

Tõnno Vähk, ES5TV
OHDXF/CCF Contest Cruise 2013

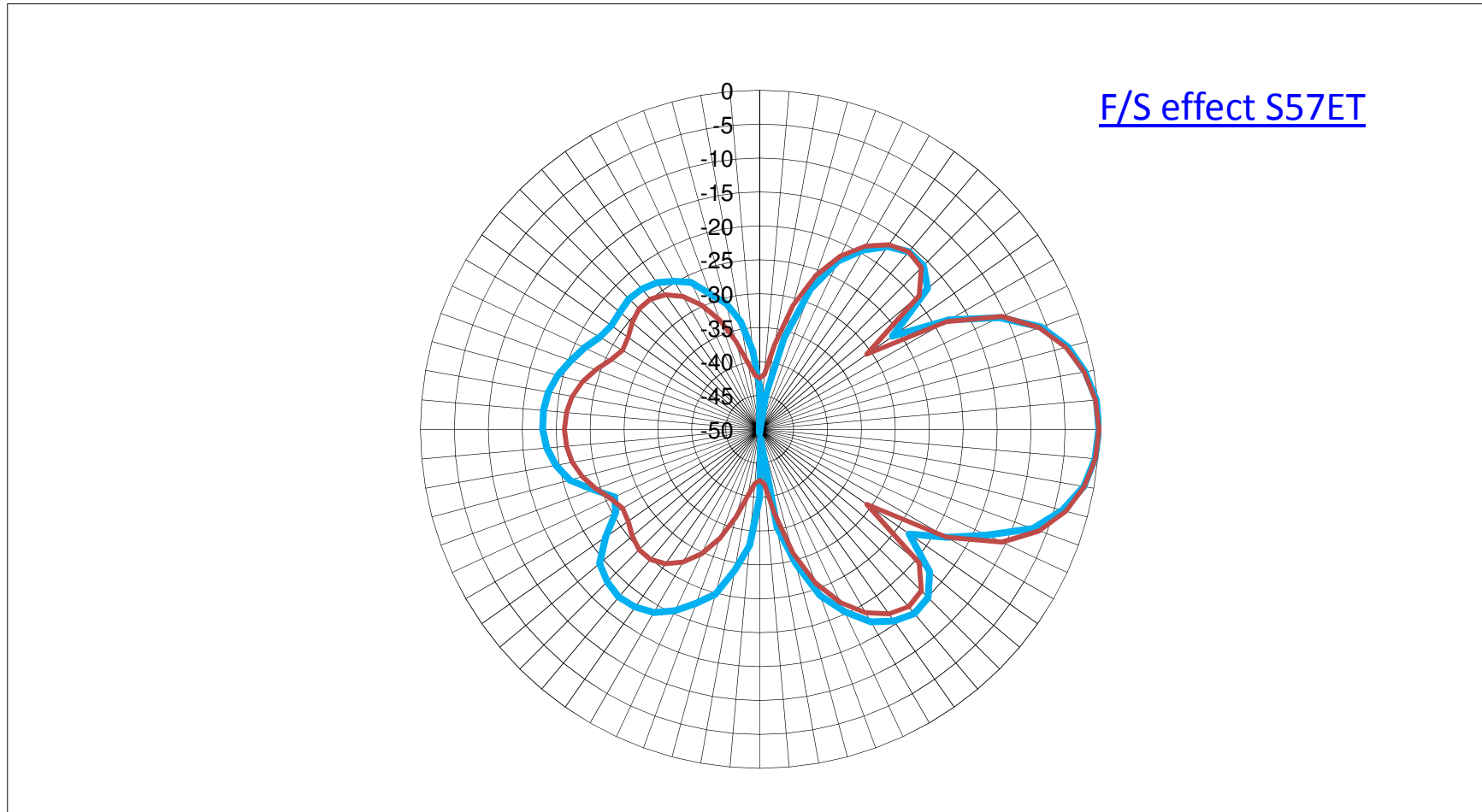






EME??

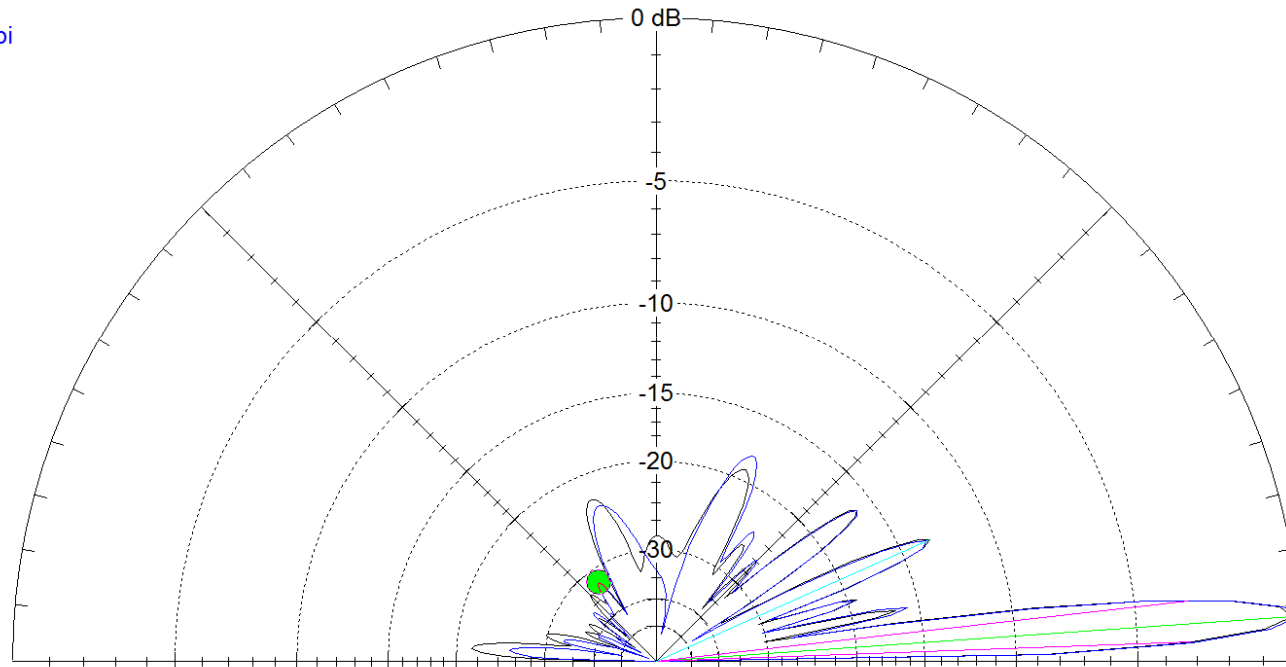
H frame measured vs computer



H frame real vs only antennas

Total Field
* Primary
15el puhas dbi

EZNEC+



Elevation Plot
Azimuth Angle 0.0 deg.
Outer Ring 24.2 dBref
Slice Max Gain 24.04 dBref @ Elev Angle = 4.0 deg.
Beamwidth 4.4 deg.; -3dB @ 2.1, 6.5 deg.
Sidelobe Gain 11.02 dBref @ Elev Angle = 24.0 deg.
Front/Sidelobe 13.02 dB

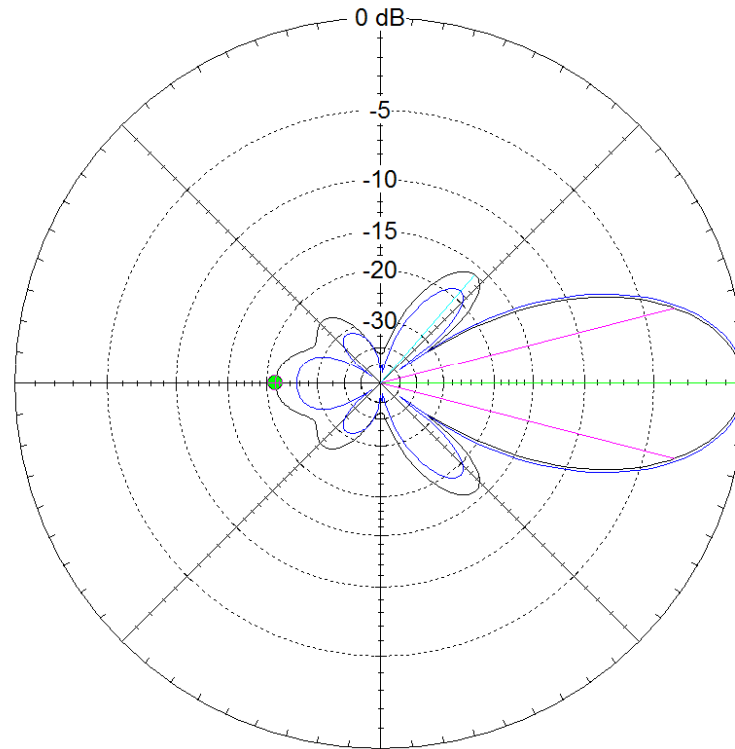
21.2 MHz

Cursor Elev 126.0 deg.
Gain -8.29 dBref
-32.33 dBmax

H frame real vs only antennas, az

Total Field
* Primary
15az puhas

EZNEC+



Azimuth Plot
Elevation Angle 4.0 deg
Outer Ring 24.2 dBref
Slice Max Gain 24.04 dBref @ Az Angle = 0.0 deg.
Front/Back 21.24 dB
Beamwidth 28.8 deg., -3dB @ 345.6, 14.4 deg.
Sidelobe Gain 8.24 dBref @ Az Angle = 49.0 deg.
Front/Sidelobe 15.8 dB

21.2 MHz

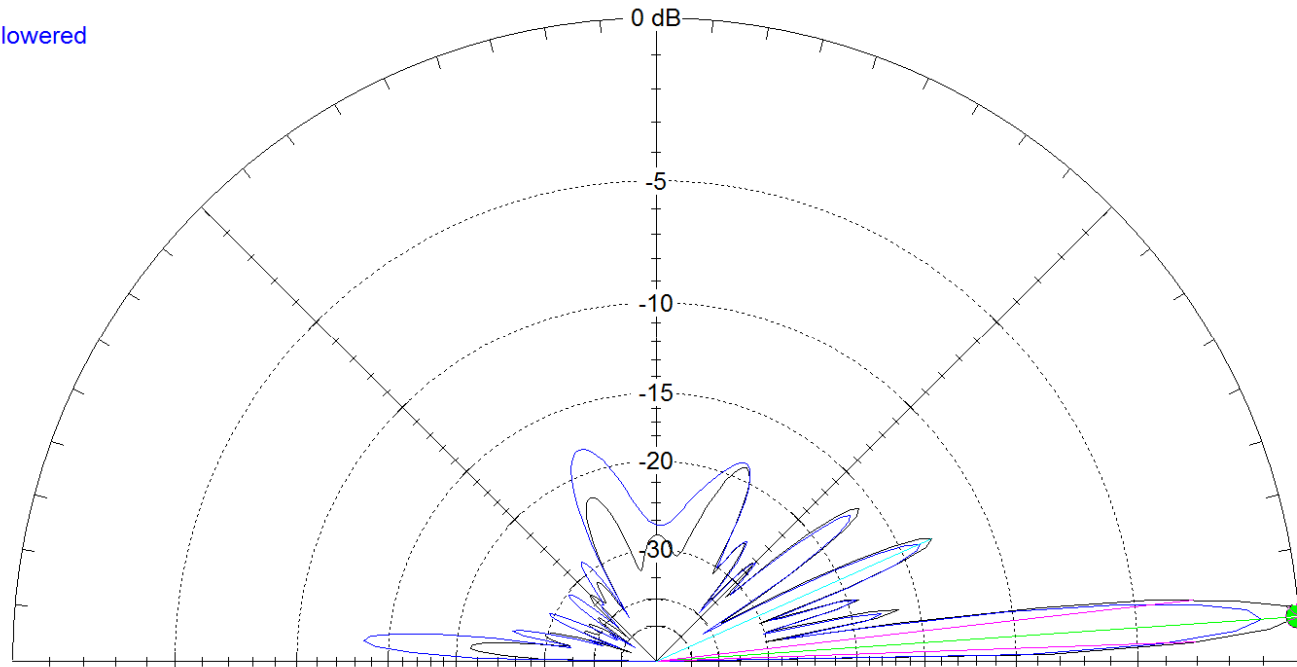
Cursor Az 180.0 deg.
Gain 2.8 dBref
-21.25 dBmax

H frame real vs antennas not lowered

Total Field

* Primary
15el ants not lowered

EZNEC+



Elevation Plot
Azimuth Angle 0.0 deg.
Outer Ring 24.04 dBref
Slice Max Gain 24.04 dBref @ Elev Angle = 4.0 deg.
Beamwidth 4.4 deg.; -3dB @ 2.1, 6.5 deg.
Sidelobe Gain 11.02 dBref @ Elev Angle = 24.0 deg.
Front/Sidelobe 13.02 dB

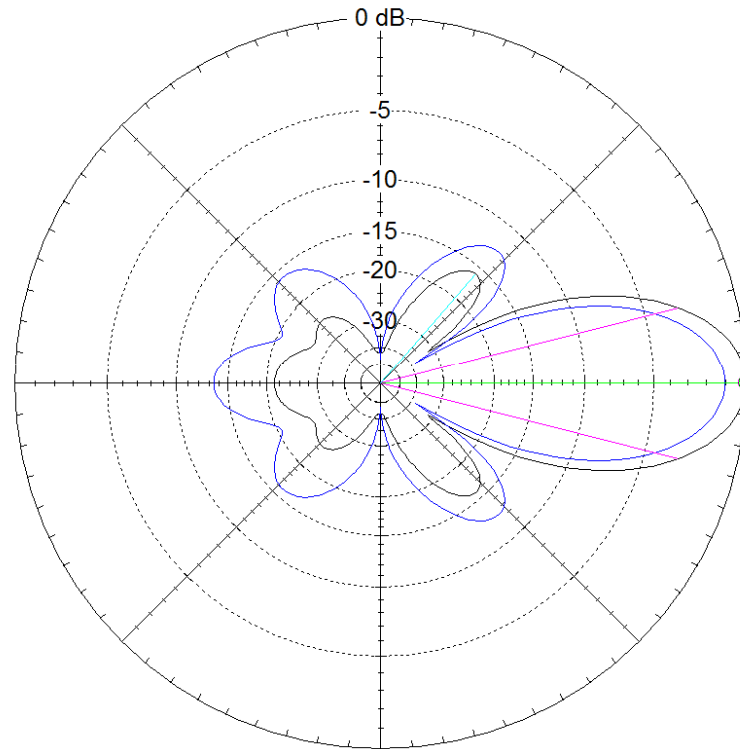
21.2 MHz

Cursor Elev 4.0 deg.
Gain 24.04 dBref
0.0 dBmax

H frame real vs antennas not lowered, az

Total Field
* Primary
15az not lowered

EZNEC+



Azimuth Plot
Elevation Angle 4.0 deg.
Outer Ring 24.04 dBref
Slice Max Gain 24.04 dBref @ Az Angle = 0.0 deg.
Front/Back 21.24 dB
Beamwidth 28.8 deg., -3dB @ 345.6, 14.4 deg.
Sidelobe Gain 8.24 dBref @ Az Angle = 49.0 deg.
Front/Sidelobe 15.8 dB

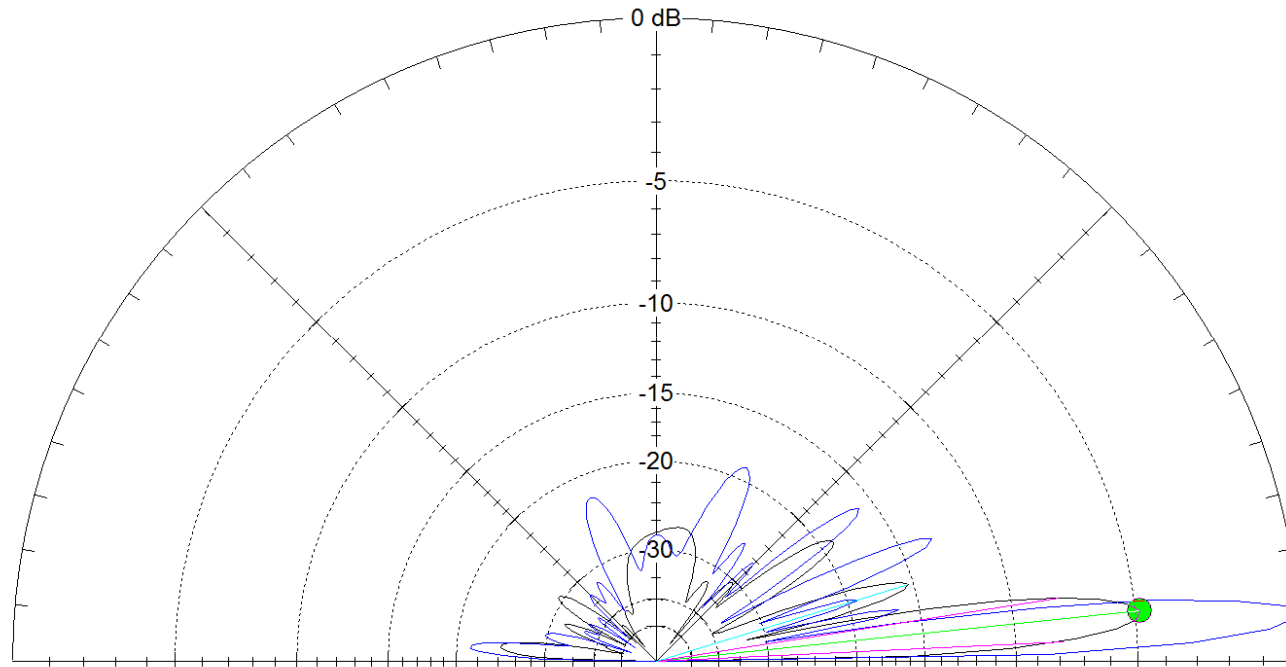
21.2 MHz
Cursor Az 0.0 deg.
Gain 24.04 dBref
0.0 dBmax

4 tribanders vs H frame, elevation

Total Field

* Primary
H frame

EZNEC+



Elevation Plot
Azimuth Angle 0.0 deg.
Outer Ring 24.04 dBref

Slice Max Gain 19.22 dBref @ Elev Angle = 6.0 deg.
Beamwidth 6.1 deg.; -3dB @ 2.8, 8.9 deg.
Sidelobe Gain 8.73 dBref @ Elev Angle = 17.0 deg.
Front/Sidelobe 10.49 dB

K4AB, AL, 2130z

21.2 MHz

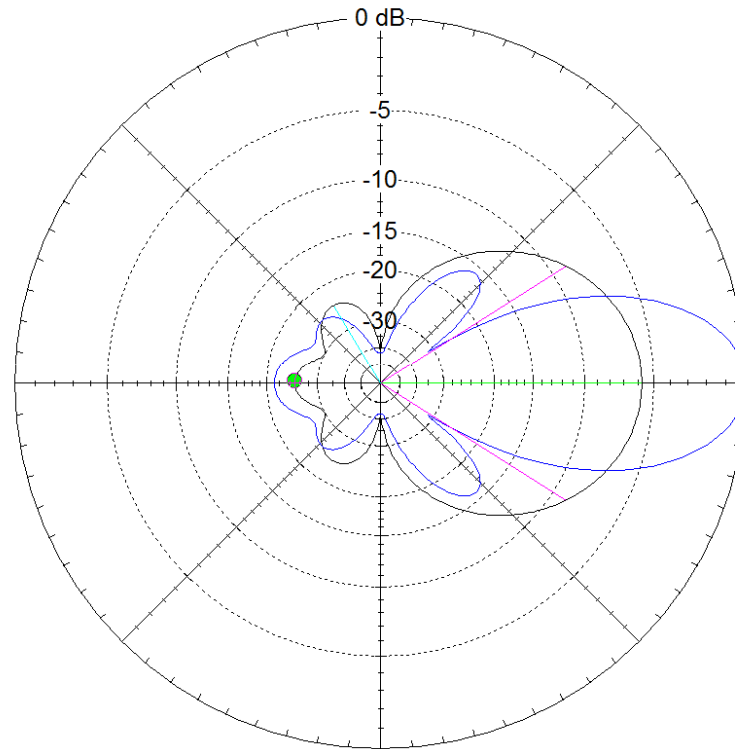
Cursor Elev 6.0 deg.
Gain 19.22 dBref
0.0 dBmax

4 tribanders vs H frame, 4 degrees

Total Field

* Primary
H frame az

EZNEC+



Azimuth Plot
Elevation Angle 4.0 deg
Outer Ring 24.04 dBref

Slice Max Gain 18.29 dBref @ Az Angle = 0.0 deg.
Front/Back 19.11 dB
Beamwidth 64.8 deg, -3dB @ 327.6, 32.4 deg.
Sidelobe Gain 0.24 dBref @ Az Angle = 121.0 deg.
Front/Sidelobe 18.05 dB

21.2 MHz

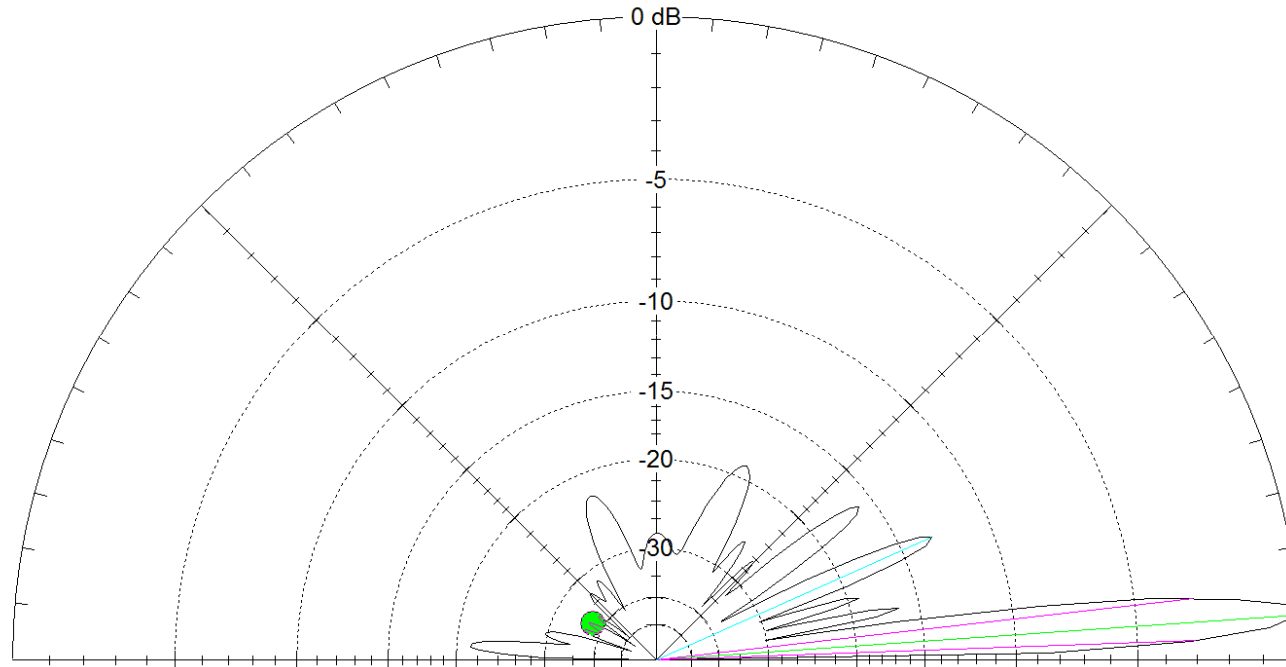
Cursor Az 179.0 deg
Gain -0.83 dBref
-19.12 dBmax

VE3TMG, 1530z

4 degrees, all in phase

Total Field

EZNEC+



Elevation Plot
Azimuth Angle 0.0 deg.
Outer Ring 24.04 dBref
Slice Max Gain 24.04 dBref @ Elev Angle = 4.0 deg.
Beamwidth 4.4 deg.; -3dB @ 2.1, 6.5 deg.
Sidelobe Gain 11.02 dBref @ Elev Angle = 24.0 deg.
Front/Sidelobe 13.02 dB

21.2 MHz
Cursor Elev 150.0 deg.
Gain -13.42 dBref
-37.47 dBmax

[K5GKC, TX, 22z](#)

[N6ML, 2130z](#)

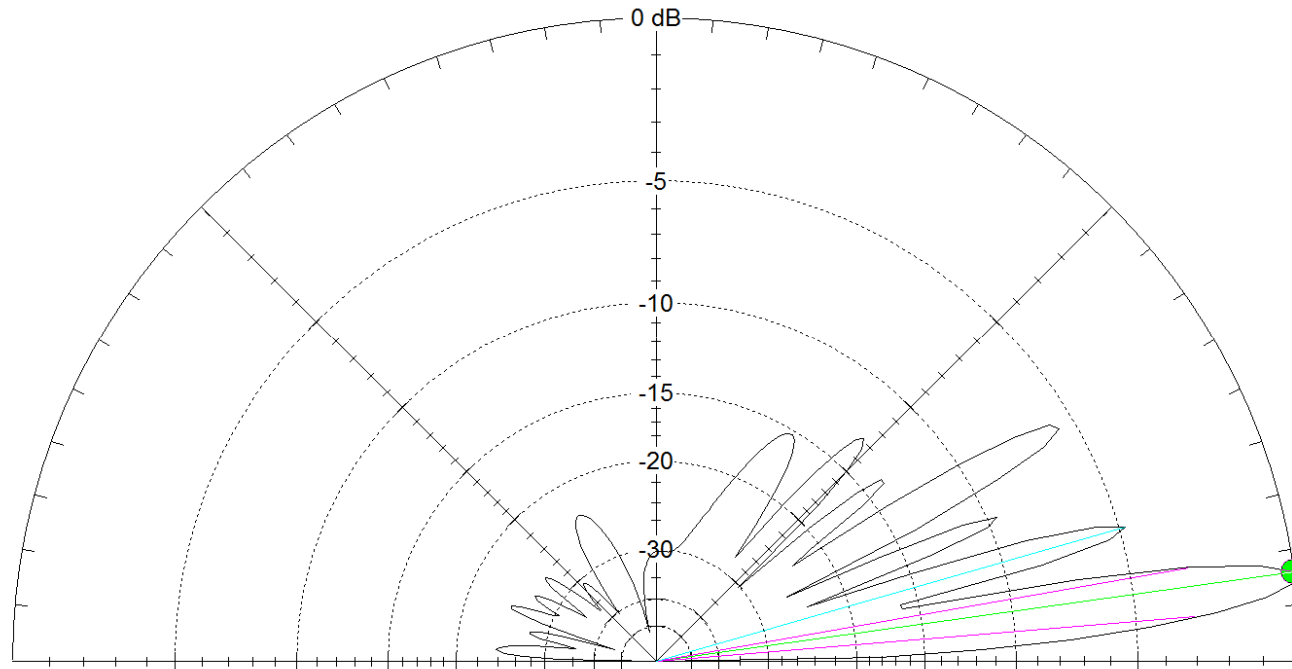
[JG2AXJ](#)

[SA3CAT, 1530z](#)

7 degrees

Total Field

EZNEC+



Elevation Plot
Azimuth Angle 0.0 deg.
Outer Ring 21.39 dBref

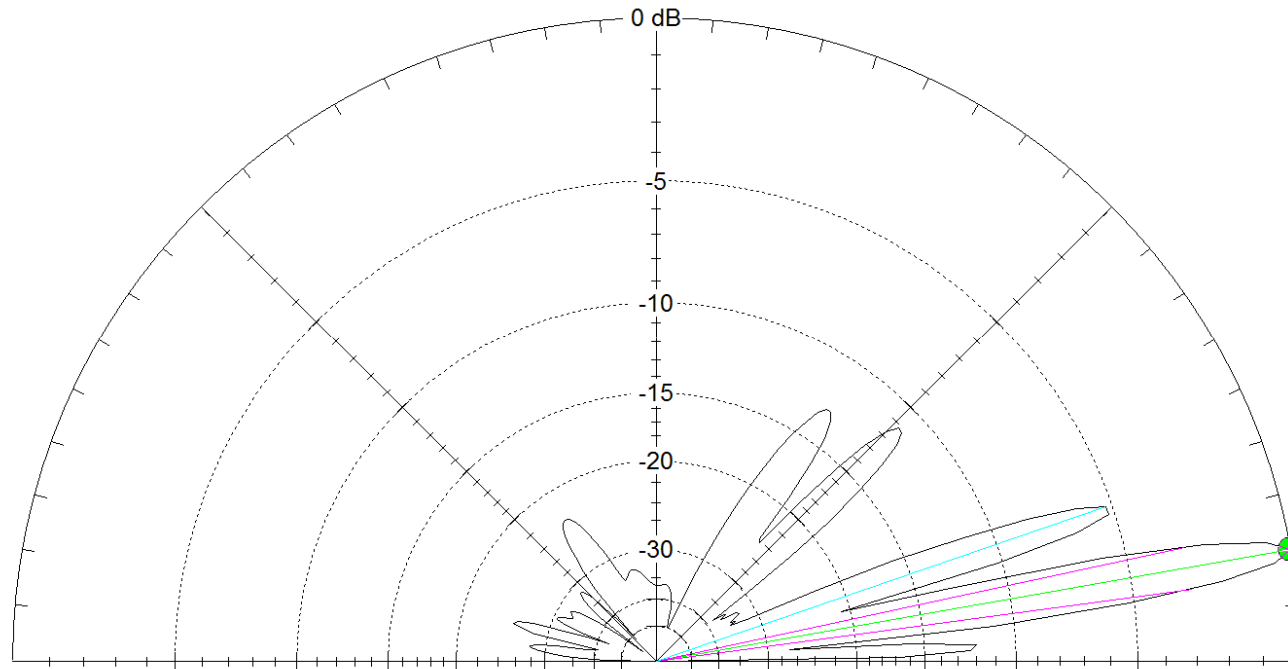
Slice Max Gain 21.39 dBref @ Elev Angle = 8.0 deg.
Beamwidth 5.3 deg.; -3dB @ 4.7, 10.0 deg.
Sidelobe Gain 16.61 dBref @ Elev Angle = 16.0 deg.
Front/Sidelobe 4.76 dB

21.2 MHz
Cursor Elev 8.0 deg.
Gain 21.39 dBref
0.0 dBmax

10 degrees

Total Field

EZNEC+



Elevation Plot
Azimuth Angle 0.0 deg.
Outer Ring 22.47 dBref
Slice Max Gain 22.47 dBref @ Elev Angle = 10.0 deg.
Beamwidth 4.5 deg.; -3dB @ 7.7, 12.2 deg.
Sidelobe Gain 17.27 dBref @ Elev Angle = 19.0 deg.
Front/Sidelobe 5.2 dB

21.2 MHz
Cursor Elev 10.0 deg.
Gain 22.47 dBref
0.0 dBmax

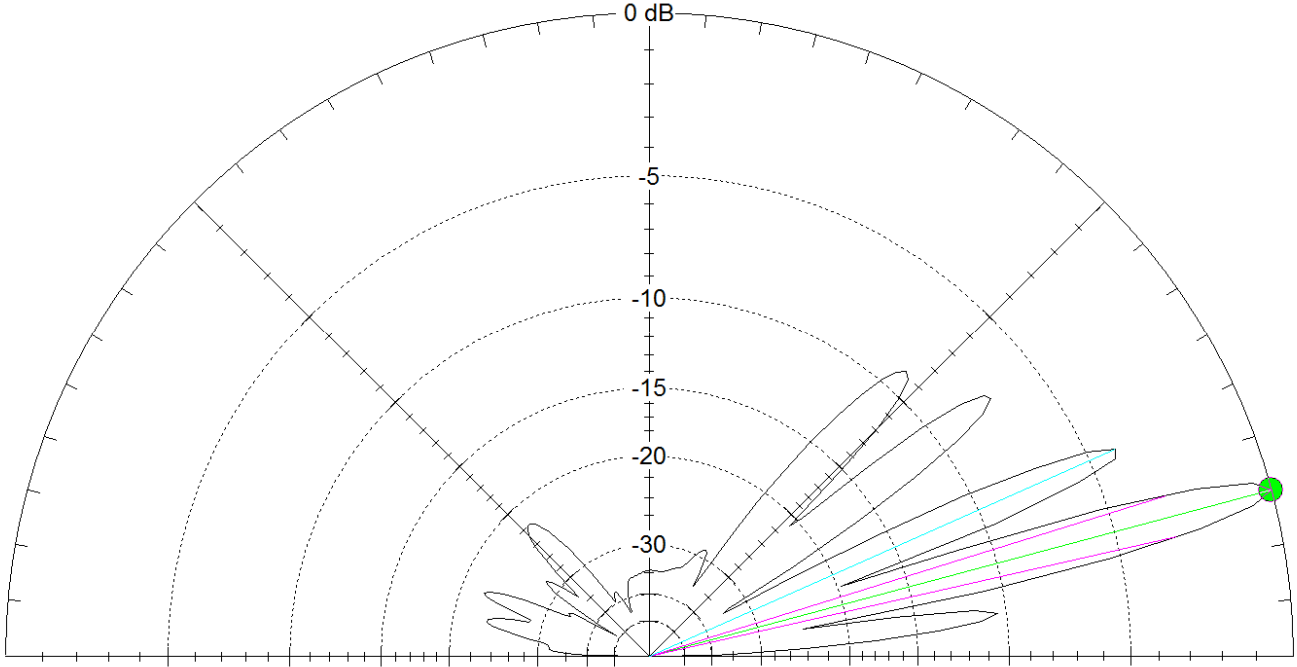
DS2CYI

IV3BCD

15 degrees

Total Field

EZNEC+



Elevation Plot
Azimuth Angle 0.0 deg.
Outer Ring 21.41 dBref

Slice Max Gain 21.41 dBref @ Elev Angle = 15.0 deg.
Beamwidth 4.5 deg.; -3dB @ 12.8, 17.3 deg.
Sidelobe Gain 17.42 dBref @ Elev Angle = 24.0 deg.
Front/Sidelobe 3.99 dB

21.2 MHz
Cursor Elev 15.0 deg.
Gain 21.41 dBref
0.0 dBmax

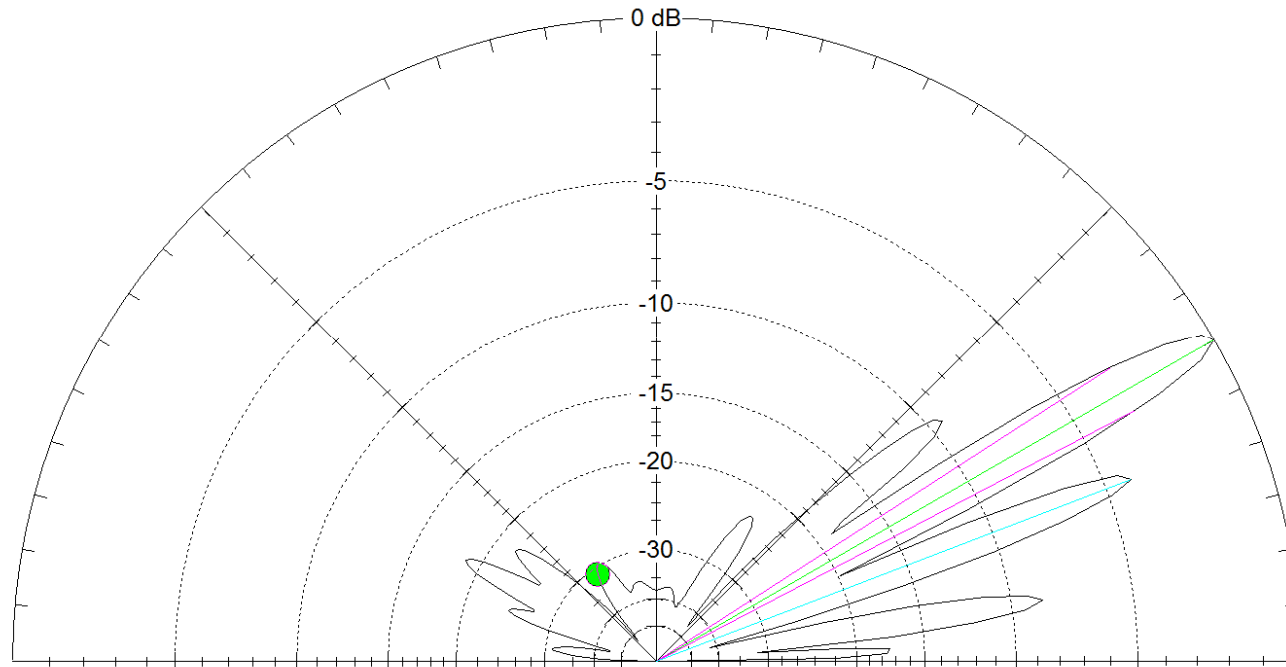
9A2UU

OE2WAO

30 degrees

Total Field

EZNEC+



Elevation Plot
Azimuth Angle 0.0 deg.
Outer Ring 21.49 dBref

Slice Max Gain 21.49 dBref @ Elev Angle = 30.0 deg.
Beamwidth 5.2 deg.; -3dB @ 27.7, 32.9 deg.
Sidelobe Gain 17.45 dBref @ Elev Angle = 21.0 deg.
Front/Sidelobe 4.04 dB

21.2 MHz

Cursor Elev 124.0 deg.
Gain -9.66 dBref
-31.14 dBmax



PICTURES:
<http://pontu.eenet.ee/es5tv>