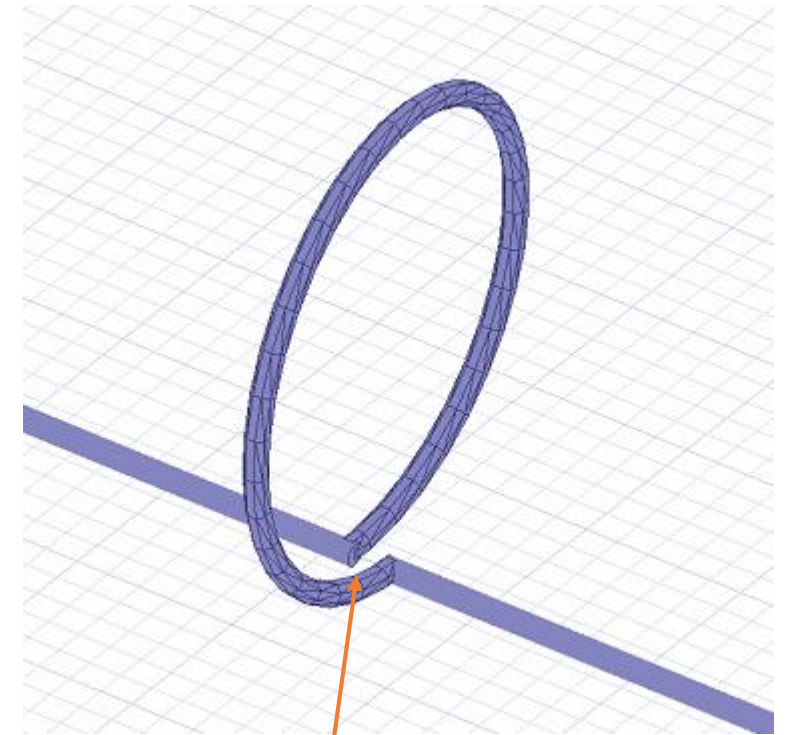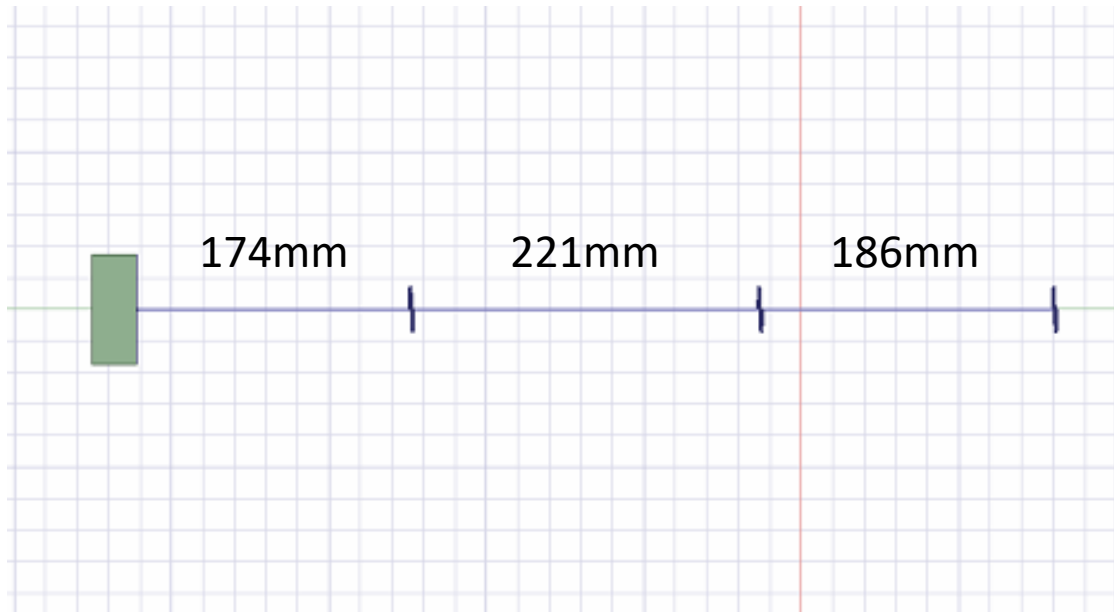# Co-linear antenna modeling v2

F. Ferrero
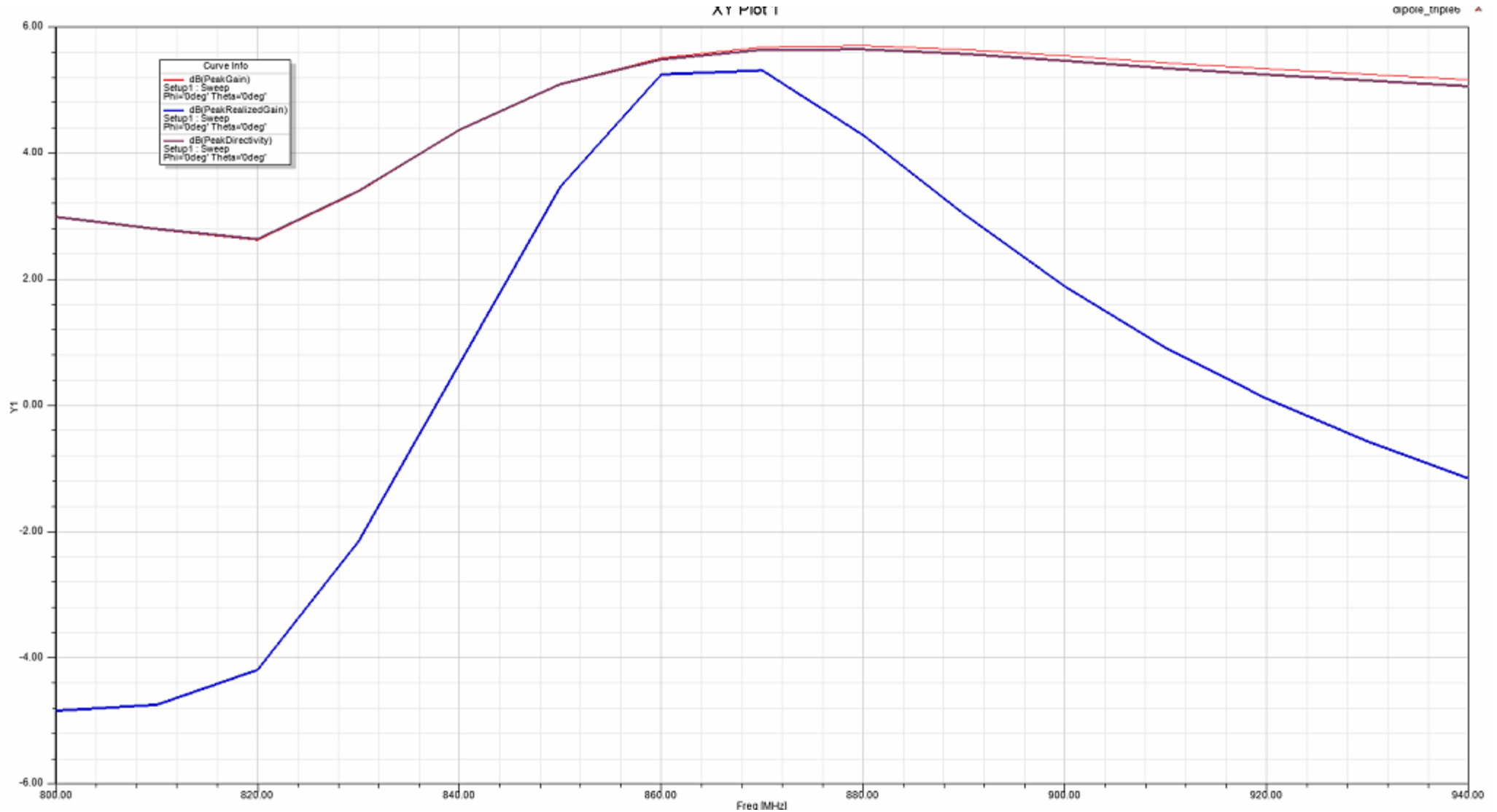
New optimization

- Using a diameter of 28mm for the loop
- Diameter of 1.4mm for the wire
- 174mm – 221mm-186mm
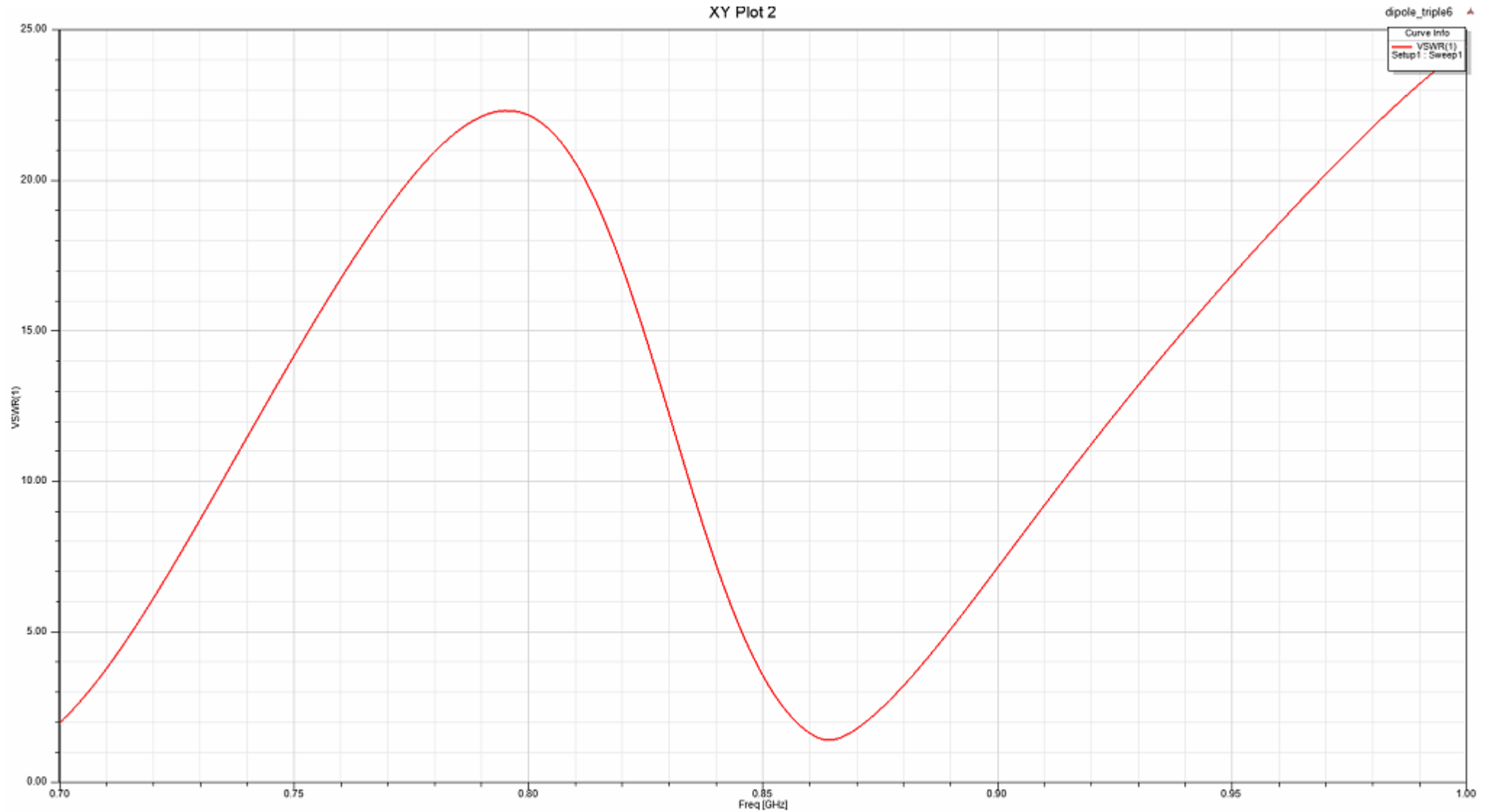

174mm   221mm   186mm

Spacing 1.5mm

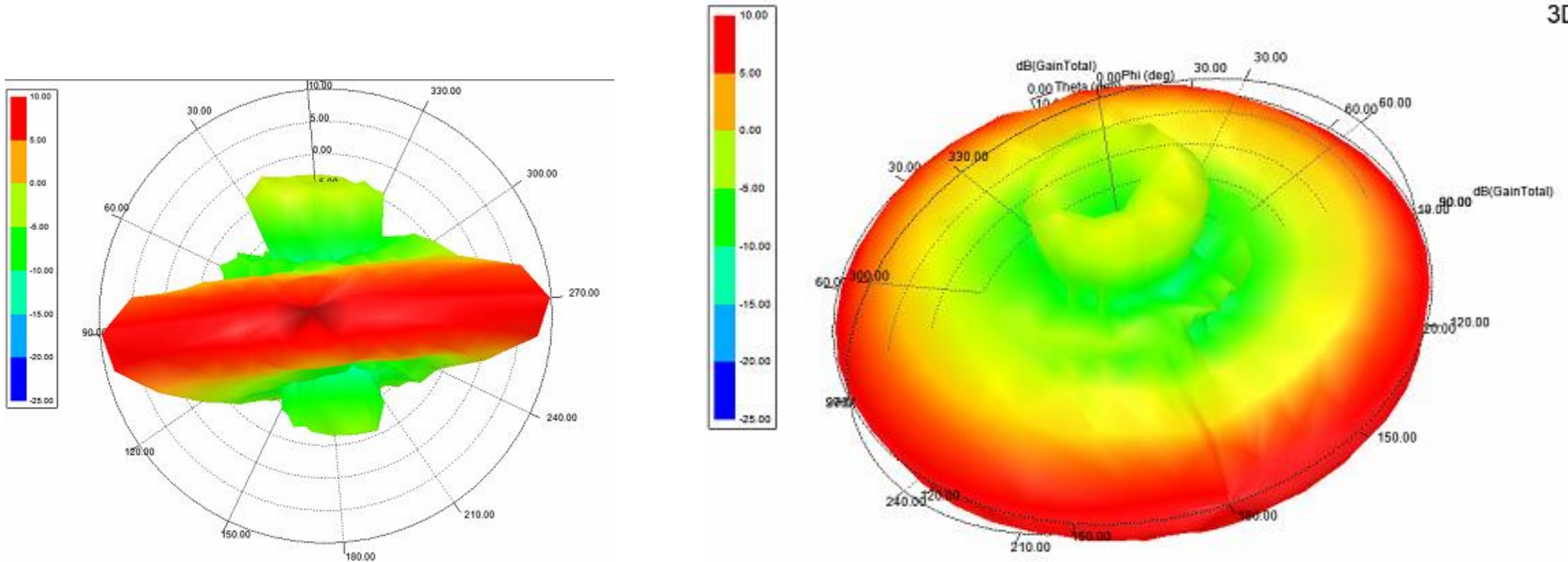# Simulation : Realized Gain, Gain, Directivity
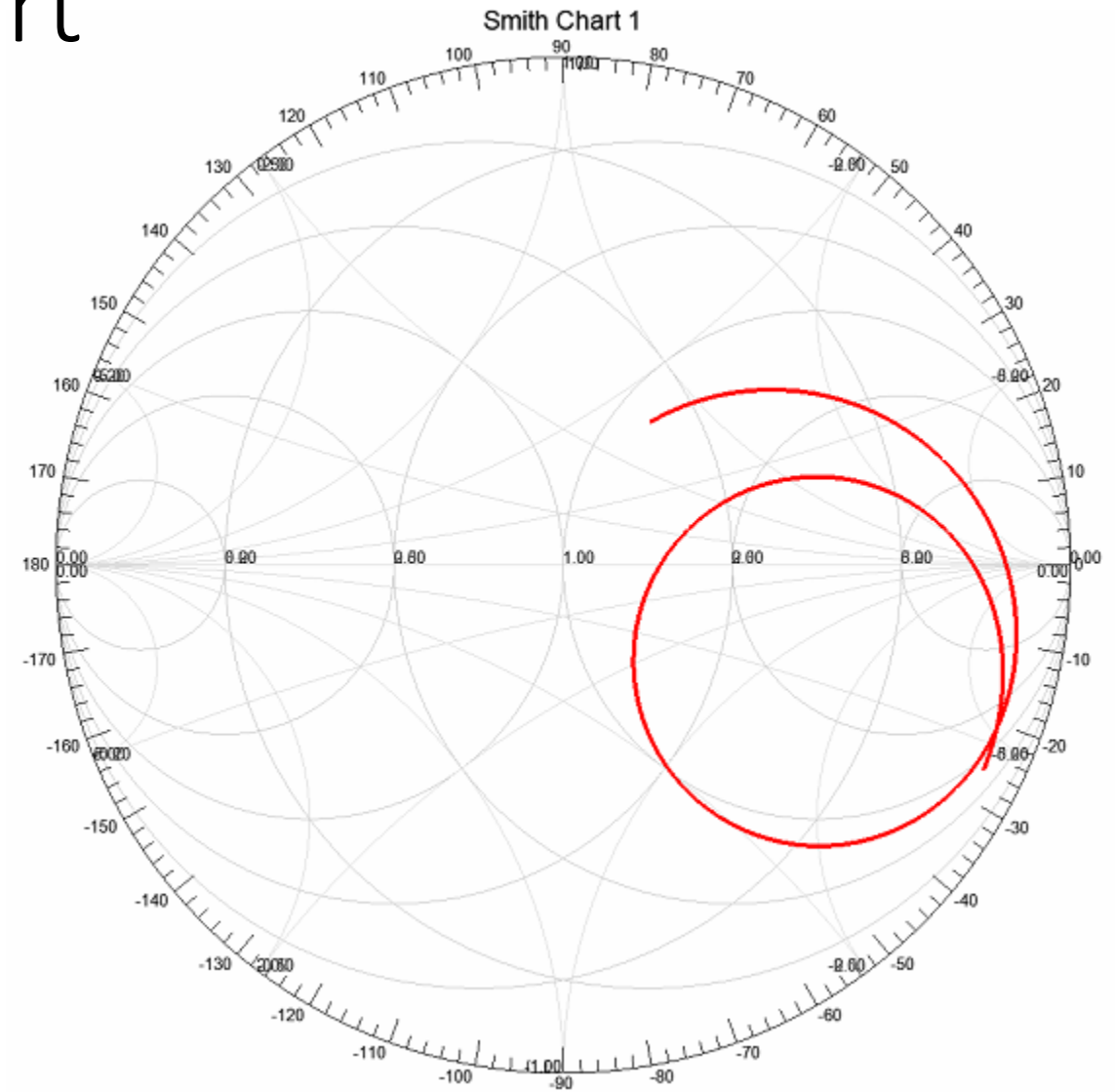
Simulation : VSWR

Simulation : Rad pattern

	Freq [MHz]	dB(PeakDirectivity) Setup1 : LastAdaptive Phi='0deg' Theta='0deg'	dB(PeakGain) Setup1 : LastAdaptive Phi='0deg' Theta='0deg'	dB(PeakRealizedGain) Setup1 : LastAdaptive Phi='0deg' Theta='0deg'	dB(RadiatedPower) Setup1 : LastAdaptive Phi='0deg' Theta='0deg'	dB(RadiationEfficiency) Setup1 : LastAdaptive Phi='0deg' Theta='0deg'
1	868.000000	5.616470	5.654919	5.413800	-0.202670	0.038449

Simulation : Smith chart

Smith Chart 1

Tips

- By changing the size of the last loop, you can tune the resonance frequency (larger loop means lower frequency)
- The size of the loop is important
- If you want to use a radome, we might have to slightly retune the antenna