70‘
- 1/2" hard line to antenna switch
- LMR 400 running to antennas and the antenna feed through
- Low bands are my issue... Vertical dipole for 75 - one of the spring storms took it down. I am thinking of putting that backup.
- Adding an inverted L for 160 (space and radials an issue)
- Lot size is only 100x140

One Issue Will Needs to Address

"Neighbors are an issue at high power, do not use the amp much, last contest was ended early when they called and said I was getting into things. Not a chance of fixing that!! It took the wind right out of my sails :-("

1. ***Contests are more fun with an amplifier***
2. ***Contests are more fun if you can operate 48 hours***
3. ***Contests are more fun if you're not worried about TVI***
4. ***Last resort: low power category; "2 out of 3 ain't bad"***

Extreme MAKEOVER YCCC Edition

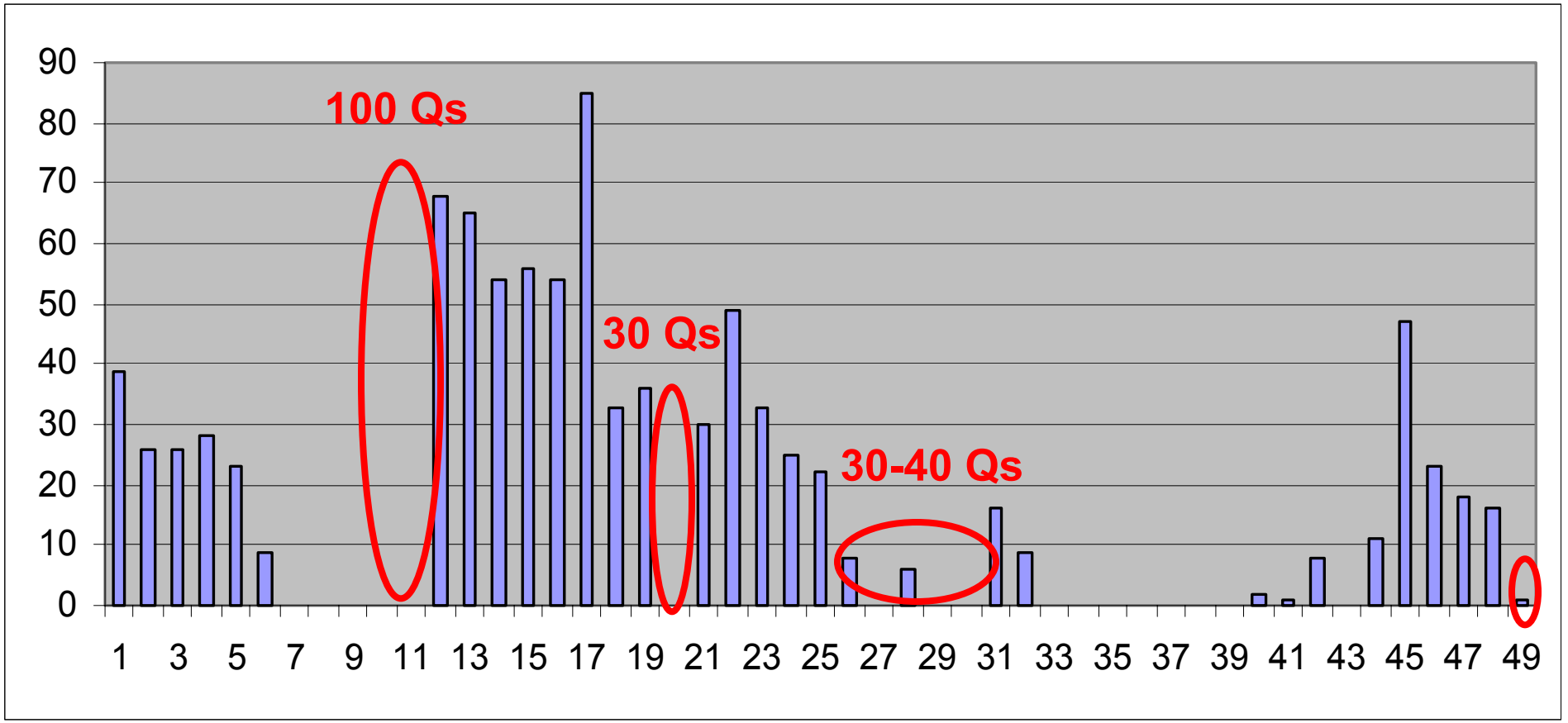
Yankee Clipper Contest Club

Station and Antenna Comments

- Station looks OK. Fix the TVI/RFI, connect the LP filter, and use the amp!

- Limited lot size constrains antenna improvements
- At next sunspot peak, consider a big 10M beam side-mounted at 30 feet
- Try shunt-feeding tower on 80/160; at least get the wires back up!

NA2NA ARRL DX SSB Rates



17 hours with 0 QSOs!

Last QSO did not count (after 2359)!

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

Medium Station – N1UR SOABLP

- CQ WW SSB 2004: #1 USA LP
- CQ WW CW 2004: #2 USA LP

- Does Ed really need a makeover???

N1UR Station Description - Antennas

- 10M: 3el EU @ 20ft, 2el South @ 40ft, 3el West @ 50ft
- 15M: 8el EU @ 30ft, 2el south @ 40ft, 3el rotate @ 74ft
- 20M: 4/4 at 71 and 35ft, bottom fixed EU (also a 20/40 half wave dipole vertical)
- 40M: 2 el at 80ft, plus dipole above
- 80M inv vee at 70 feet
  - New Additions: inv vee at 60 feet for Carib and SA, ½-wave sloper to Pac/West; 2 el phased co-linear inv vee array (ala ON4UN book) for SW/NE (roughly 4dBd gain) with peaks at 50ft.
- 160M inv vee at 50 feet (now raised to 70 feet)
- 1000-foot Beverage on EU

Comments: Nice setup. Try a top-loaded wire vertical for 160. Inv Vees too low.

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

N1UR QTH

- Great take-off to EU/AF
- Flat from 160 – 220
- Up a hill somewhat to Pac and JA

"I don't run JA on 15 or really even 20 Short path (might try 20 more this year)."

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

N1UR Station - Equipment

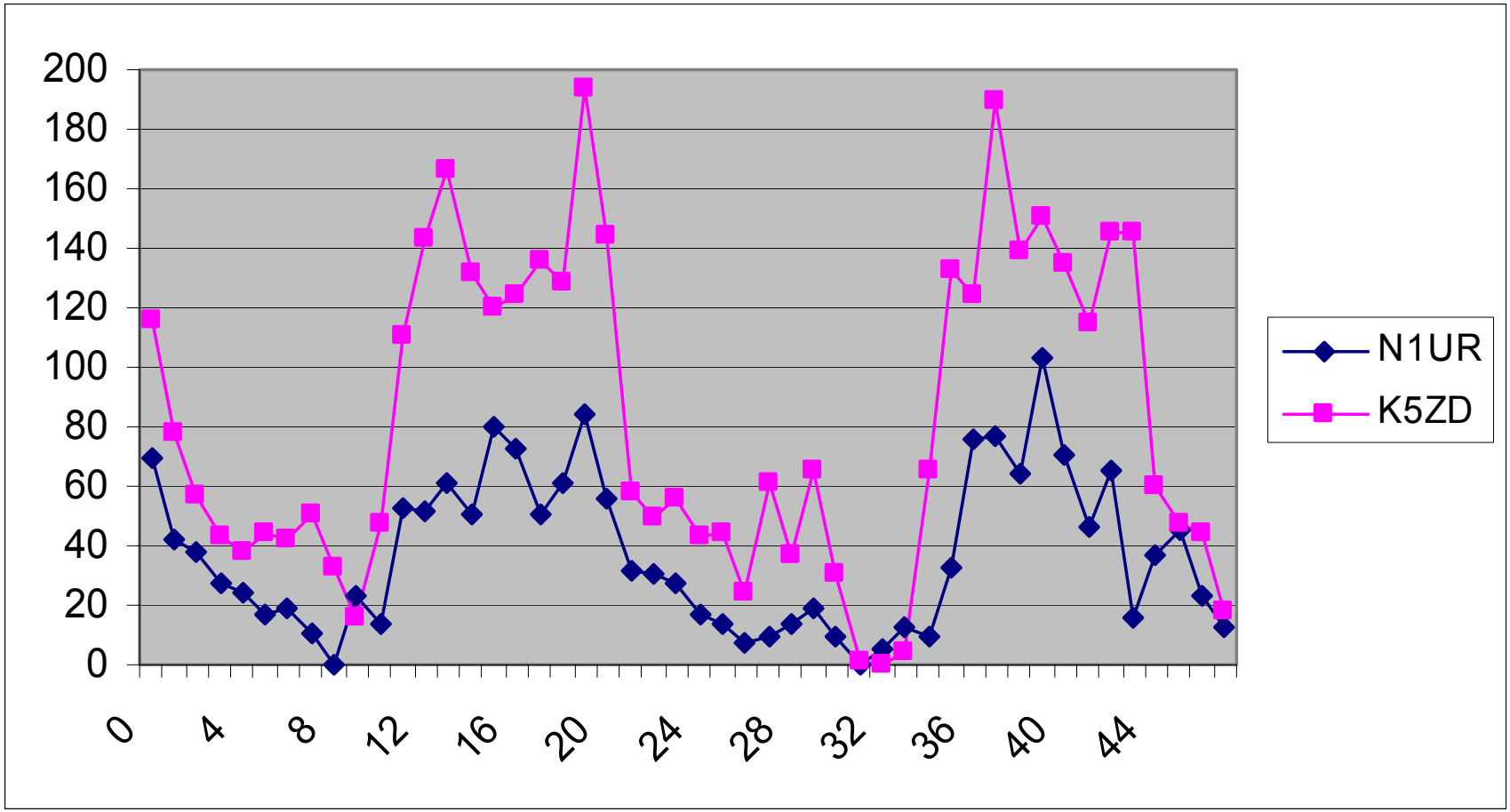
- Radios:
  - FT-1000MP Mk V, FT990
- SO2R but haven't computerized them to the serial ports yet, just the PTT activation
- DXDoubler and Dunestars (manually switched) on both radios
- 2x6 WX0B switch array (manually switched)

Question: What's up with the manual switching???

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

N1UR vs. K5ZD (N5RZ op) Rates

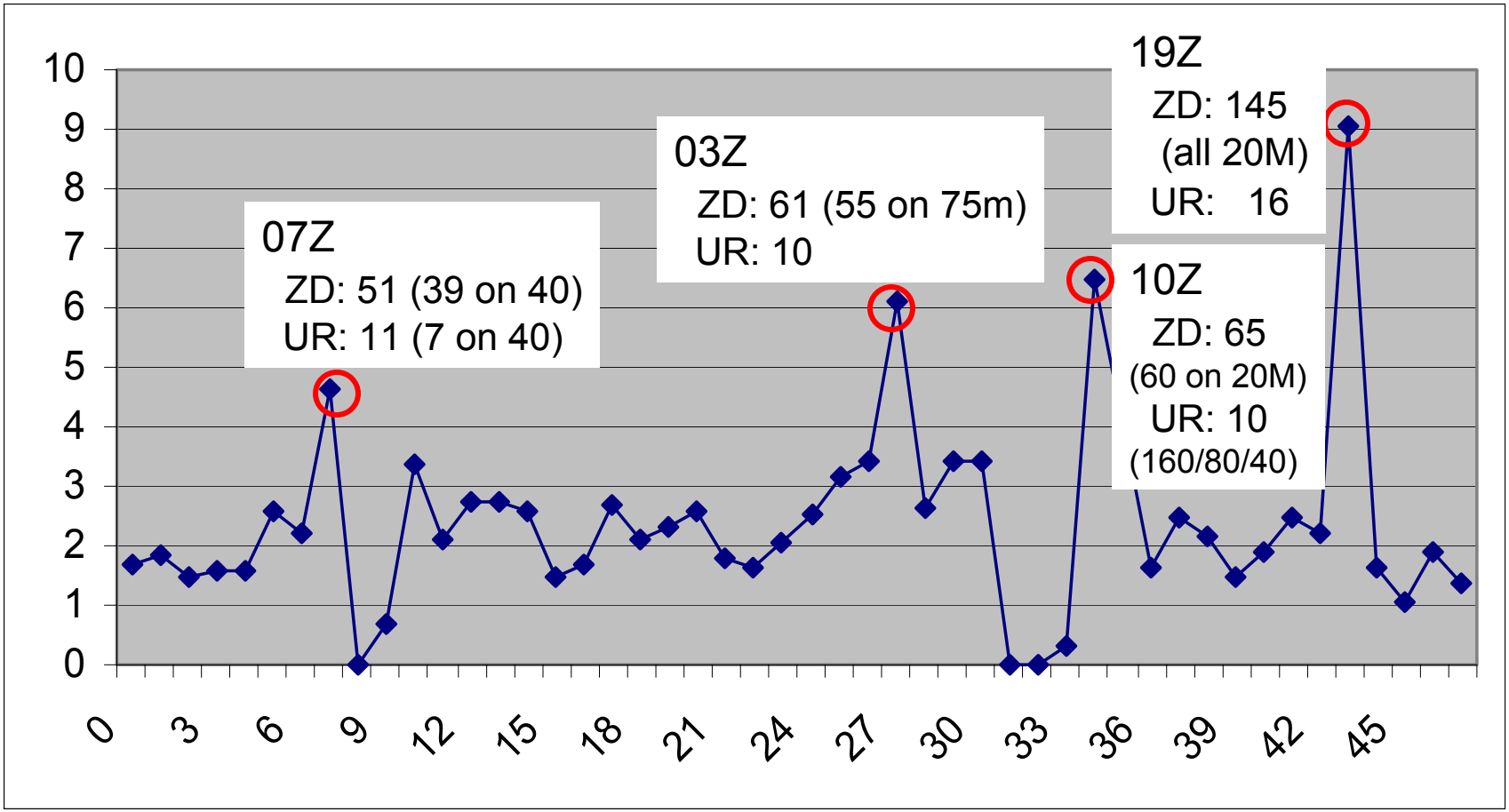


Note that the shapes of the curves are very similar…one is HP, one is LP
Is there a ratio between them?

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

K5ZD Rate / N1UR Rate



Average: 2.503 Median: 2.191 Std Dev: 1.555

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

Medium Station – W1LLU SOABHP

- 10-20: SteppIR (4 el) at 72 ft
- 40M: 2 el 40 beam by M2 @ 86 ft
- 75/80M:
  - 65 ft vertical (50 wire mesh radials); folded dipole
- 160M: Inverted L
- I may put up a vertical (40 thru 10) at the other end on my back yard

- I am located about 1 mile from the ocean
- I would say that my signal is very strong into EU and Africa and pretty good into Asia and Oceania. My worst direction seems to be SA.

Conclusion: well-rounded, probably LOUD

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

Extreme
MAKEOVER
YCCC Edition

Yankee Clipper Contest Club

Extreme
MAKEOVER
YCCC Edition

Yankee Clipper Contest Club

W1LLU Equipment

- 1000D, ***Acom 2000***
- M2 rotor, SixPack ant switch, SteppIR Controller
- MFJ voice keyer with remote push button switch just above the numeric keypad on the computer keyboard
- Foot switch, headphones with boom mic
- WriteLog
- *“I have available but don't use an Icom 781 and a JST245”*

Extreme MAKEOVER
YCCC Edition

Yankee Clipper Contest Club

Extreme MAKEOVER
YCCC Edition

Yankee Clipper Contest Club

Extreme
MAKEOVER
YCCC Edition

Yankee Clipper Contest Club

W1LLU Self-Assessment

- I'd like to work 2K Q's and/or get over 2.2M points in this up coming CQWW PH. My highest so far has been about 1.7M
- My typical operating time during Phone contests is 25 hours with a max of 35 hours
  - (health problems and laziness keep me from going higher)
- In CW contests I usually don't last longer than 15 hours in total.
- I have a tendency to spend more time in S&P mode than running.
- I make liberal use of packet…
- I have never asked a station to go to another band.
- I am capable of sending with computer or my key and can copy a contest exchange at 35 to 40wpm.

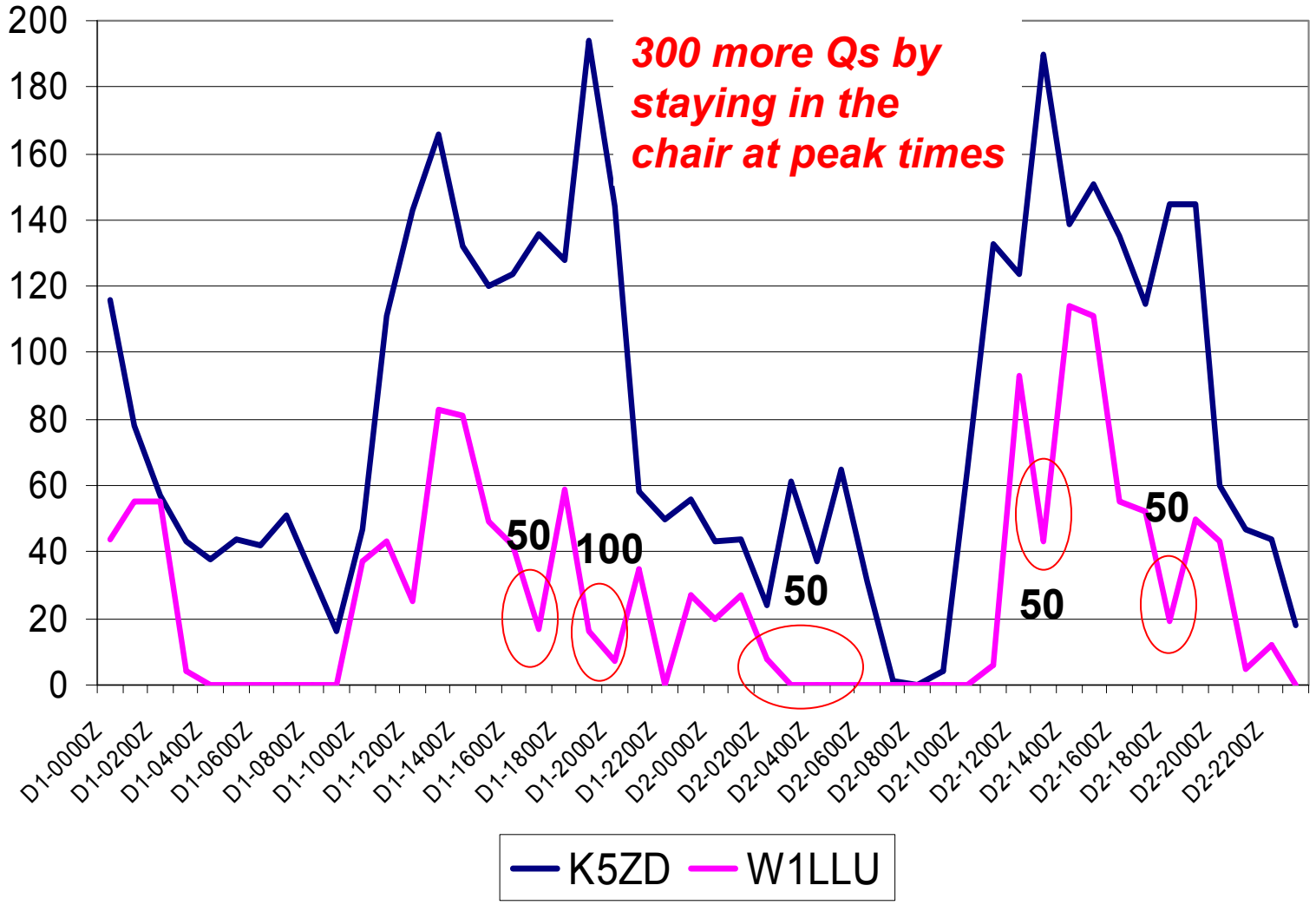
- My accuracy in logging I believe improved during the past couple of contests simply because I am focusing more.
- I should do more running I guess, but I don't do well finding clear (or just moving into) frequencies. Guess I am a timid contester.

Critical Station Equipment
Learn to use it!

Extreme MAKEOVER
YCCC Edition

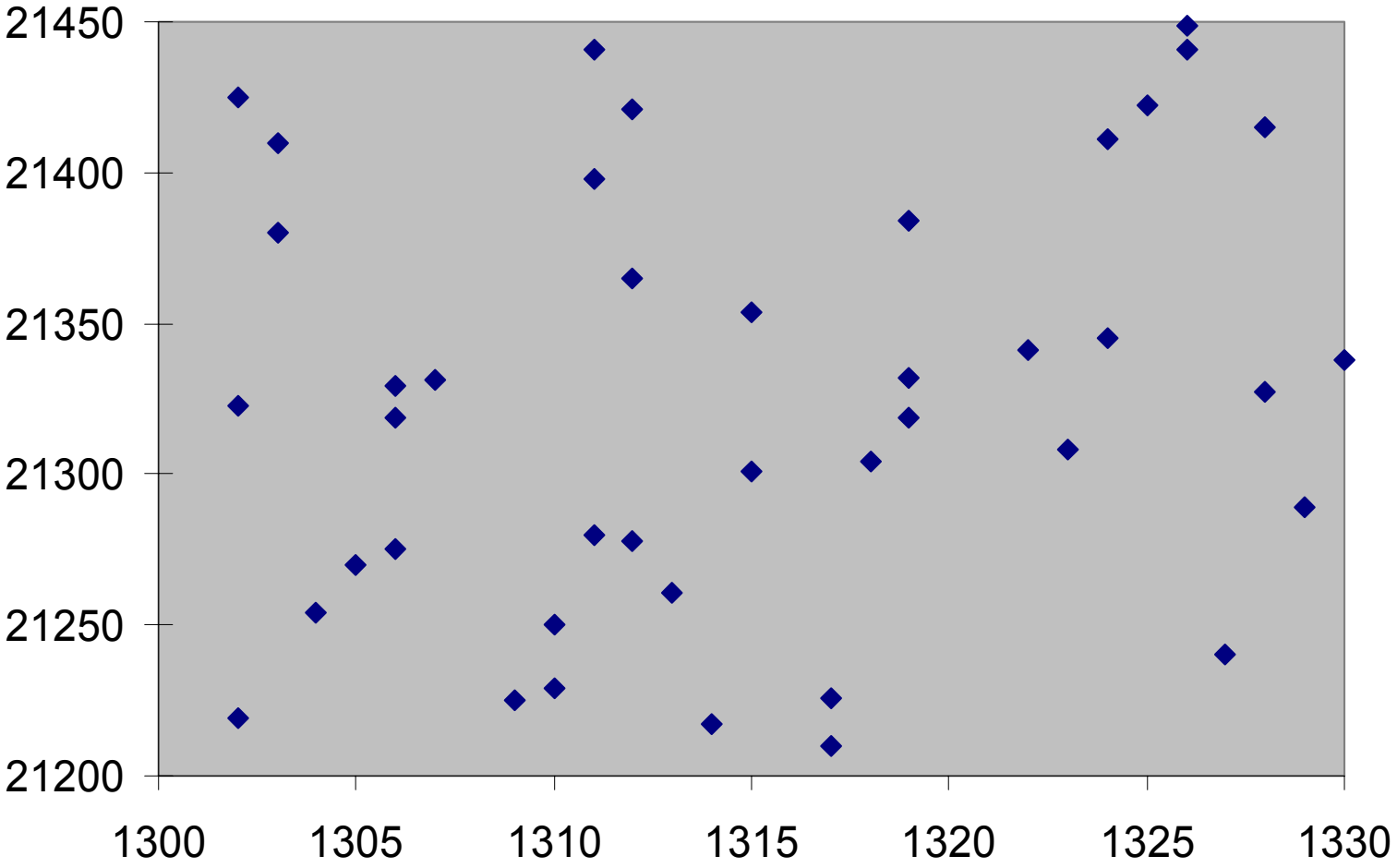
Yankee Clipper Contest Club

K5ZD (N5RZ op) vs. W1LLU Rate Problem #1 – Not enough rate time



Extreme MAKEOVER YCCC Edition

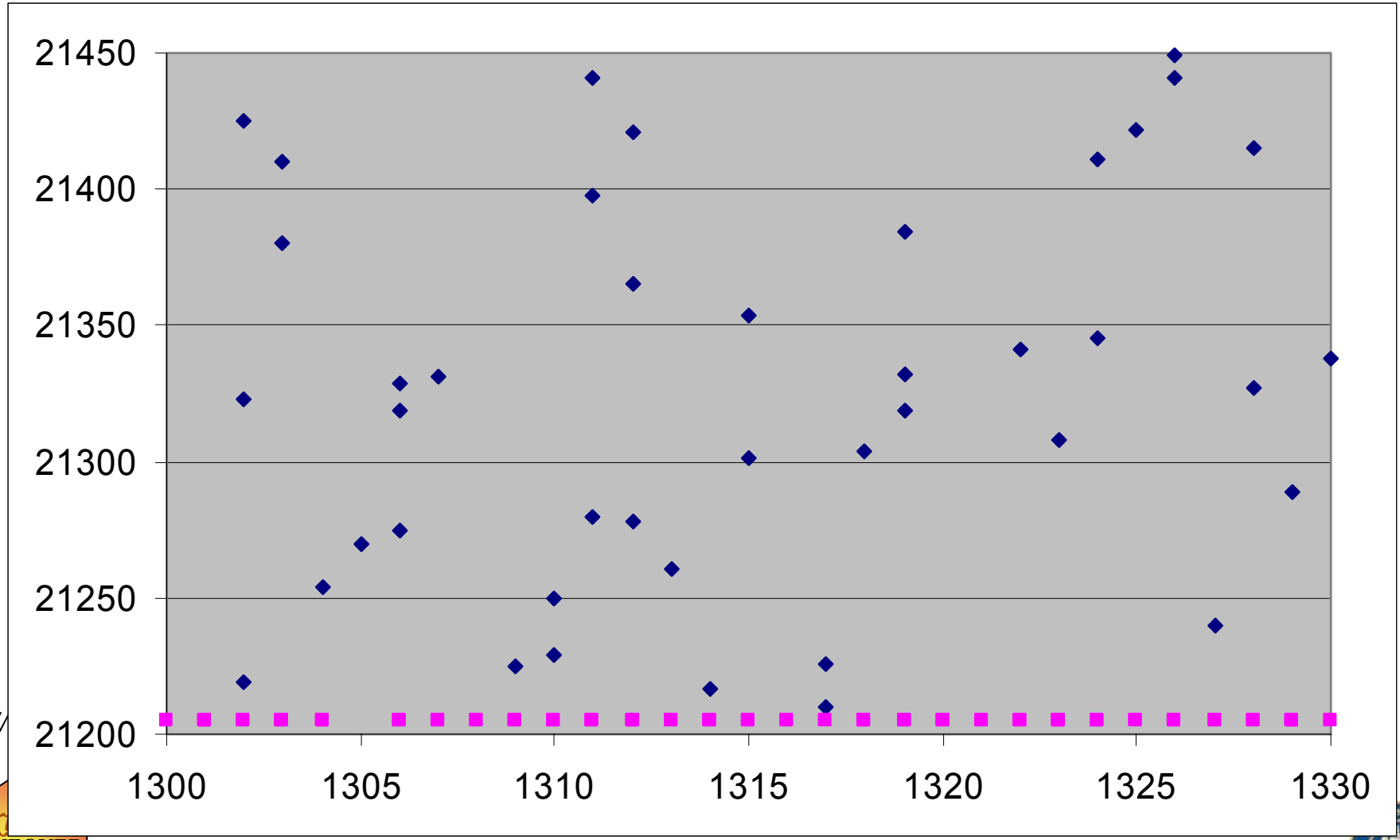
Problem #2:
Where's Jim (Sat 1300-1330Z)??



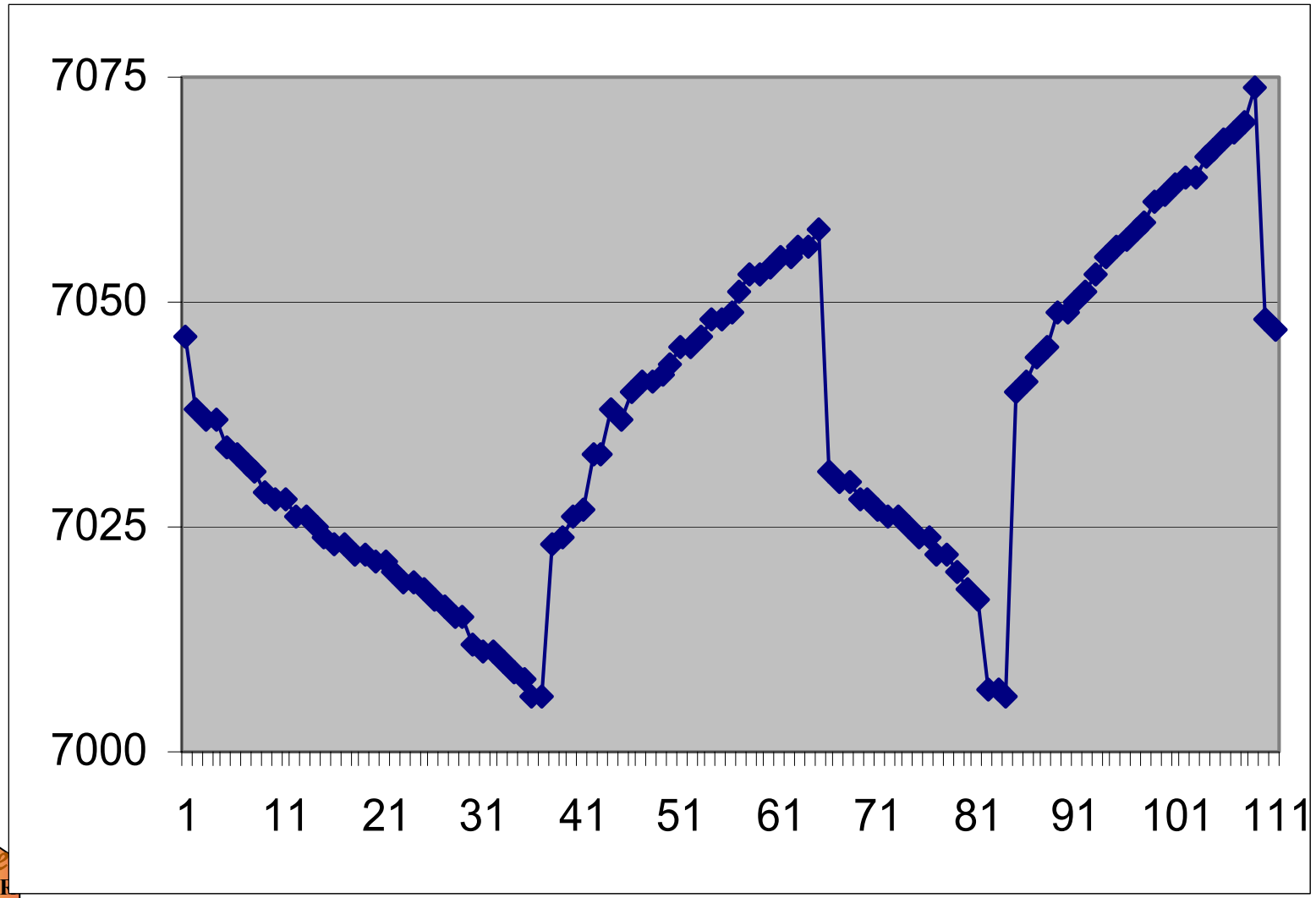
Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

W1LLU vs. K5ZD (N5RZ op)



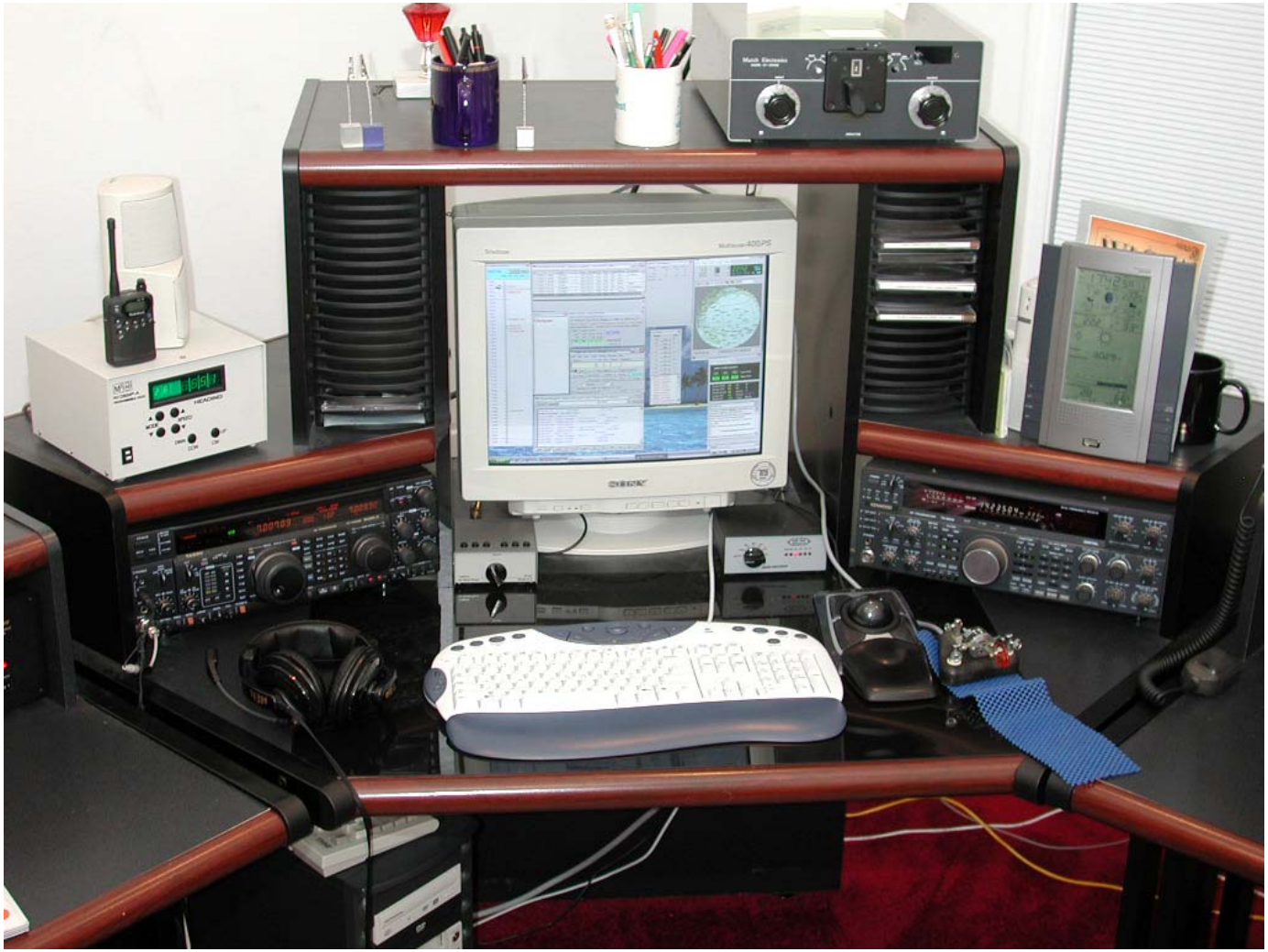
W1RM 2004 CQWW CW 40M LP



Extreme MAKEOVER
YCCC Edition

Yankee Clipper Contest Club

W1RM Station



Extreme MAKEOVER
YCCC Edition

Yankee Clipper Contest Club

Recommendations for W1LLU

- This is a very nice station – good rigs, good QTH, good antennas, ***good chair***
- Jim is louder than he thinks and should run more (and pass guys to other bands)
- More hours in the chair = more points
  - (Only 15 hours on CW !?!)
  - Consider a guest op for the overnights?
- Install the vertical and hook the 781 to it
  - Check other bands
  - Must be running on primary band to get full benefit (SO2R S&P is very very hard)

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

Getting into the Big Leagues – K0TV M/2

- Tower 1: stack of two Tennadyne T-12 Log Periodics
  - Top antenna is rotatable at 92 feet; bottom at 45 feet fixed on EU
- Tower 2: 4 element monobander for 15 meters at the top
  - KT34A fixed South at 45 feet..
  - Second 4 el 15 Planned at 45 feet pointed at Europe.
- Tower 3: 4 element 40 meter yagi
  - A four square array is available to augment the existing beam
- 160M: all three towers can be shunt fed and phased
- 80M: Four-square vertical array
- Two Steerable Wave Antennas have been installed at the edges of the property providing low noise receive capability for 160, 80 and 40 meters.

Antenna Comments by Band

- 10M: not a problem yet, but will need low beam and independent stack in 5 years
  - Stock up on 10M beams now while they're cheap…
  - Consider installing on 40M tower; no rotator contention
- 15M: high beam OK, adding another lower is good
- 20M: T12s OK, but shared with 10
  - When 20 and 15 are running, how do you know when to go to 10?
- 40/80/160M: No change needed

- Note: T12 is about equal to 4 element close-spaced monobander (but with more wind load).
- How important are the WARC bands to you?

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

Equipment – 4 operating positions

- #1 (20-10M) IC-756PRO/Amp 12/12 LPA at 95/50 ft. Top rotatable, bottom fixed on EU.
- #2 (80, 15, 10M) Orion/Amp. 80M 4-Square; Rotatable M2 15M4 at 95 ft (second 15m4 going in at 45 feet fixed EU). Shared South antenna. Shares 12/12 LPA
- #3 (160, 15M) IC-756PROII/Amp (multiple switched). 3 element phased array for 160, shares 15 meter stack from 2. Shares South antenna.
- #4 40M FT-1000MP/Amp (manual). 4 element KLM (being replaced by 4 element M2) plus Four Square

Observations:

Too many different radios; consider 1 less position

Too many shared antennas for M/M; not enough sharing for M2

Dedicated 40M station is OK

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

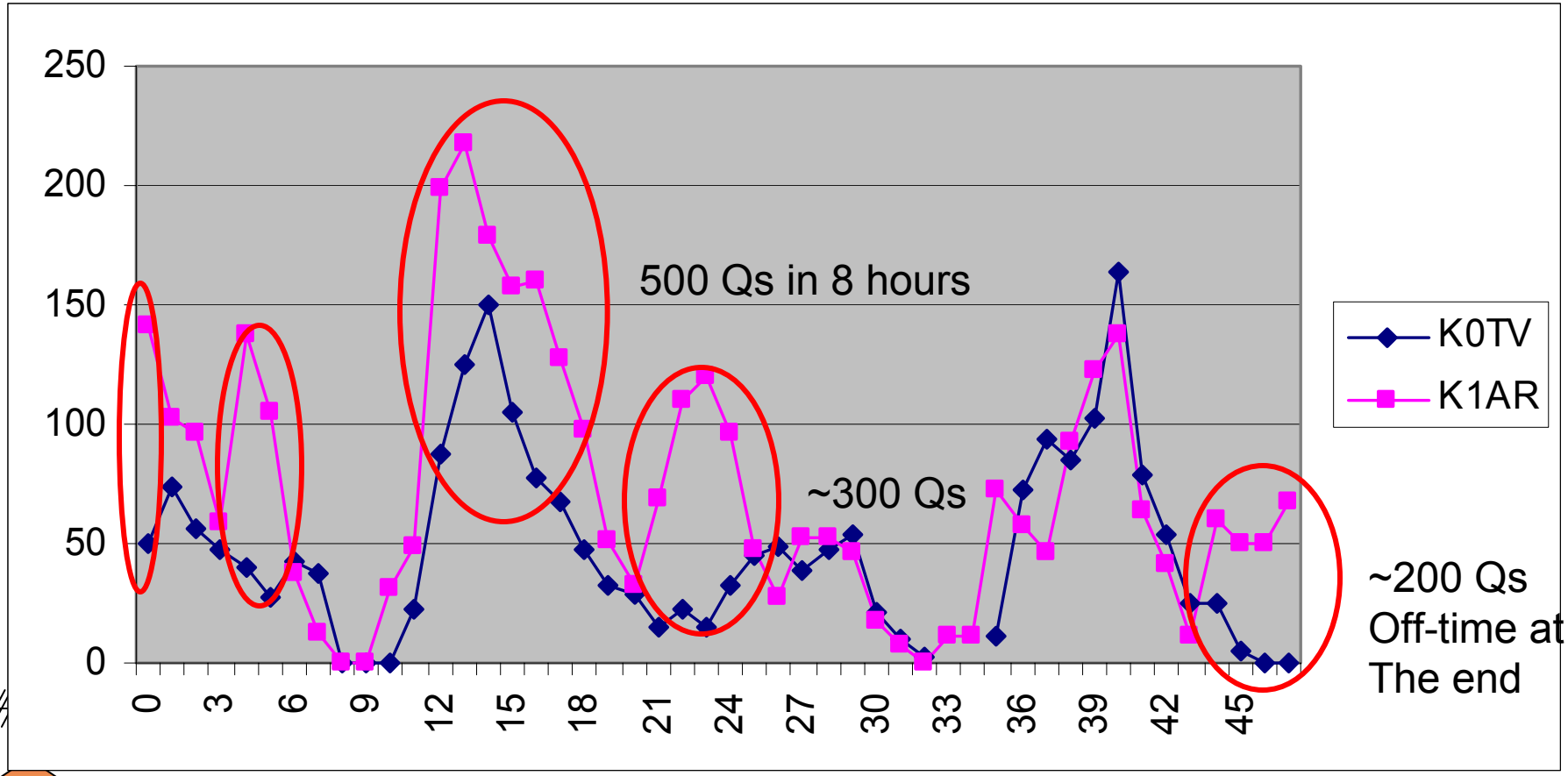
K0TV M2 vs. K1AR (@K1EA) M2

	K1AR				K0TV		
160	48	12	29		13	6	8
80	349	23	87		307	21	82
40	***1026***	38	129		358	29	110
20	930	39	135		688	35	114
15	***988***	33	127		704	31	115
10	193	24	85		94	22	68
Totals	**3534**	**169**	**592**		**2164**	**144**	**497**
			7.5 M				**3.9 M**

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

K0TV M2 vs. K1AR (@K1EA) M2



Extreme MAKEOVER YCCC Edition

Some Obvious Improvements
Cabrillo Excerpt

QSO: 21054 CW 2004-11-27 1320 K0TV 599 05 **GW4ALGCP6CW** 599 10 0
QSO: 21054 CW 2004-11-27 1321 K0TV 599 05 GW4ALG 599 14 0

.
.

QSO: 21020 CW 2004-11-27 1730 K0TV 599 05 EA7RM 599 14 0
QSO: **10 FM** 2004-11-27 1732 K0TV 59 05 VP9I 59 5 1

.
.

QSO: **10 CW** 2004-11-28 1652 K0TV 599 05 GM0OGN 599 14 0

.
.

QSO: 7032 CW 2004-11-28 **2107** K0TV 599 05 RW6CF 599 16 1
END-OF-LOG:

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

One More Big League Station: K5ZD

- Nice layout
- Everything within reach
- “Motivational” wall art
- Lots of antenna switches
- And outdoors…

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

Extreme
MAKEOVER
YCCC Edition

Extreme
MAKEOVER
YCCC Edition

Yankee Clipper Contest Club

Note the similarities (and differences) between K5ZD and K1DG

Extreme MAKEOVER
YCCC Edition

Yankee Clipper Contest Club

…and another Big Gun

Can you see any possible improvements?

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club

Conclusions

- Most immediate improvements are obvious – so do them!
- Biggest bang for the next few years is muscle on 40/80; high wires or verticals are better than 70-foot high inverted vees
- Stock up on big 10M antennas now

- Practice, practice, practice!

Extreme MAKEOVER YCCC Edition

Yankee Clipper Contest Club