

HK 1NA

by **K1CC**

Multi / Multi

2014 CQWW SSB

*Why would anyone want to go to **COLOMBIA**!?!?*

- **Isn't it dangerous?**
- **Does anyone speak English?**
- **Who are these HK1NA guys anyway?**
- **Won't you get arrested at the border when you come back?**

*Why **not** to go to Colombia (or anywhere else!)*

- **Airline glitches (how to lose your Spirit)**
- **Chikungunya virus outbreak**
- **Rainy season vs. dry season**
- **If you don't like cultural immersion, you should stay home**
 - **Suggested reference (Library of Congress Area Handbooks)**
http://lcweb2.loc.gov/frd/cs/pdf/CS_Colombia.pdf

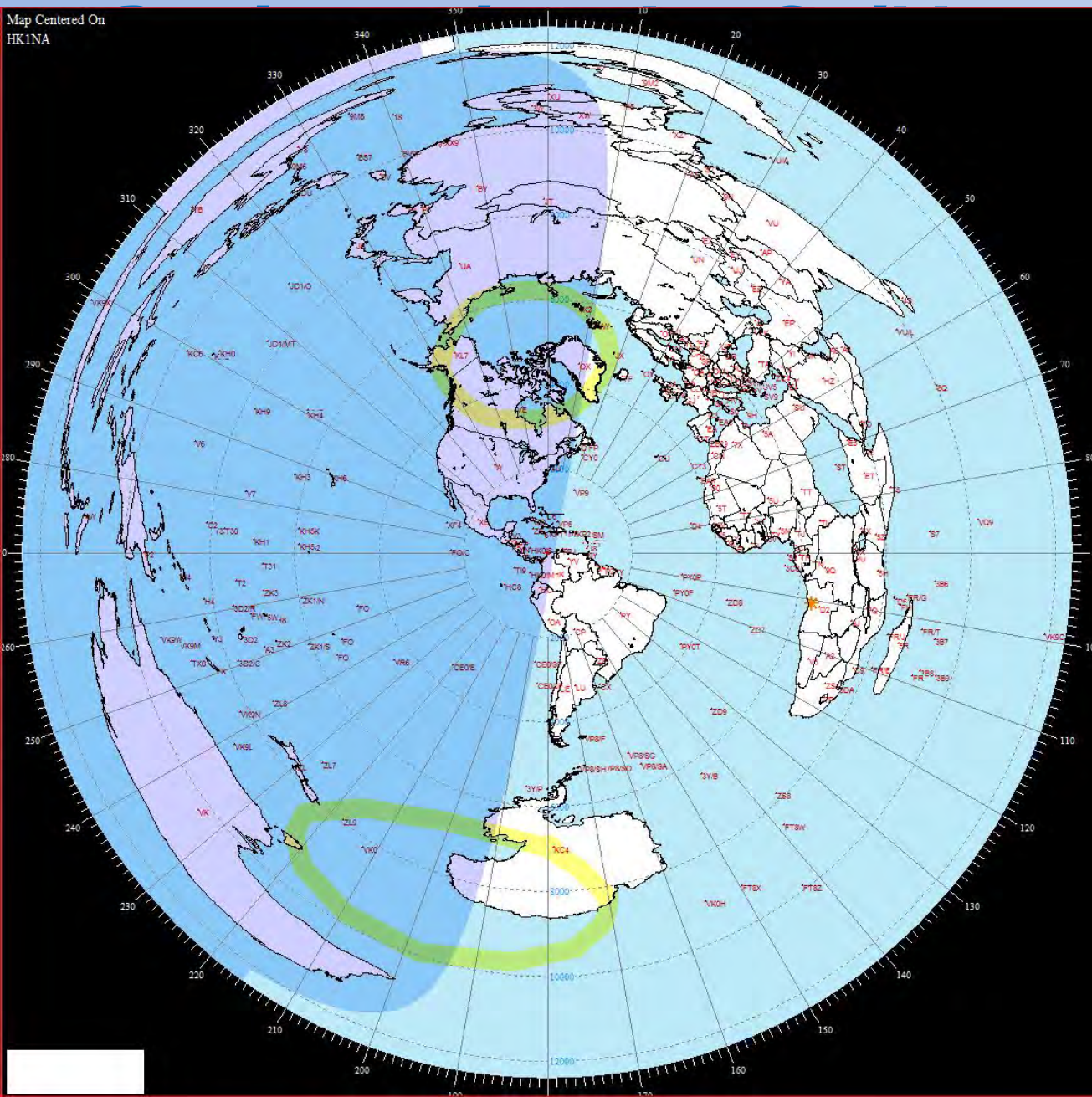
LOCATION, LOCATION, LOCATION

3-point territory with Caribbean propagation!



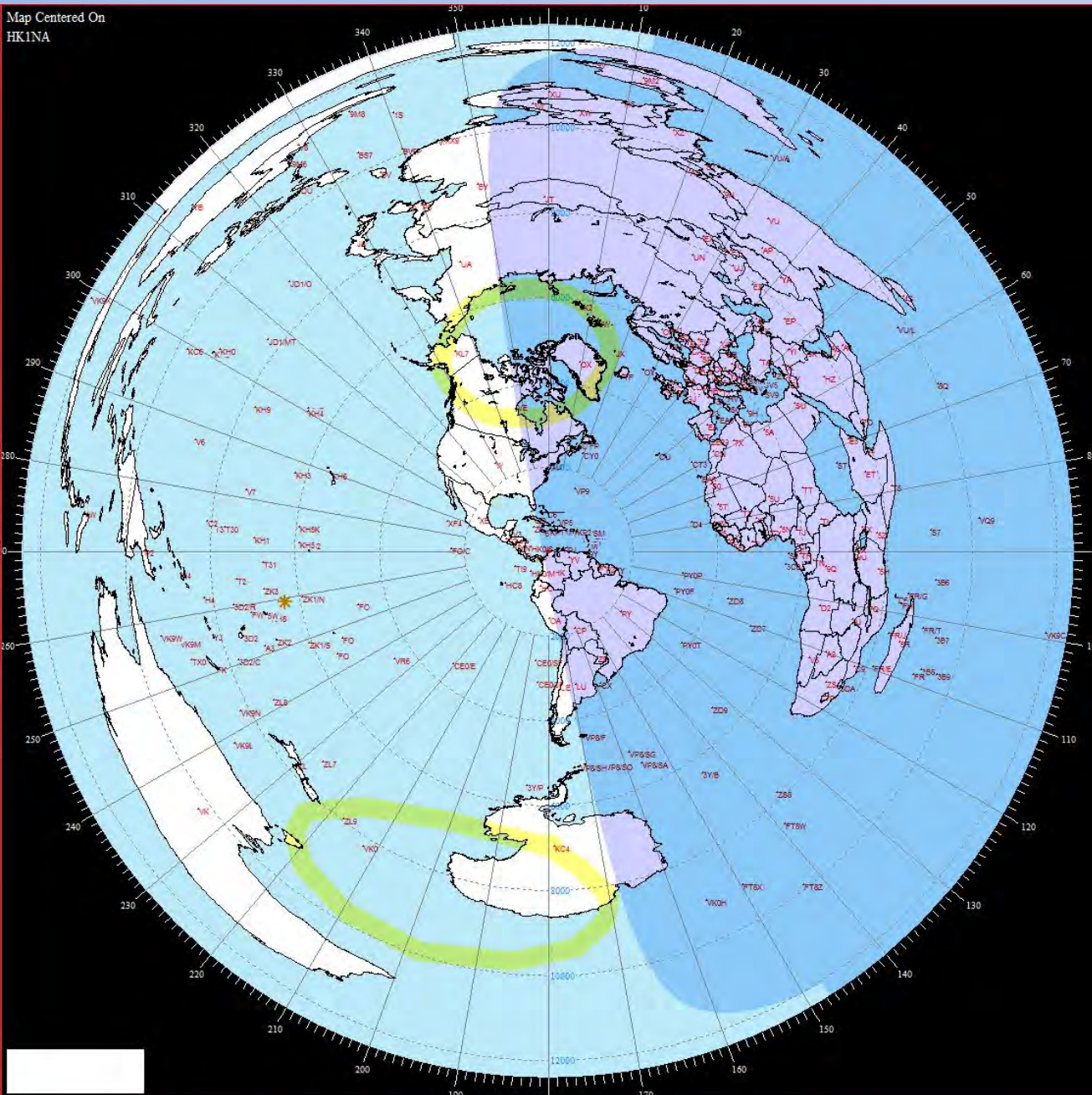
HK SUNRISE

Map Centered On
HK1NA



HK SUNSET

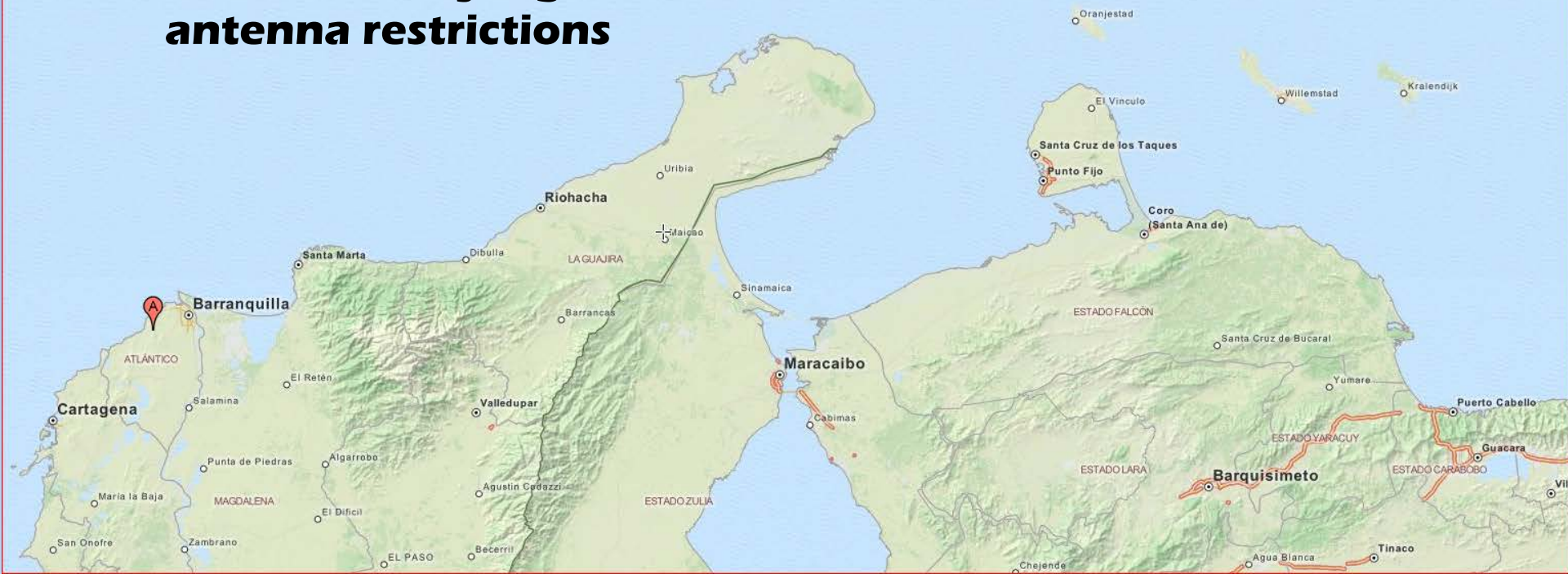
Map Centered On
HK1NA



History of HK1NA

- **2009 – First QSO's with a vertical on a fence**
- **2010 – First contest operation**
- **2012 – First multi-multi operation**

- **Owned by Jorge Prieto HK1R (ex-HK1KYR)**
- **Core group of HK's + LU's + guest ops**
- **1000 acres of jungle with NO antenna restrictions**



Contest results

2014 ARRL DX CW	M/2	8.2M	#1 world
2014 ARRL DX SSB	M/S	8.9M	#3 world
2014 WPX SSB	SOSB15	6.4M	#6 world (LW1DTZ op)
2014 WPX CW	SOSB15	8.3M	New world record (HK1R op)

2013 ARRL 10	M/S	3.9M	#3 world
2013 ARRL DX CW	M/M	10.8M	#1 world
2013 ARRL DX SSB	M/M	15.5M	New world record
2013 CQWW RTTY	M/M	16.1M	#2 world
2013 CQWW SSB	M/M	43.0M	#2 world
2013 CQWW CW	M/M	40.7M	#2 world
2013 WPX SSB	M/M	65.3M	#2 world

2012 CQWW CW	M/M	39.8M	#3 world
2012 CQWW SSB	M/M	36.1M	#3 world
2012 WAE SSB	M/S	2.1M	#6 world
2012 WPX CW	M/M	49.6M	#1 world

2011 ARRL 10	M/S	3.4M	#5 world
2011 CQWW RTTY	M/M	1.4M	
2011 IARU	M/S	1.8M	
2011 WPX CW	SOSB10	0.8M	

The team (15 ops)



Argentina (+AD4Z + HK3TK)

STATION
20 M

STATION
40 M

STATION
80 M

Esteban LW1DTZ
/ LO4D

Manu LU9ESD
/ LR9D

Tim LW9EOC

Julio AD4Z
/ HI3A

Mark LU8EOT
/ LO5D

Pepin HK3TK
ex-CO2TK



Station description

(10) Icom 7600/7700/ProIII's + FT-1000MP + (6) Alpha 8410

(12) Windows XP computers with Win-Test

160m **$1/4\lambda$ vertical + 8el HiZ (now 4 x 950 ft beverages) for RX**

80m **$1/4\lambda$ vertical + 2 x 4el vertical yagis + 5el inv-V
yagi + SAL-30 RX antenna**

40m **2 x 3el yagis at 70'/155' + 2 x 4el vertical yagis + SAL-30
RX antenna**

20m **3 x 6el OWA yagis at 50'/100'/150' + SAL-20 RX antenna**

15m **3 x 6el M²15M6 at 50'/80'/100' + 5 x 4el fixed yagis at
24 ft for RX**

10m **3 x 5el OWA yagis at 50'/66'/82' + 2 x 9el at 65'/45'
+ 5 x 4el fixed yagis at 24 ft for RX**

Typical operating position



Station setup



Jorge HK1NA



Mousepads

CQWW CW 2014

HK1NA

TUBARA

Jumanji contest station

COLOMBIA

The shack



The ranch



15m and 10m towers

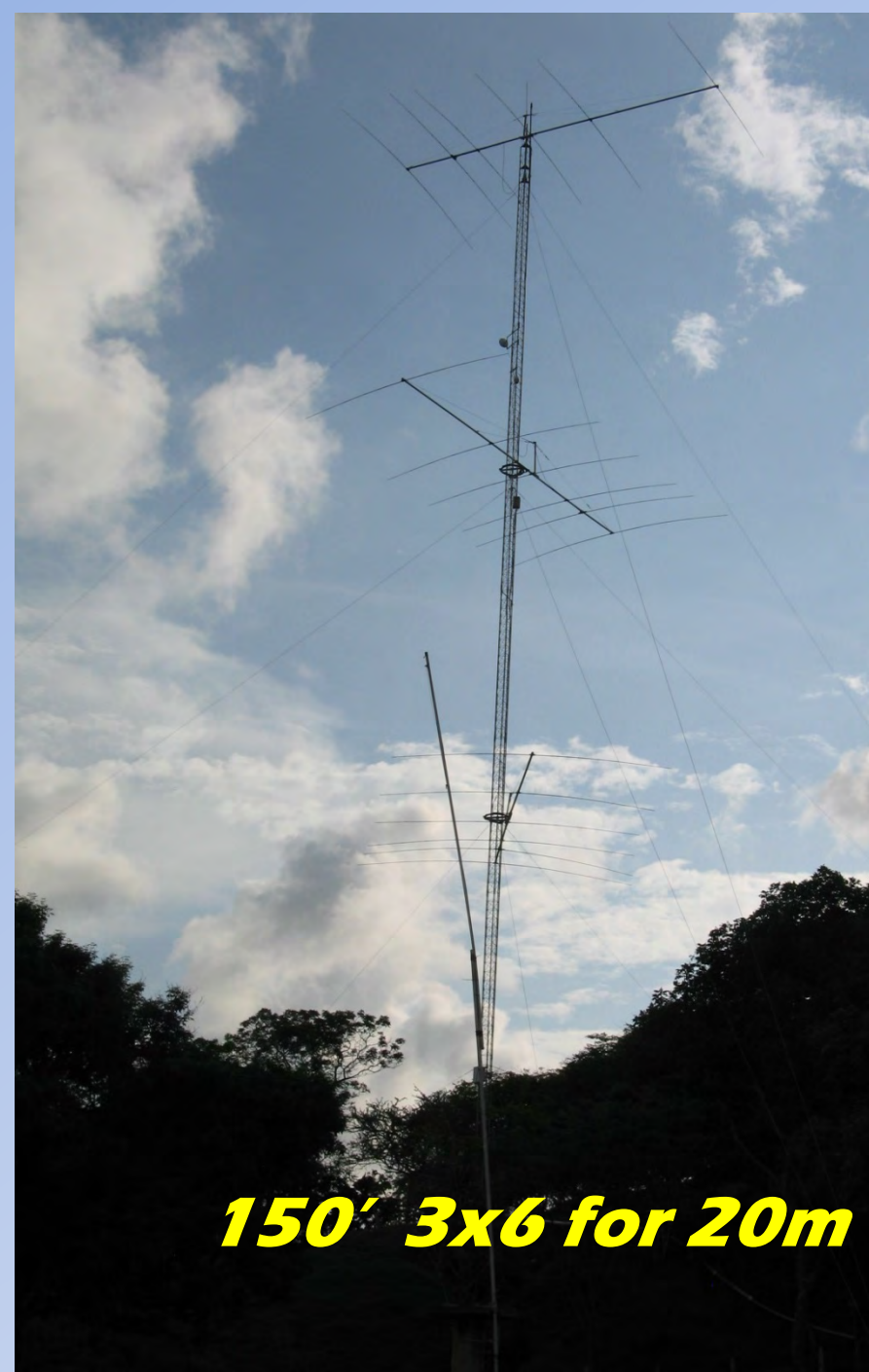


HK1NA



155' 40m
2x3





150' 3x6 for 20m



$1/4 \lambda$ 160m vertical

DXARC JUMANJI FIELD

40 Meters tower, 45m high
40 Meter 4 El Vertical Yagi to JA
40 Meter 4 El Vert Yagi to EU

10 Meters Tower, 31 m high

SHACK

15 meters tower, 37 m high

20 Meters tower, 44 meters high

© 2010 Google
© 2010 MapLink/Tele Atlas
Image © 2010 DigitalGlobe
© 2010 Europa Technologies

© 2010 Google
DXARC

View from top of the hill

Lower 9el 10m yagi



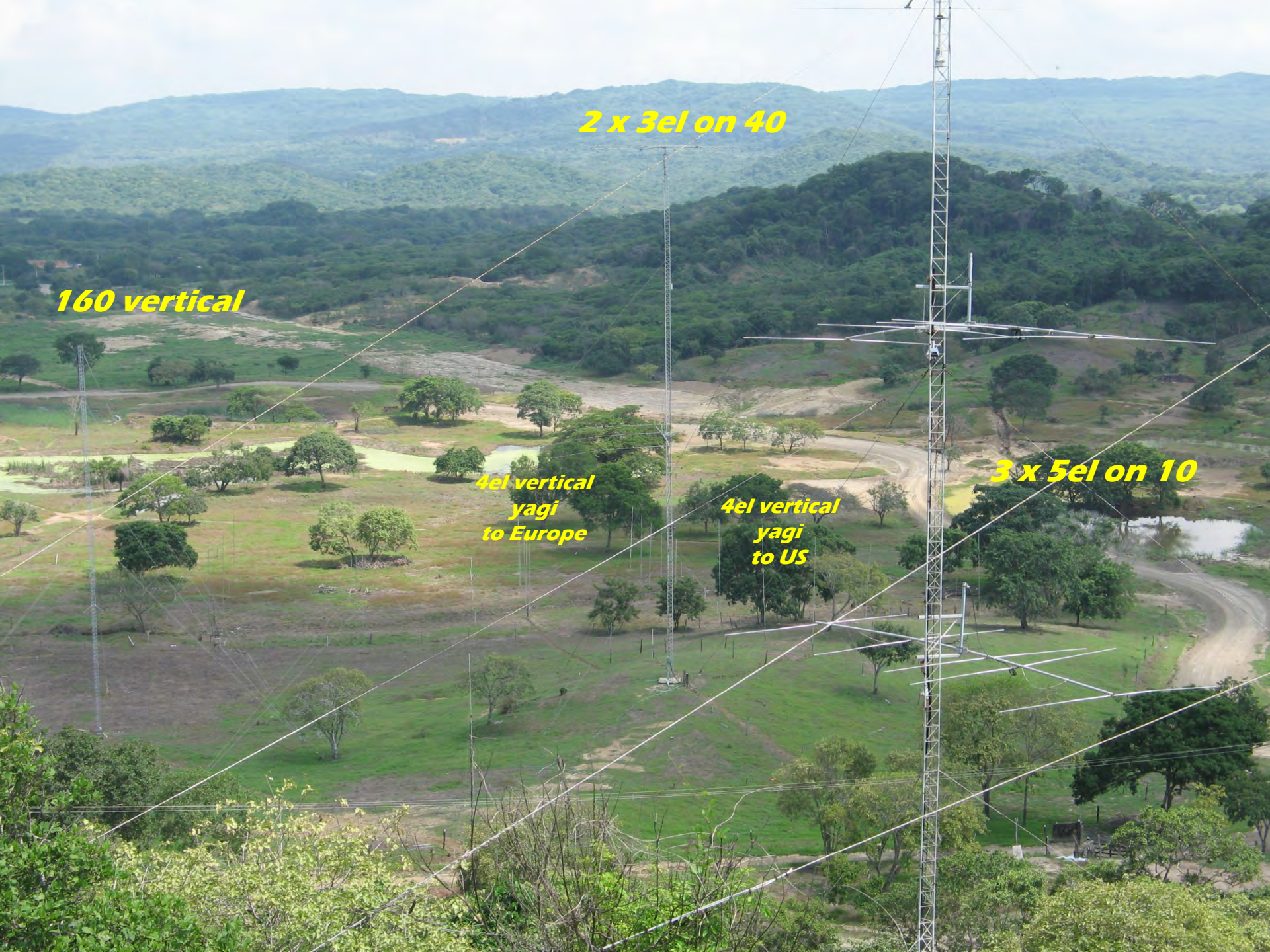
2 x 3el on 40

160 vertical

**4el vertical
yagi
to Europe**

**4el vertical
yagi
to US**

3 x 5el on 10





3 x 5el 15m

3 x 5el 10m

2 x 9el 10m





***55 kVA backup
generator control panel***



Daytime action

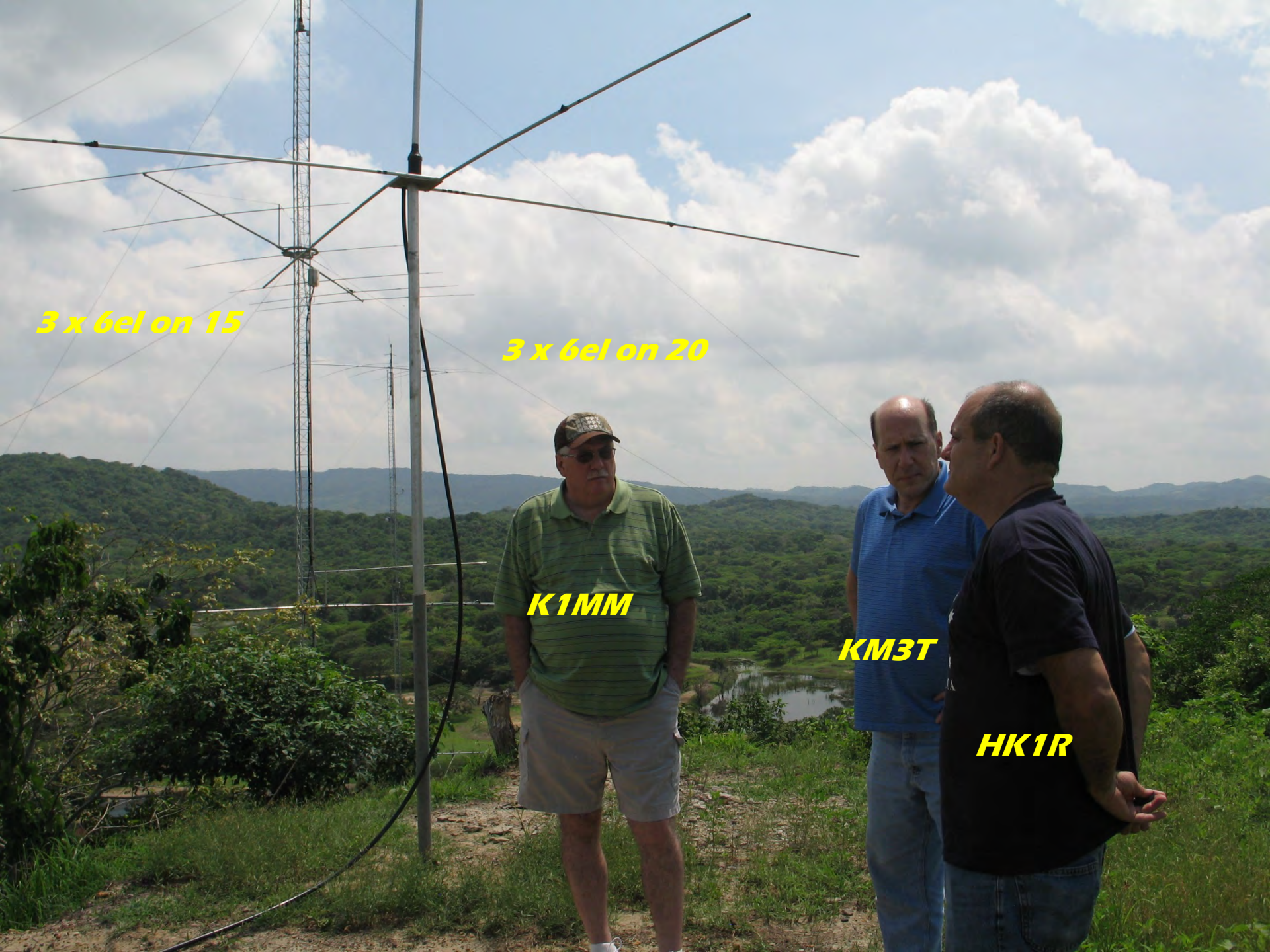
3 x 6el on 15

3 x 6el on 20

K1MM

KM3T

HK1R





K1CC

HK1R



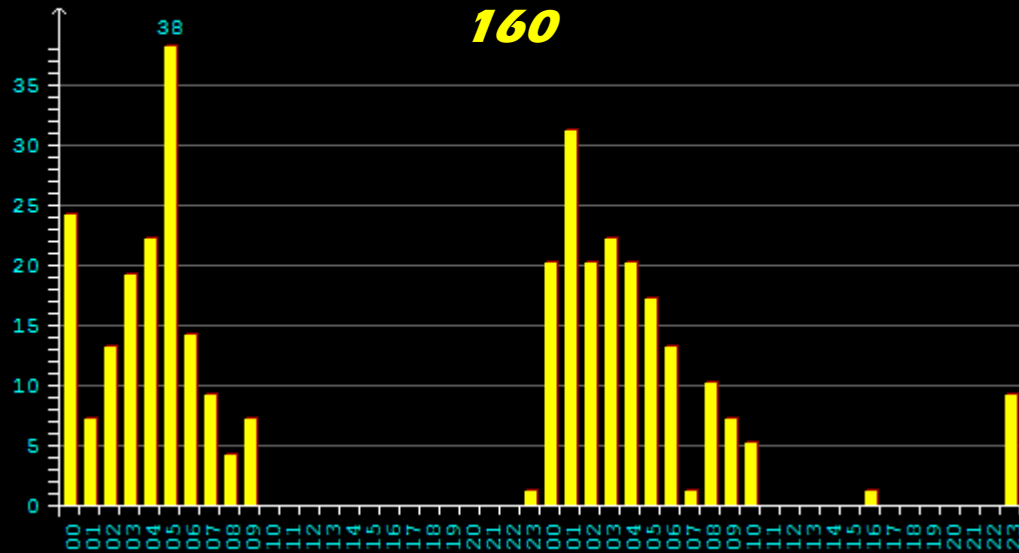
2014 HK1NA CQWW SSB claimed score

Band	QSOs	Zones	Countries		
160:	335	15	32		
80:	938	24	90		
40:	2682	34	121		
20:	4395	38	147		
15:	4399	38	153		
10:	5147	36	146		
Total:	17,896	185	689	Total Score	45,939,188

#1 world multi-multi

HK1NA
160 - All modes
QSOs (without dupes) - By time

160

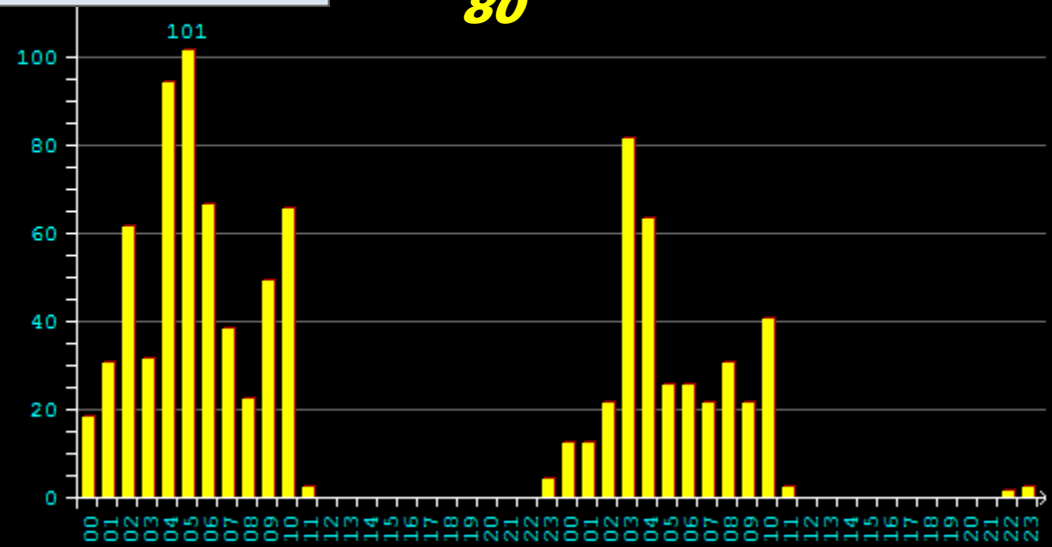


\Log\Targets\Continents\

- **Problems with receive antennas on 80 and 160**
- **1/4 wave vertical on 80 and vertical yagi did NOT work (only inv-V wire yagi)**

HK1NA
80 - All modes
Qs (without dupes) - By time

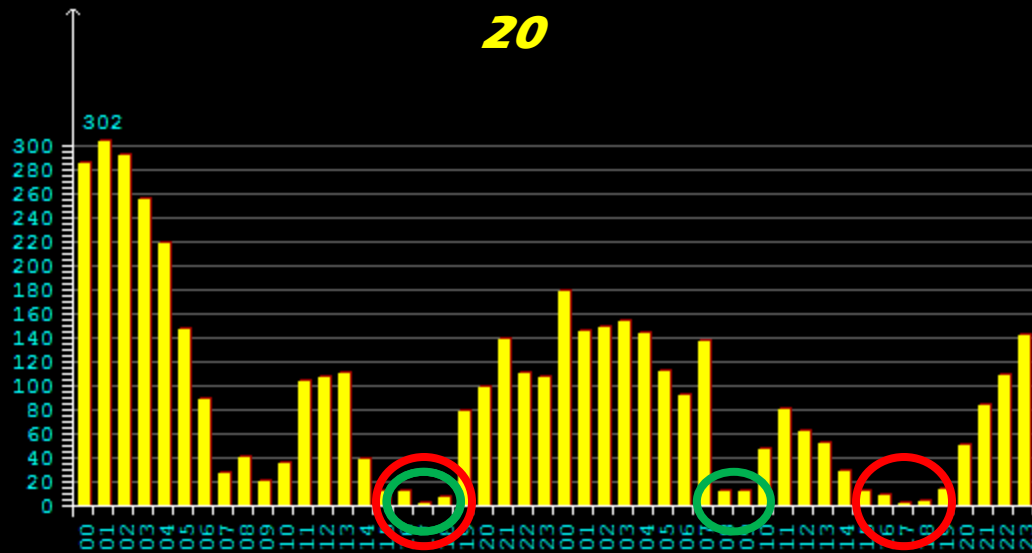
80



\Log\Targets\Continents\

HK1NA
20 - All modes
QSOs (without dupes) - By time

20

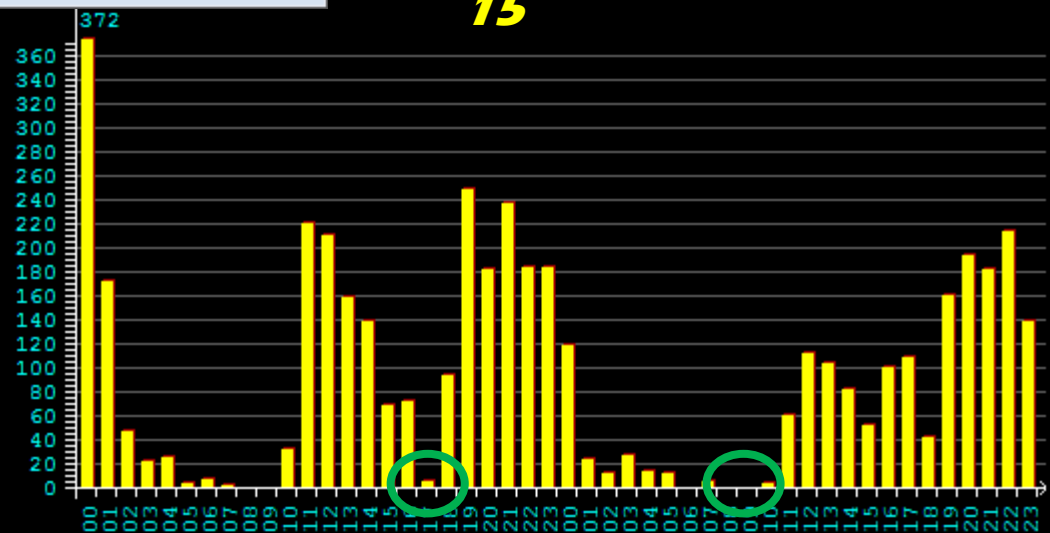


Log Targets Continents

- Only top 20 rotatable
- Local noon absorption
- Thunder storms and power outages
- Solar flare

HK1NA
15 - All modes
QSOs (without dupes) - By time

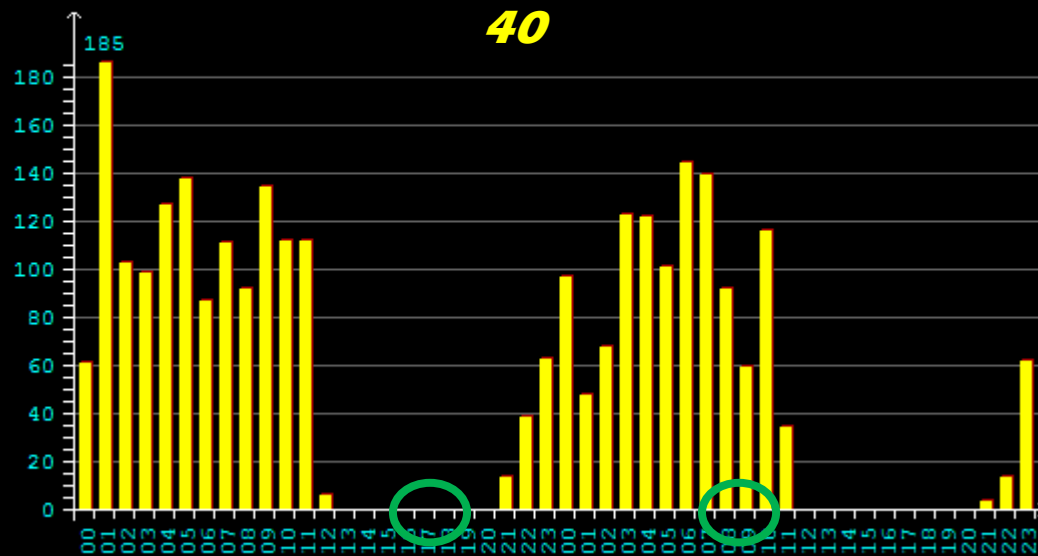
15



Log Targets Continents

HK1NA
40 - All modes
QSOs (without dupes) - By time

40

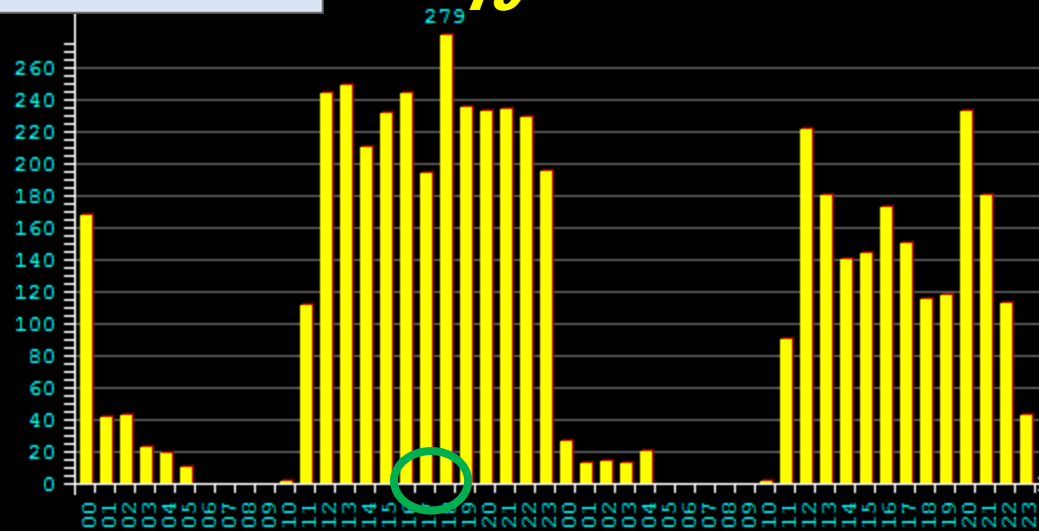


Log Targets Continents

- Receive antennas at 24 ft were **MUCH** better than anything higher on 10
- Need higher-angle antennas on 10 for high solar flux!!

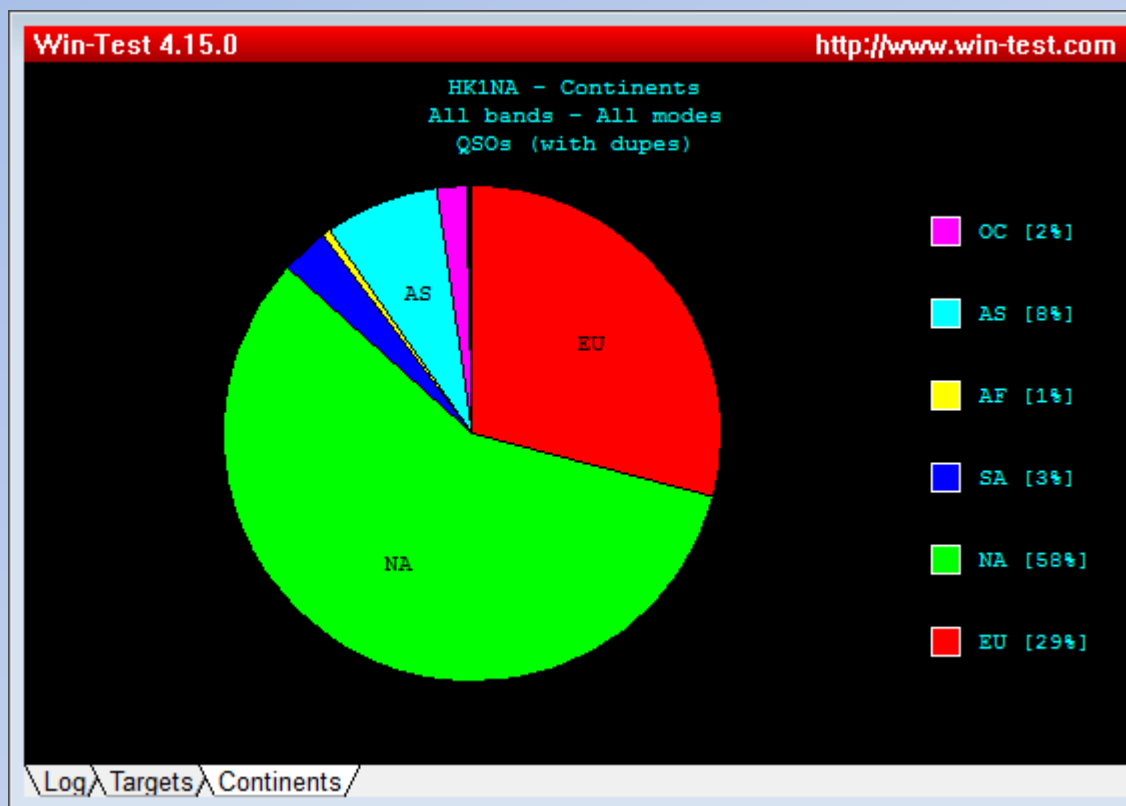
HK1NA
10 - All modes
QSOs (without dupes) - By time

10



Log Targets Continents

Continental distribution



2:1 ratio of US to Europe



Rules:

High Power: Total output power must not exceed **1500 watts** on any band at any time

“It’s a hollow victory if you didn’t play by the rules”

Reality:

- 3 kW “European standard”, 6 kW for big guns**
- Multiple amplifiers per band on separate antennas**
- “Closet kilowatts”**

“Everyone else is doing it so why shouldn’t I?”

=> It is not fair to compete with those who do not play by the rules!

Post-contest in Puerto Colombia



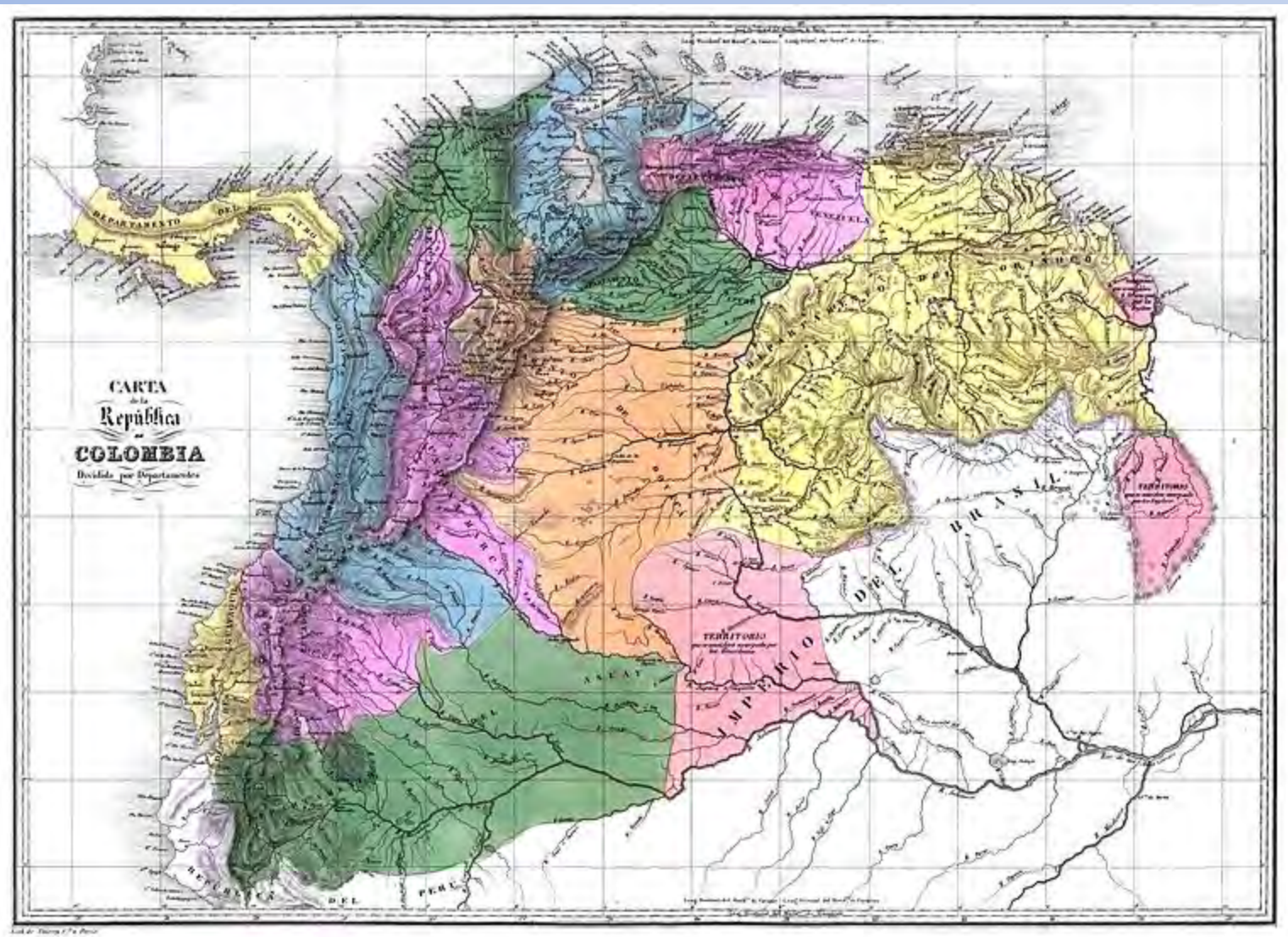
Puerto Colombia in Barranquilla



Monument to Simon Bolivar in Santa Marta



Republic of Colombia (1821-1830)



Taganga



Taganga beach



Cartagena old city



Cartagena old city



Castillo San Felipe de Barajas



... and the new



***Cartagena by
night***



Hotel Caribe



**Thanks to Jorge HK1R and the
HK team for the hospitality!**

