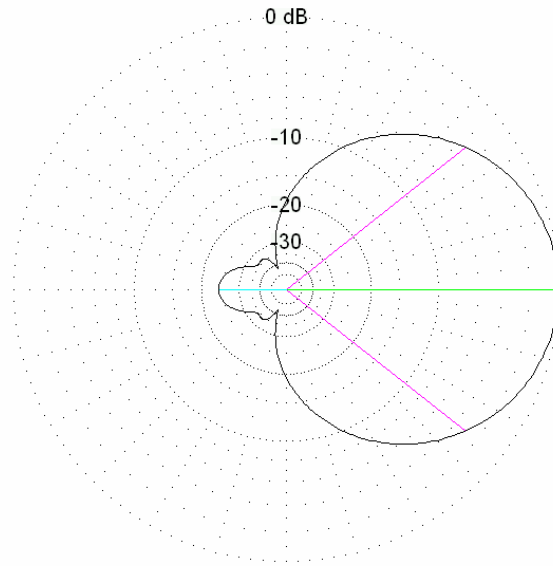


# OBW10-5, 10 element 5 band wirebeam 20-17-15-12-10m

## 20m Azimut plot

\* Total Field

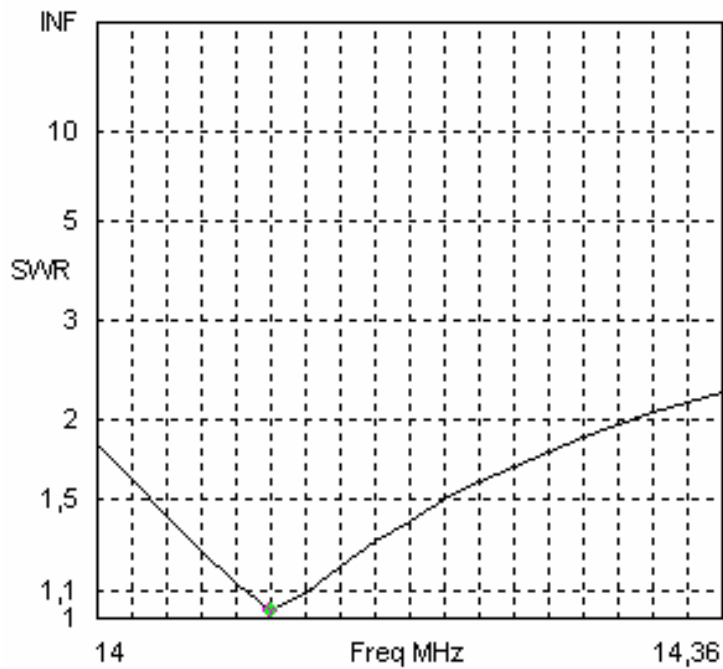
EZNEC+



Azimuth Plot  
Elevation Angle 0,0 deg.  
Outer Ring 4,12 dBref  
  
Slice Max Gain 4,12 dBref @ Az Angle = 0,0 deg.  
Front/Back 23,89 dB  
Beamwidth 76,6 deg, -3dB @ 321,7, 38,3 deg.  
Sidelobe Gain -19,77 dBref @ Az Angle = 180,0 deg.  
Front/Sidelobe 23,89 dB

14,2 MHz  
Cursor Az 0,0 deg.  
Gain 4,12 dBref  
0,0 dBmax

## 20m SWR curve



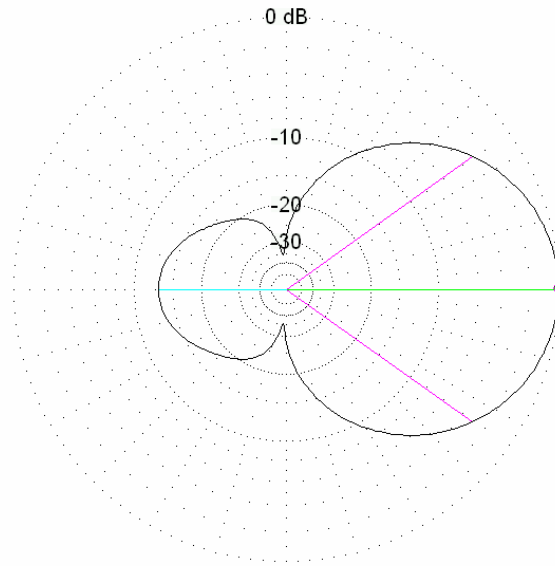
Freq	14,1 MHz	Source #	1
SWR	1,024	Z0	50 ohms
Z	49,67 + j 1,147 ohms		
Refl Coeff	0,01198 at 105,48 deg.		

# OBW10-5, 10 element 5 band wirebeam 20-17-15-12-10m

## 17m Azimut plot

\* Total Field

EZNEC+

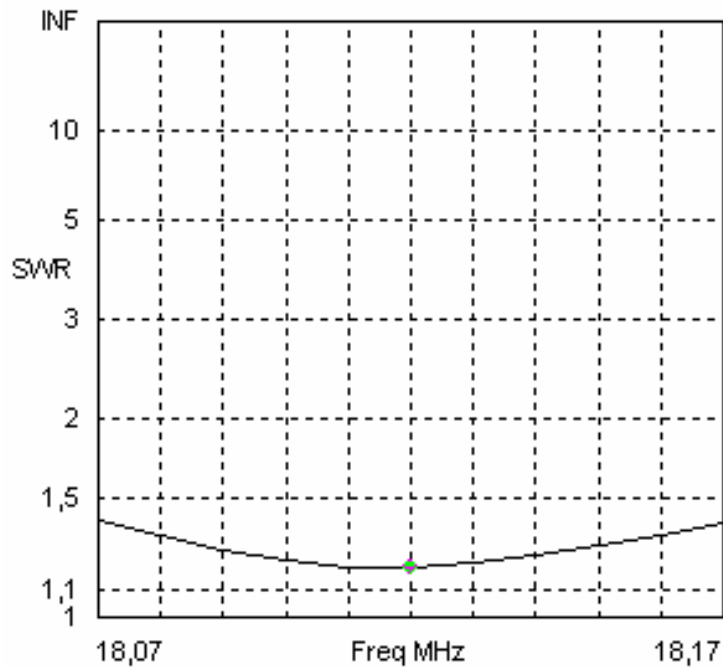


18,135 MHz

Cursor Az 0,0 deg.  
Gain 4,3 dBref  
0,0 dBmax

Azimuth Plot  
Elevation Angle 0,0 deg.  
Outer Ring 4,3 dBref  
  
Slice Max Gain 4,3 dBref @ Az Angle = 0,0 deg.  
Front/Back 12,99 dB  
Beamwidth 70,3 deg., -3dB @ 324,6, 35,4 deg.  
Sidelobe Gain -3,69 dBref @ Az Angle = 180,0 deg.  
Front/Sidelobe 12,99 dB

## 17m SWR curve



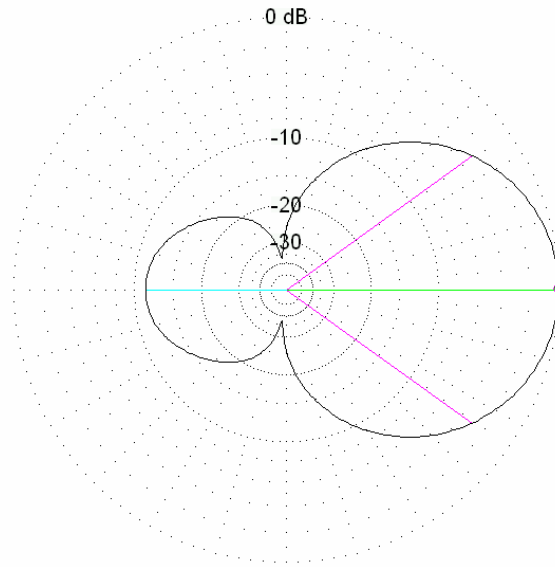
Freq	18,12 MHz	Source #	1
SWR	1,18	Z0	50 ohms
Z	54,16 + j 7,541 ohms		
Refl Coeff	0,08249 at 56,96 deg.		

# OBW10-5, 10 element 5 band wirebeam 20-17-15-12-10m

## 15m Azimut plot

\* Total Field

EZNEC+

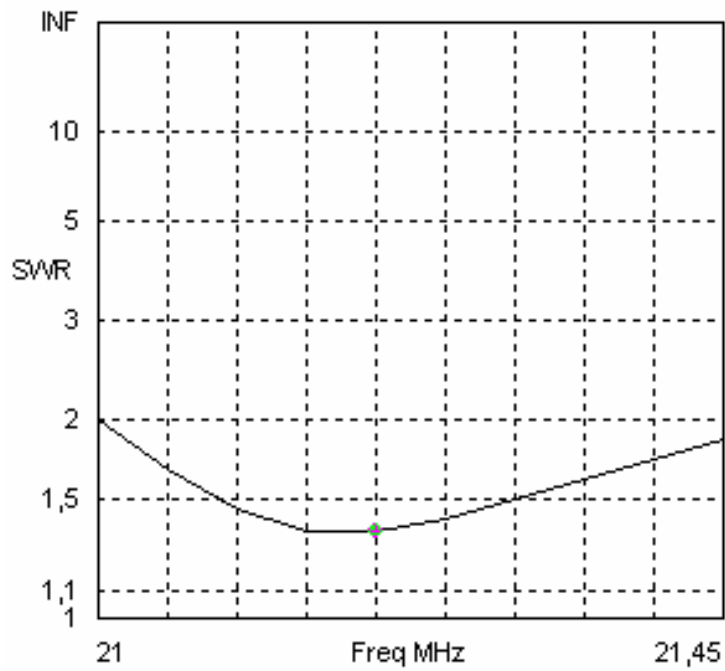


21,25 MHz

Cursor Az 0,0 deg.  
Gain 4,18 dBref  
0,0 dBmax

Azimuth Plot  
Elevation Angle 0,0 deg.  
Outer Ring 4,18 dBref  
Slice Max Gain 4,18 dBref @ Az Angle = 0,0 deg.  
Front/Back 11,32 dB  
Beamwidth 71,4 deg., -3dB @ 324,3, 35,7 deg.  
Sidelobe Gain -7,14 dBref @ Az Angle = 180,0 deg.  
Front/Sidelobe 11,32 dB

## 15m SWR curve



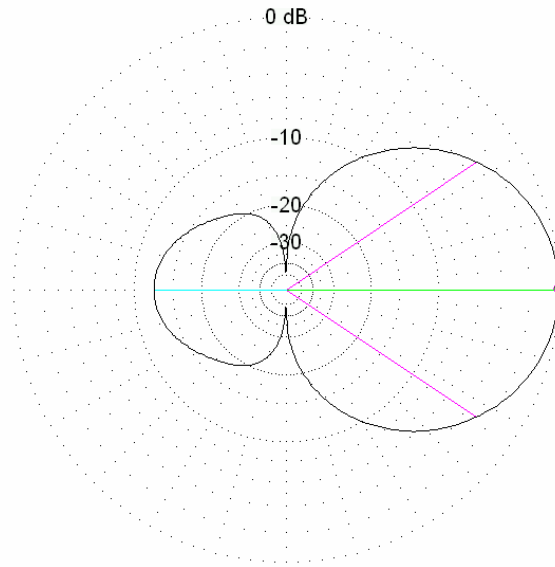
Freq	21,2 MHz	Source #	1
SWR	1,34	Z0	50 ohms
Z	63,23 + j 9,686 ohms		
Refl Coeff	0,1443 at 31,31 deg.		

# OBW10-5, 10 element 5 band wirebeam 20-17-15-12-10m

## 12m Azimut plot

\* Total Field

EZNEC+

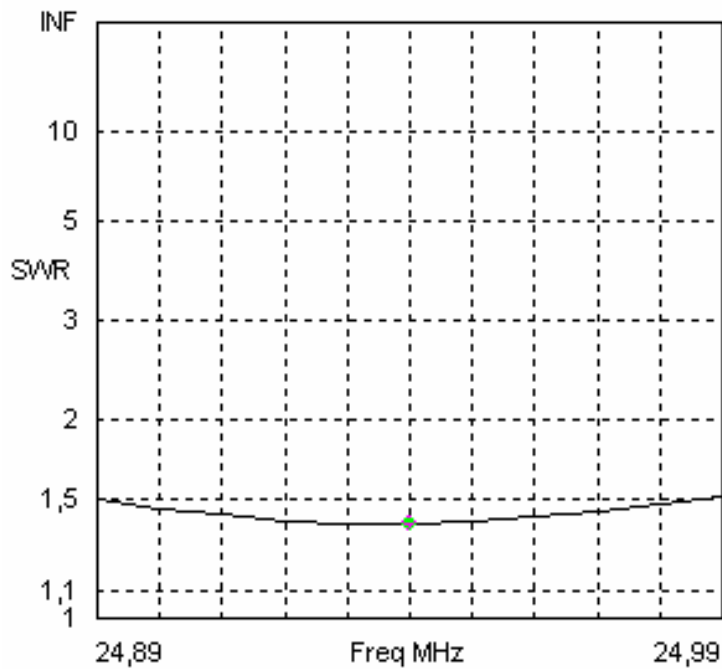


24,95 MHz

Azimuth Plot  
Elevation Angle 0,0 deg.  
Outer Ring 4,44 dBref  
Slice Max Gain 4,44 dBref @ Az Angle = 0,0 deg.  
Front/Back 12,38 dB  
Beamwidth 67,8 deg., -3dB @ 326,1, 33,9 deg.  
Sidelobe Gain -7,95 dBref @ Az Angle = 180,0 deg.  
Front/Sidelobe 12,38 dB

Cursor Az 0,0 deg.  
Gain 4,44 dBref  
0,0 dBmax

## 12m SWR curve



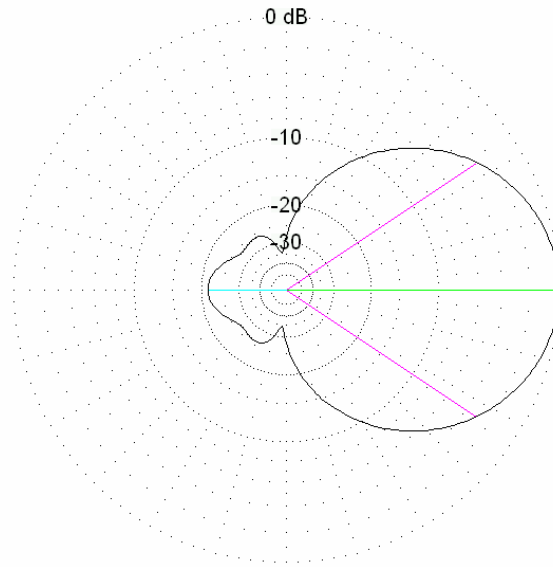
Freq	24,94 MHz	Source #	1
SWR	1,38	Z0	50 ohms
Z	63,69 + j 12,1 ohms		
Refl Coeff	0,1598 at 35,4 deg.		

# OBW10-5, 10 element 5 band wirebeam 20-17-15-12-10m

## 10m Azimut plot

\* Total Field

EZNEC+

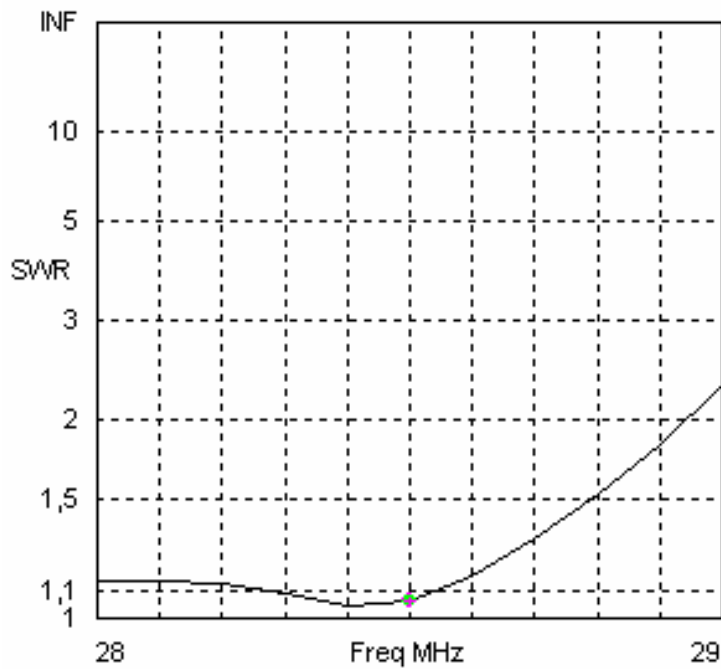


Azimuth Plot  
Elevation Angle 0,0 deg.  
Outer Ring 4,67 dBref  
Slice Max Gain 4,67 dBref @ Az Angle = 0,0 deg.  
Front/Back 21,35 dB  
Beamwidth 67,3 deg. -3dB @ 326,3, 33,6 deg.  
Sidelobe Gain -16,68 dBref @ Az Angle = 180,0 deg.  
Front/Sidelobe 21,35 dB

28,5 MHz

Cursor Az 0,0 deg.  
Gain 4,67 dBref  
0,0 dBmax

## 10m SWR curve

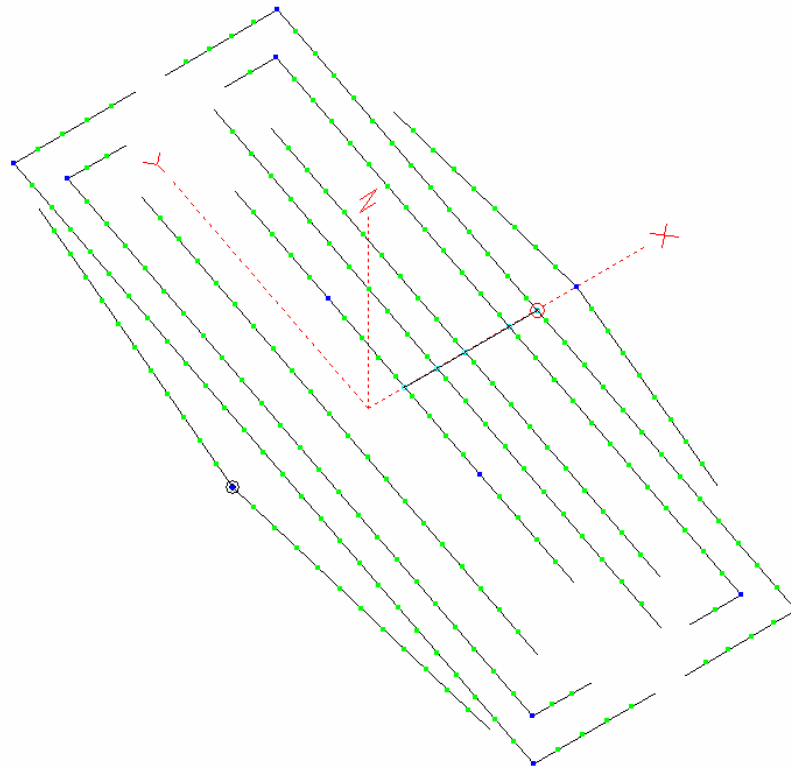


Freq	28,5 MHz	Source #	1
SWR	1,058	Z0	50 ohms
Z	52,47 + j 1,466 ohms		
Refl Coeff	0,02801 at 29,89 deg.		

## OBW10-5, 10 element 5 band wirebeam 20-17-15-12-10m

### antenna structure

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-> boom length = 3,70 meters (12.1 feet)

-> wing span = 7,70 meters (25.25 feet)

-> element configuration

- 20m = 2el Moxon
- 17m = 2el Moxon (hidden sleeve elements, 12mm diameter, fixed to main 20m elements)
- 15m = 2el with V-shaped reflector configuration
- 12m = 2el driver-reflector combo + 50% efficiency of 10m director
- 10m = 2el driver- director combo + 50% efficiency of 12m reflector

All elements consist of 2mm stainless steel wire except for the 10m driver which is a tubing element

-> framework consists of

- square phase line tubes 40x20mm being part of the boom
- 30mm round tubes to the front and the end as an insulated extension of the phase line
- driver 10m realised as a tubing element, centre section = 35mm diameter, outer sections = 30mm
- fibreglass rods of 20mm in diameter connected to the 10m driver tube in a Y-shape configuration
- overhead truss to stiffen the entire frame work

-> single coaxial feed line

-> weight = 14 kgs (31 lbs)