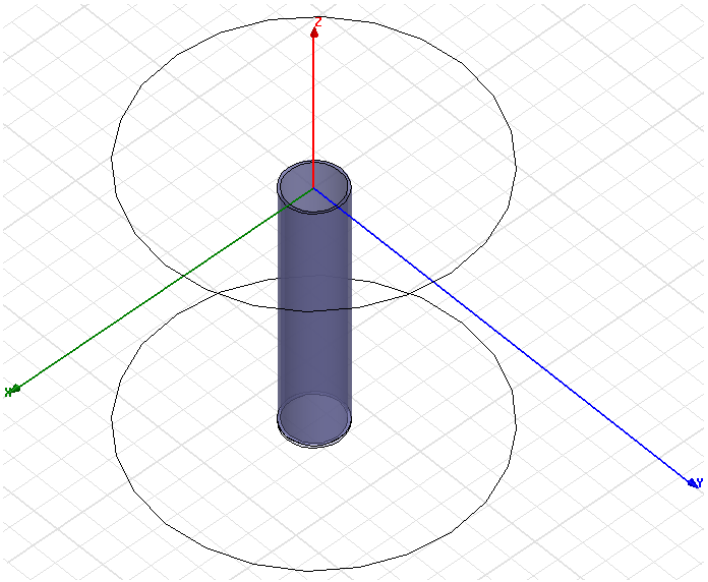
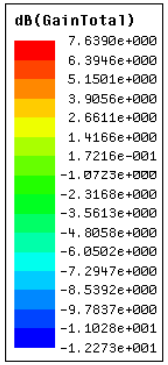
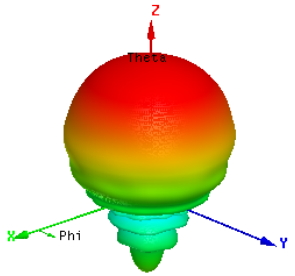
Feeds for Parabolic Dish Study – 10 GHz

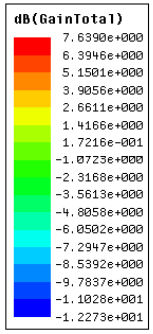
Miroslav Kasal 30. 7. 2012

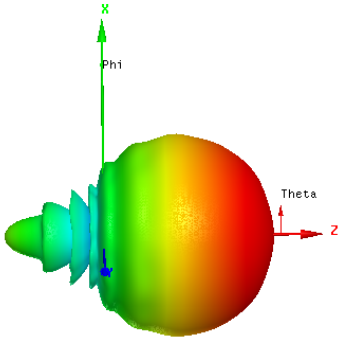
Circular waveguide (22/20 mm, 10 GHz)







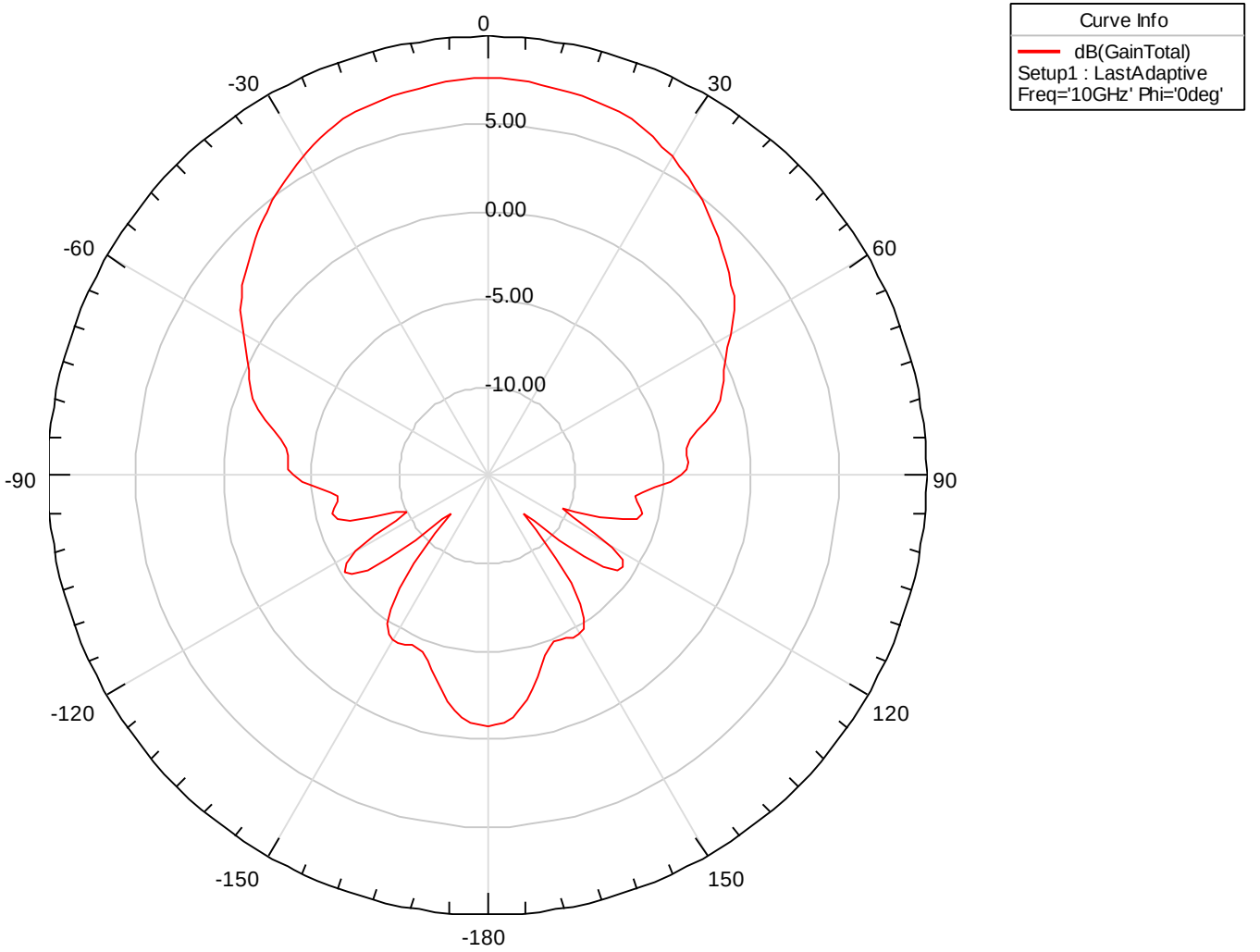




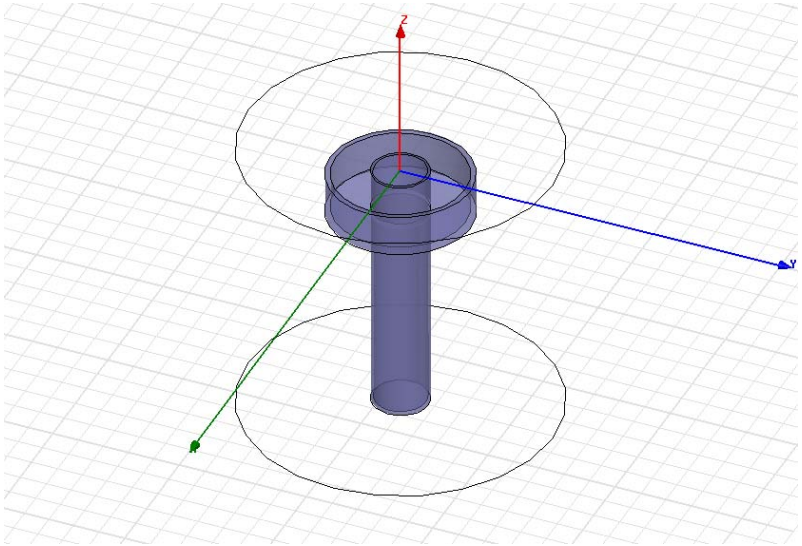
Ansoft LLC

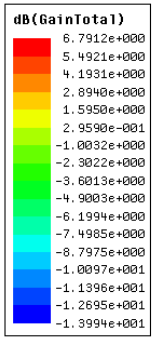
Radiation Pattern 1

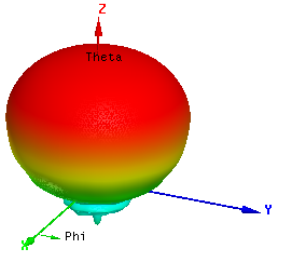
CircularWG_Antenna_ADKv1

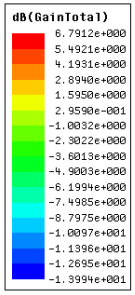


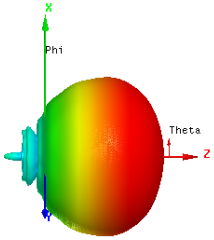
Simple Choke - Kumar (22/20 mm, shift 18 mm – back wall to WG front end)

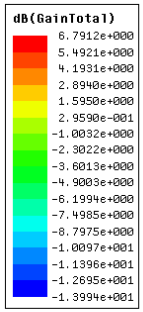


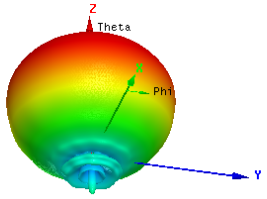








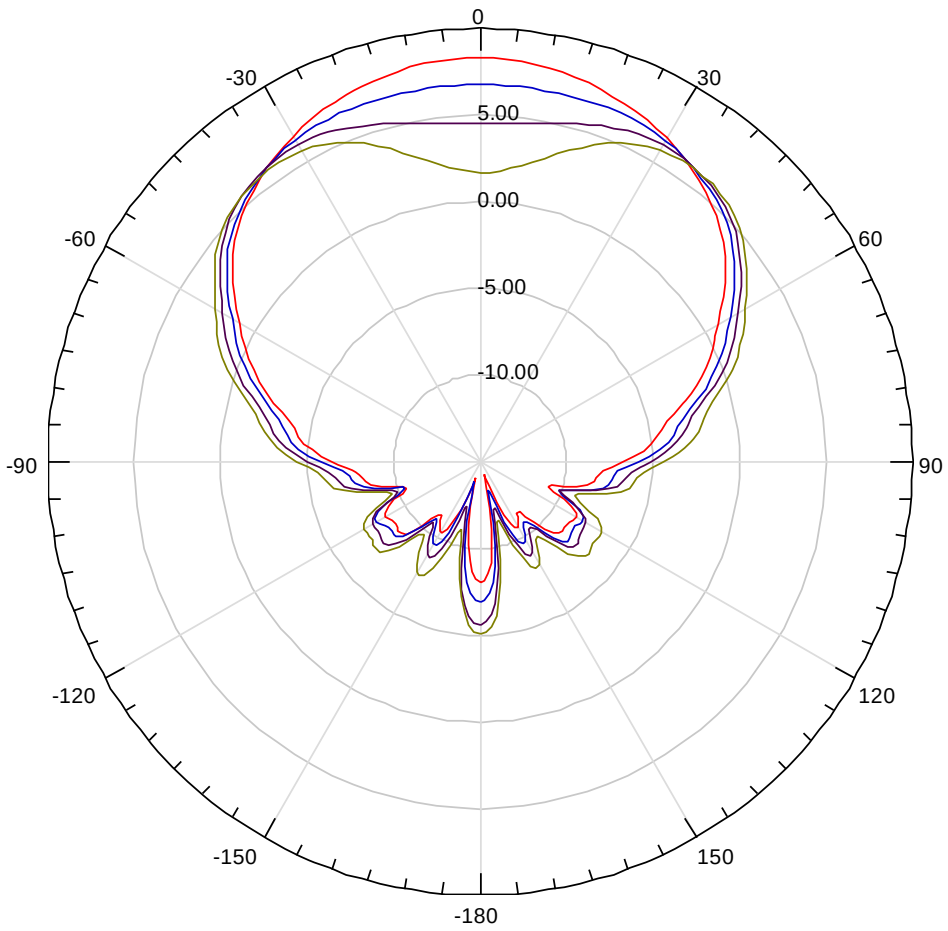




Ansoft LLC

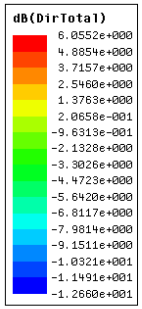
Radiation Pattern 1

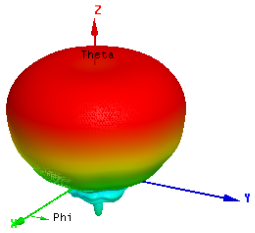
CircularWG_Antenna_ADKv1

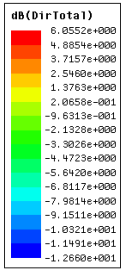


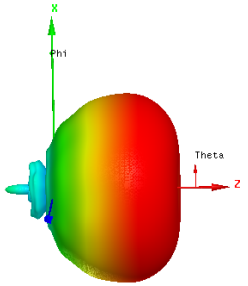
Curve Info
dB(GainTotal) Setup1 : LastAdaptive a='17mm' Freq='10GHz' Phi='0deg'
dB(GainTotal) Setup1 : LastAdaptive a='18mm' Freq='10GHz' Phi='0deg'
dB(GainTotal) Setup1 : LastAdaptive a='19mm' Freq='10GHz' Phi='0deg'
dB(GainTotal) Setup1 : LastAdaptive a='20mm' Freq='10GHz' Phi='0deg'

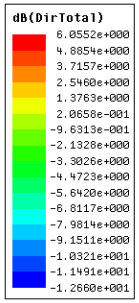
Simple Choke – Kumar (22/20 mm, shift 19 mm - back wall to WG front end)

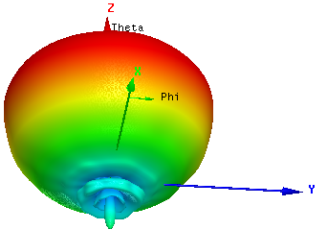




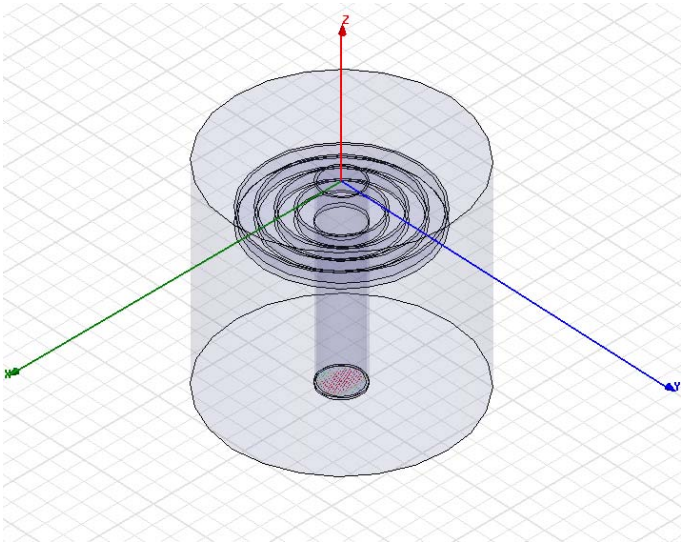




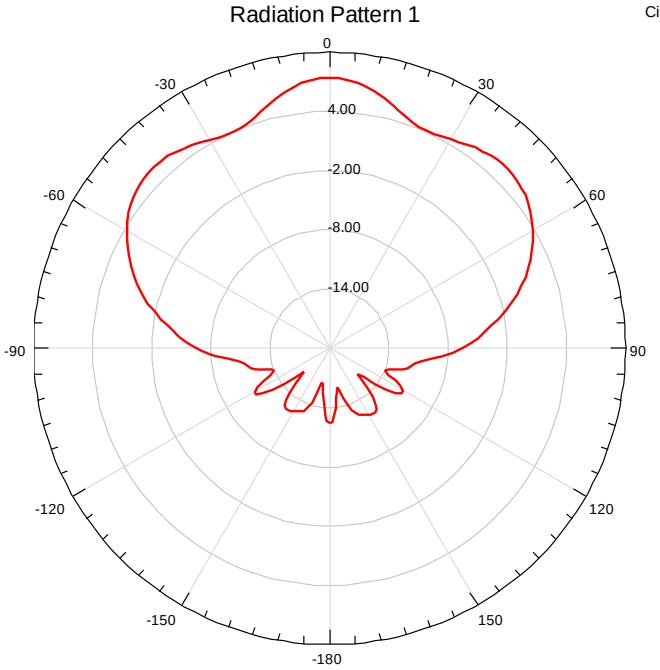




Chaparral Feed (22/20 mm, shift 19,3 mm - back wall to WG front end))

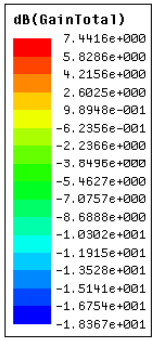


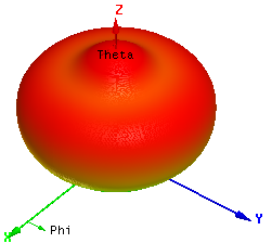
Ansoft LLC



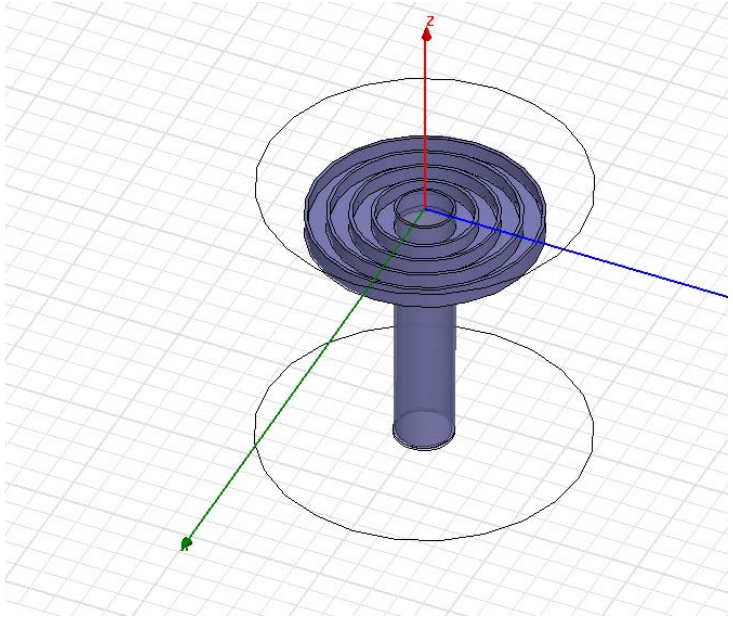
CircularWG_Antenna_ADKv1

Curve Info
dB(GainTotal)
Setup1 : LastAdaptive
Freq='10GHz' Phi='0deg'

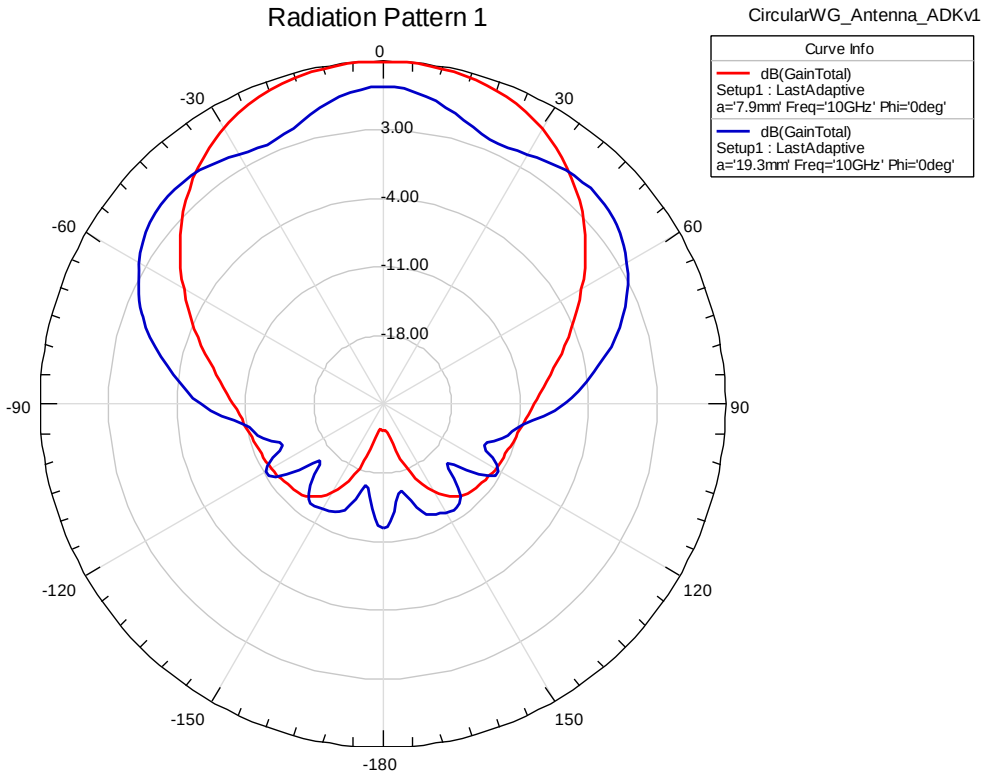


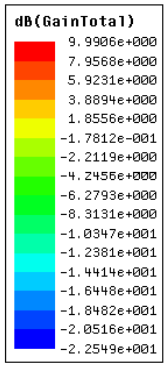


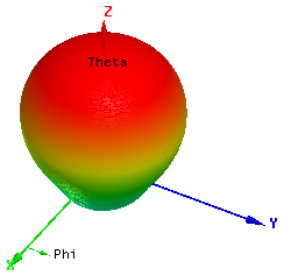
Chaparral Feed (22/20 mm, shift 7,9 mm)

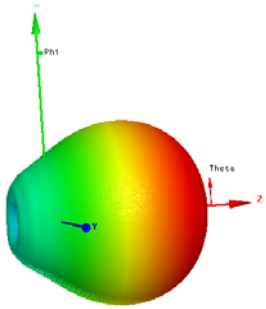


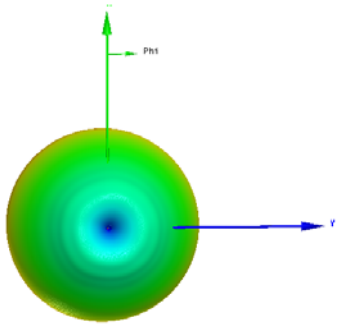
Ansoft LLC





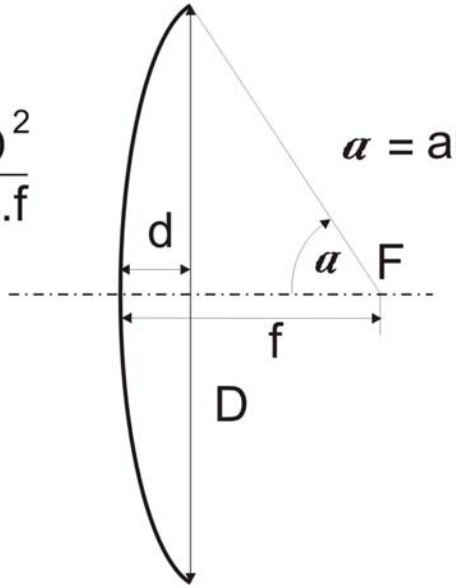






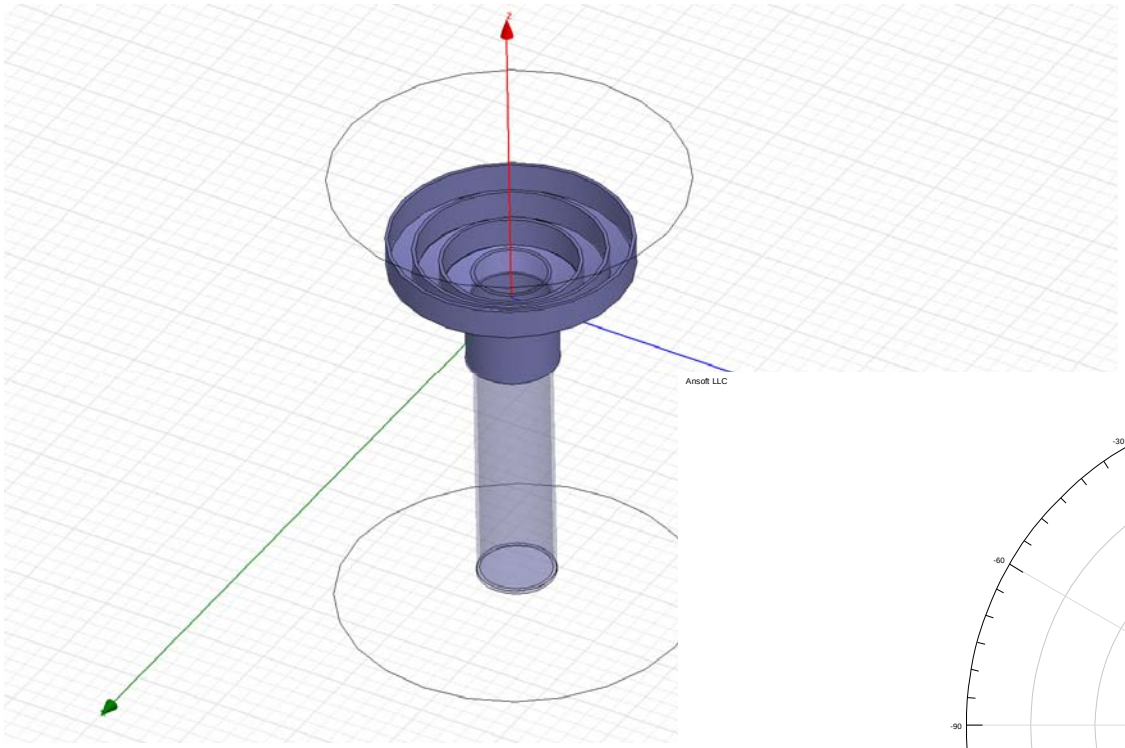
$$d = \frac{D^2}{16.f}$$

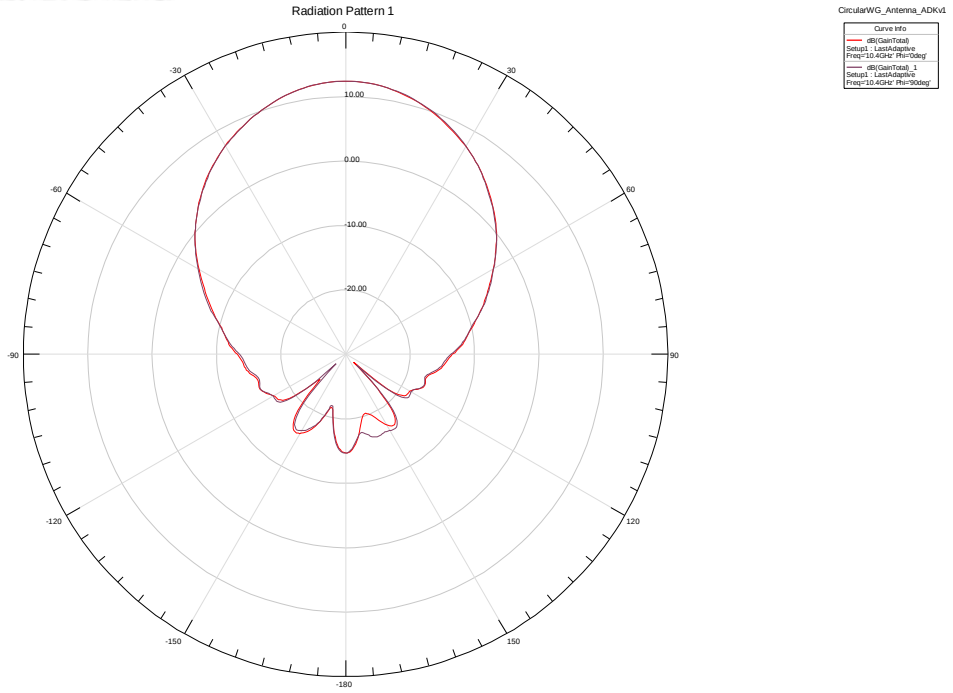
$$\alpha = \text{arctg}\ \frac{8(f/D)}{16(f/D)^2 - 1}$$

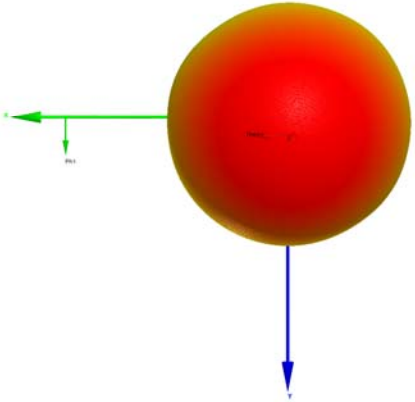


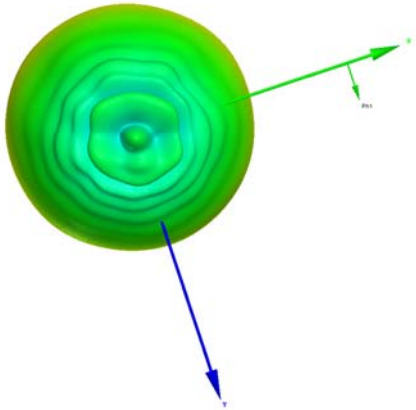
For $f/D = 0{,}4$ then $\alpha = 64$ deg

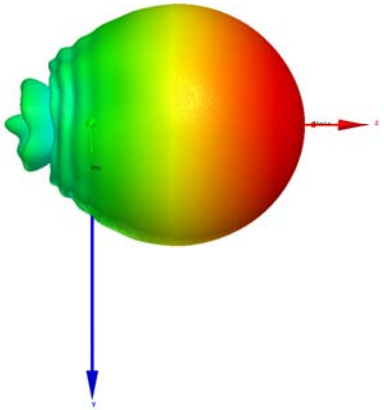
Chaparral OK1CA_OM6AA

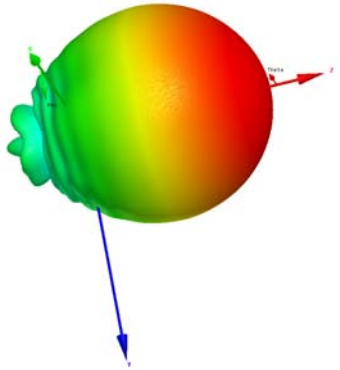




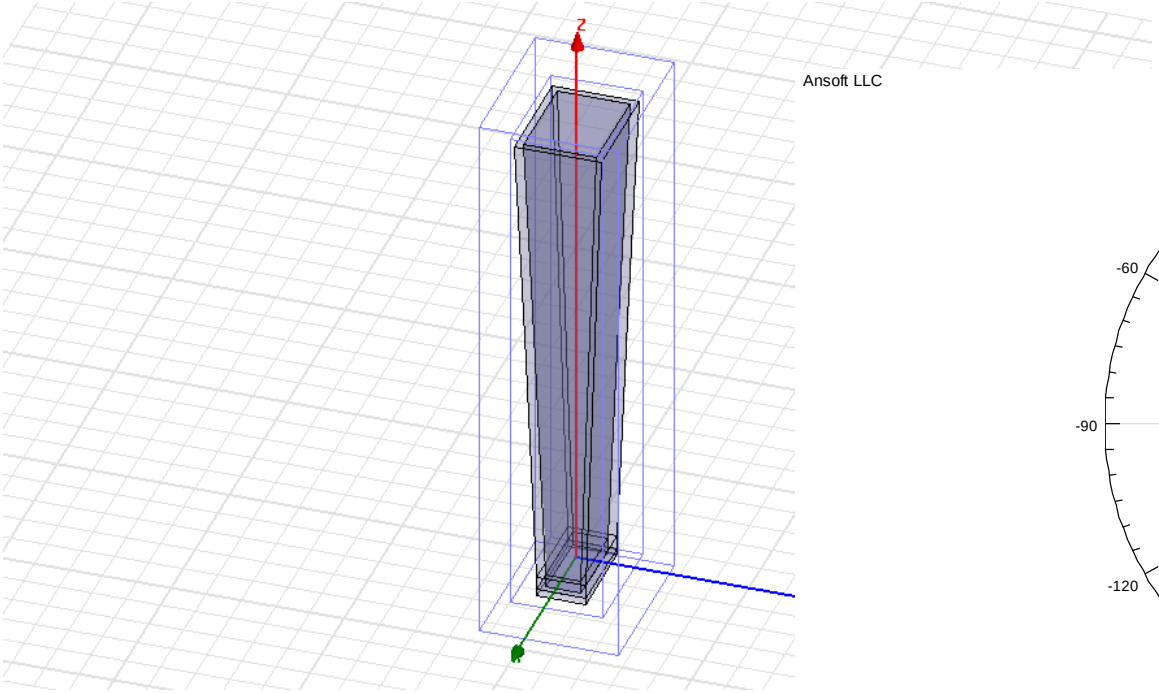


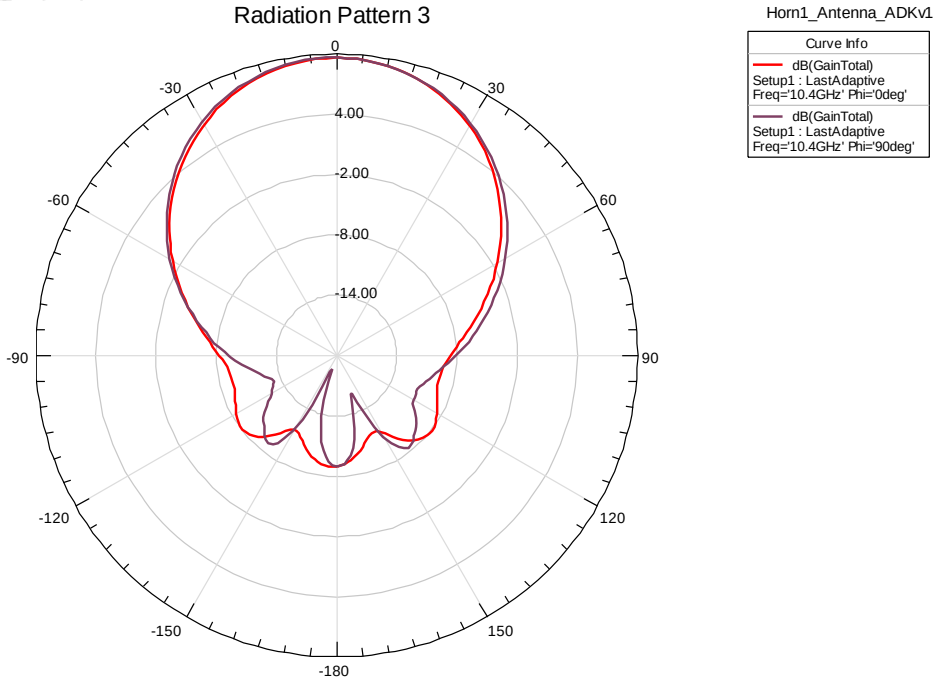


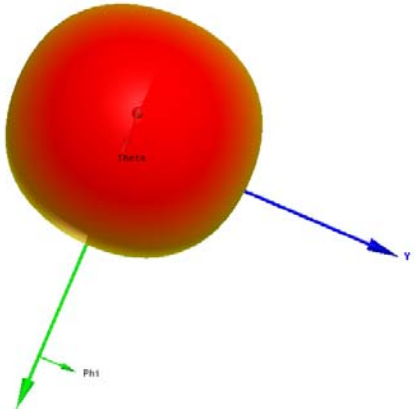


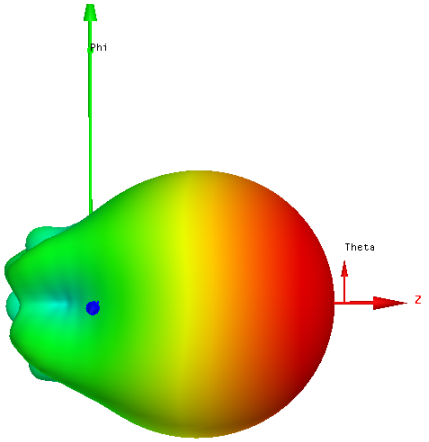


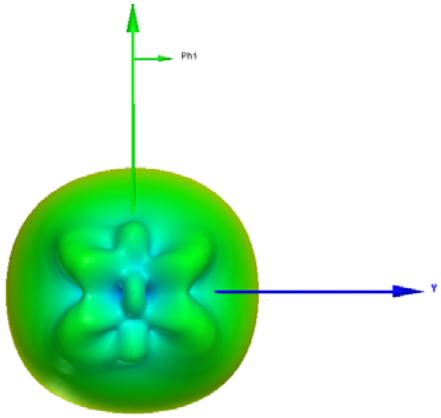
Long Horn OK1KIR (140 mm, wall thickness 2 mm)

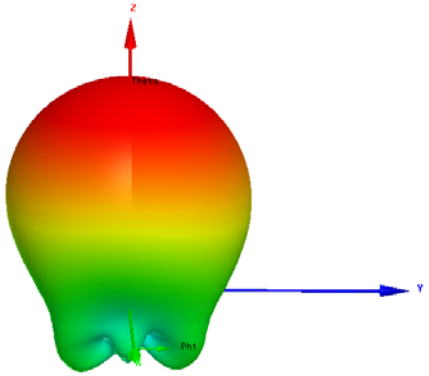




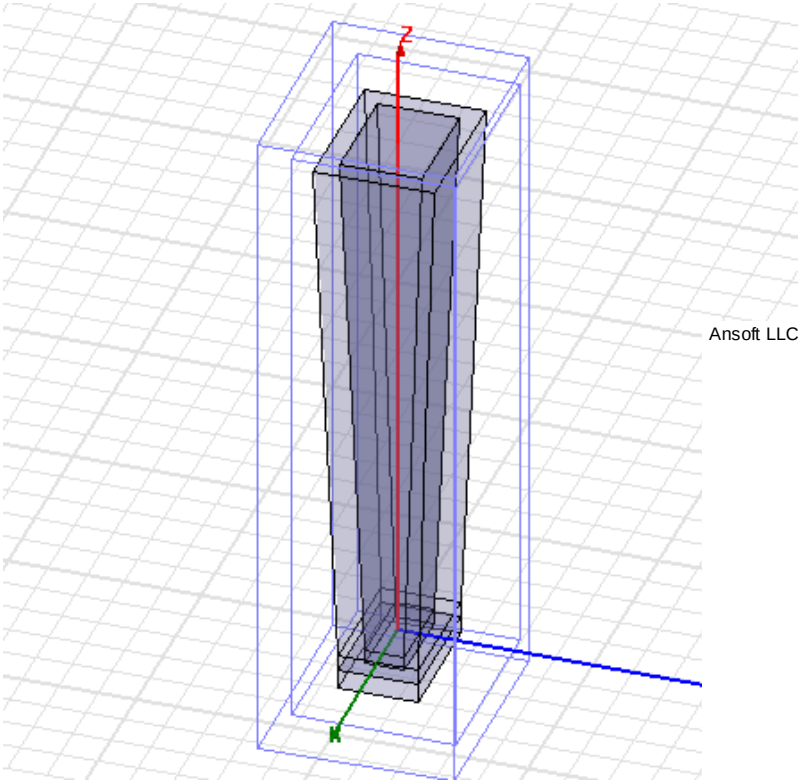

Theta
Y
Ph1

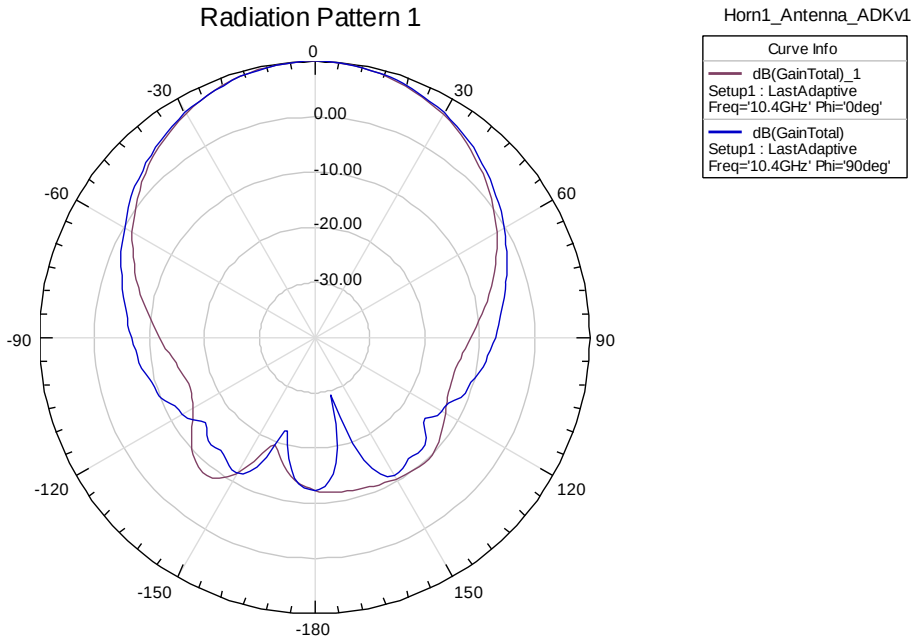

Ph1
Theta
Z

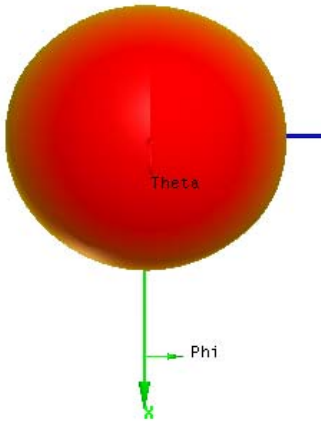

Ph1
Y

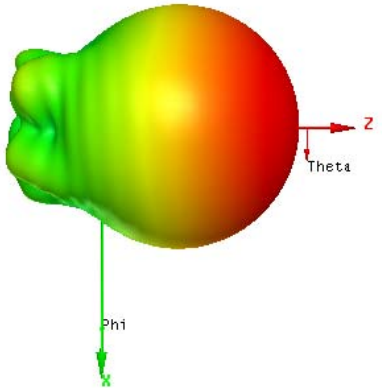

Z
Theta
Y
Ph1

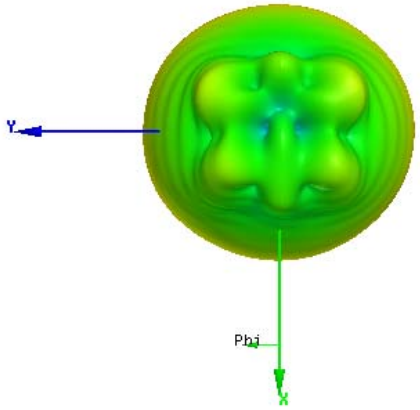
Long Horn OK1KIR (140 mm, wall thickness 5 mm)

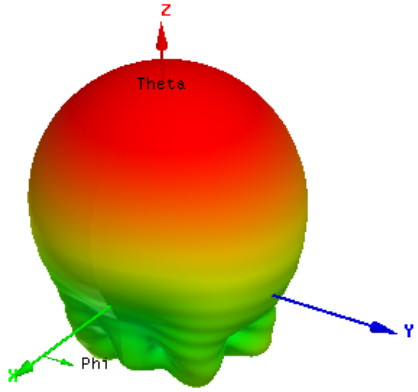




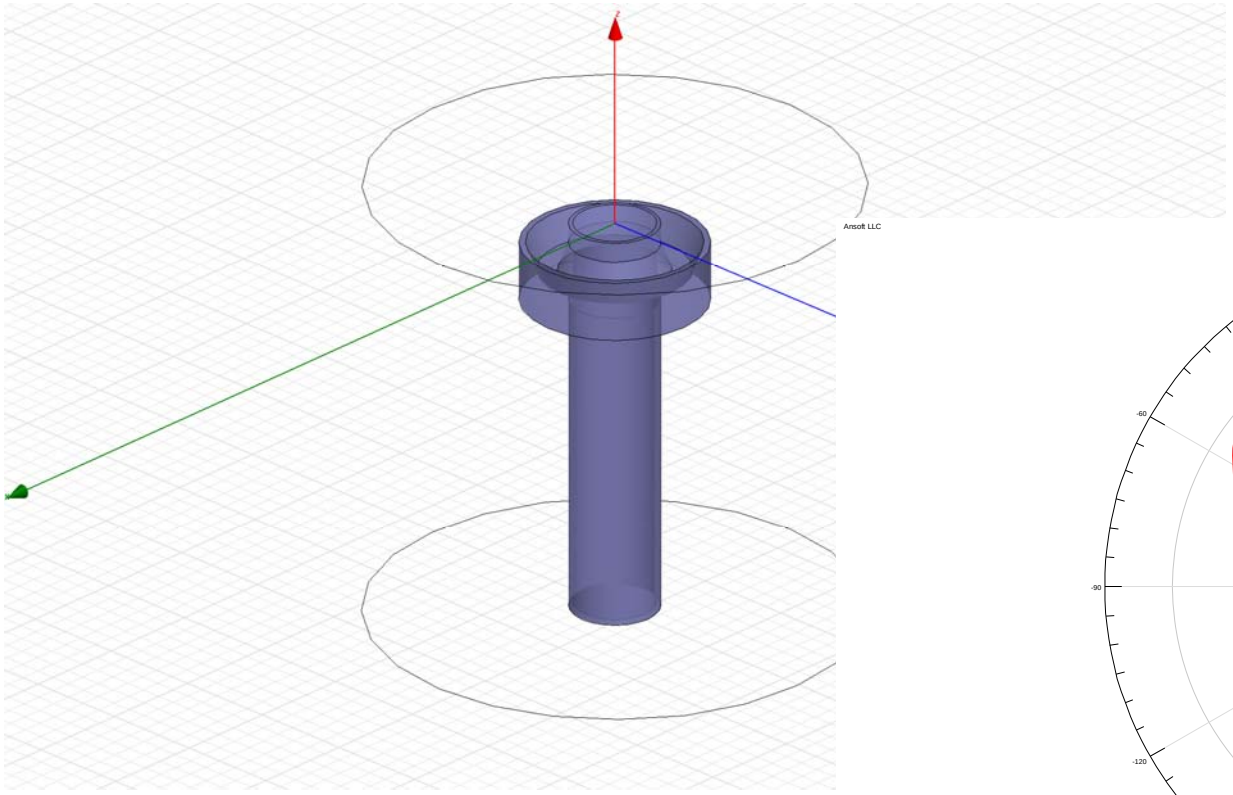

Theta
Phi
X

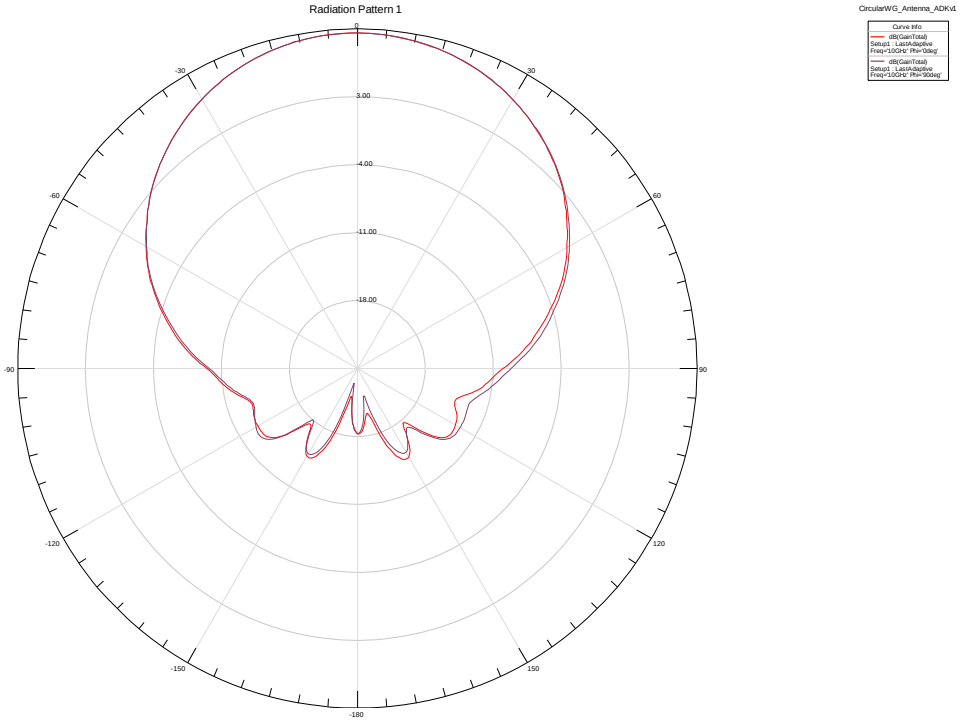

Z
Theta
Phi
X

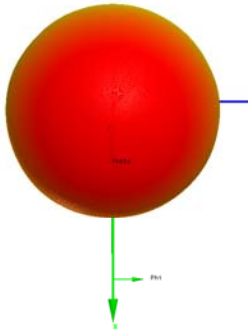

Y
Phi
X

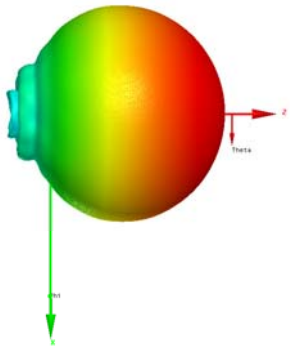

Z
Theta
Y
X
Phi

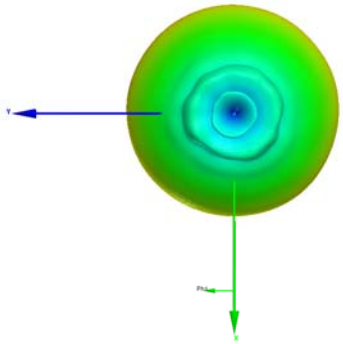
Trapezoid Choke OK1KIR

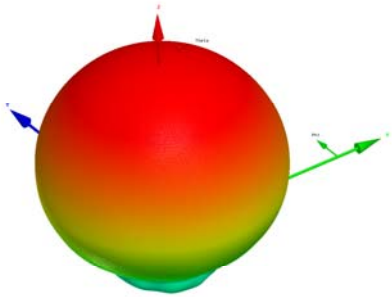





Phi1
X


Z
Theta
Phi1
X


Y
Phi1
X


Z
Theta
Phi1
Y