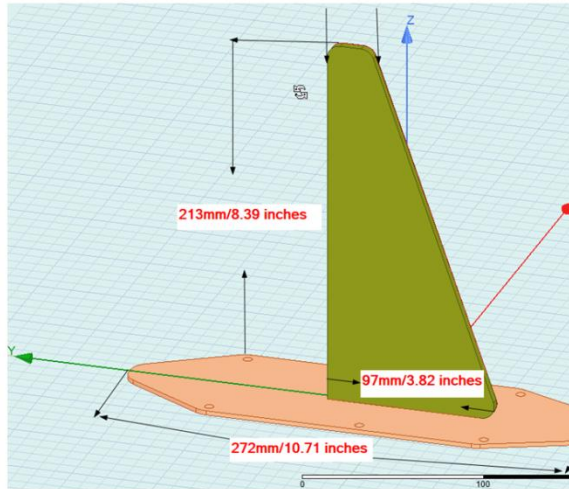


12B-20-1000-XS-X

Blade antenna variation

2B,3B,4B,5B,6B,7B,8B,9B,10B,12B.

Can optimize by on: Bandwidth, VSWR, Gain



Blade Antenna:(4 feet GP)
 Element only (No Components Impedance matching circuit)
 Connector: 50 Ohm.
 Base plate: Aluminum
 Element : FR4
 2) This elements can adjust low (2 inches) for 2B Blade antenna to High(12 inches) 12B Blade Antenna.
 3)Element configuration can work :
 2B,3B,4B,5B,6B,7B,8B,9B,10B,12B.
 3) Feed point at center of element so element work all baseplate with scale down or up.
 4)Element can apply for antenna very wide band:
 9B-20-532MHz,12B-20-532MHz any connector type. With take intrinsic impedance matching at feedpoint in Smithchart to turn it. Use direct from VNA or take S-parameter then tune with ADS, AWR softwares.

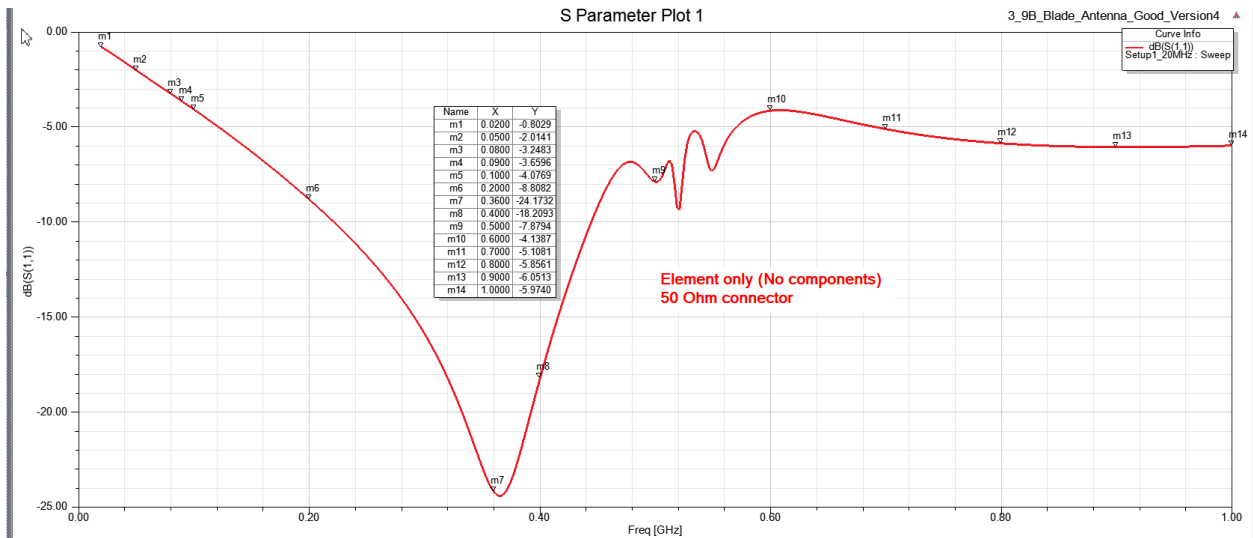
All Performance below (Element only No component)

Designed : Victor Dat Do

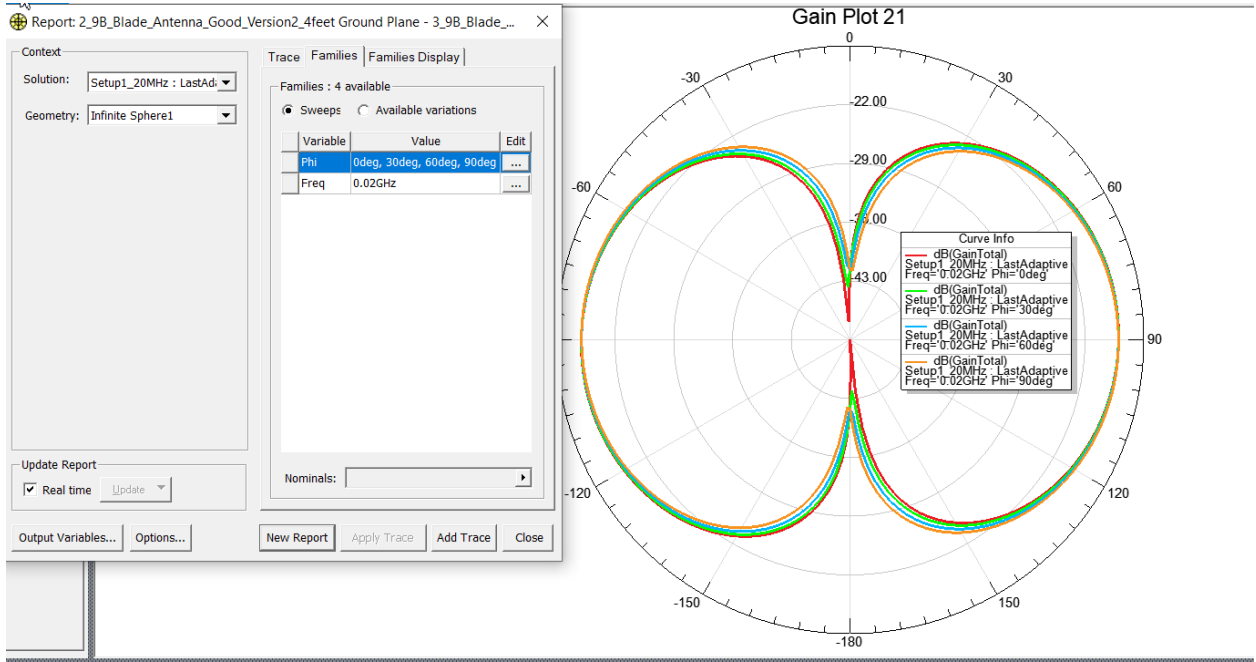
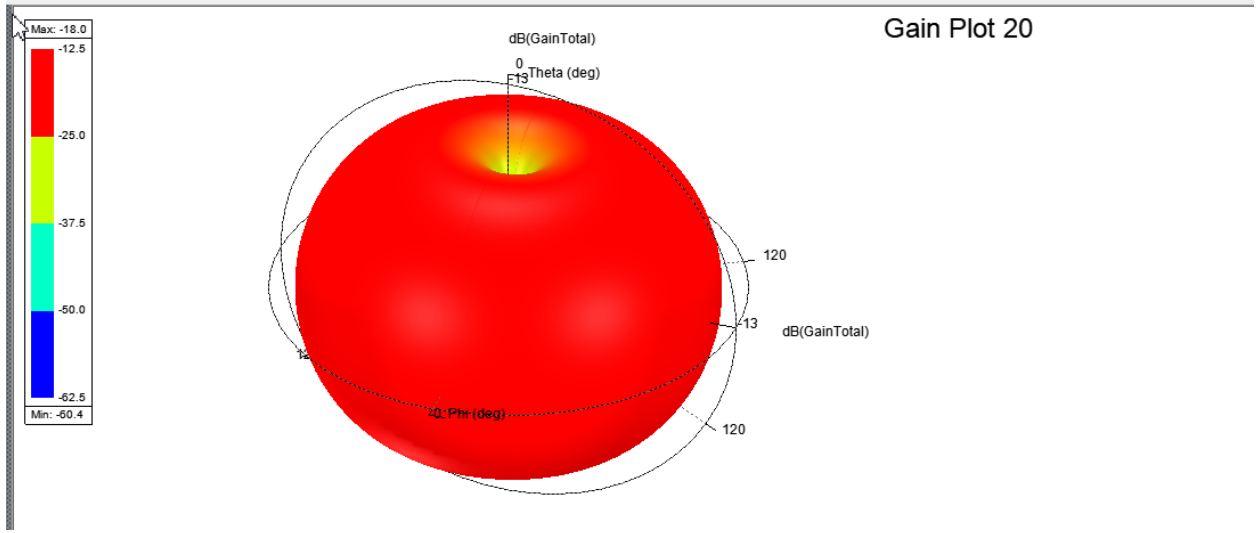
Return loss from: 20MHz to 1GHz

S Parameter Plot 1

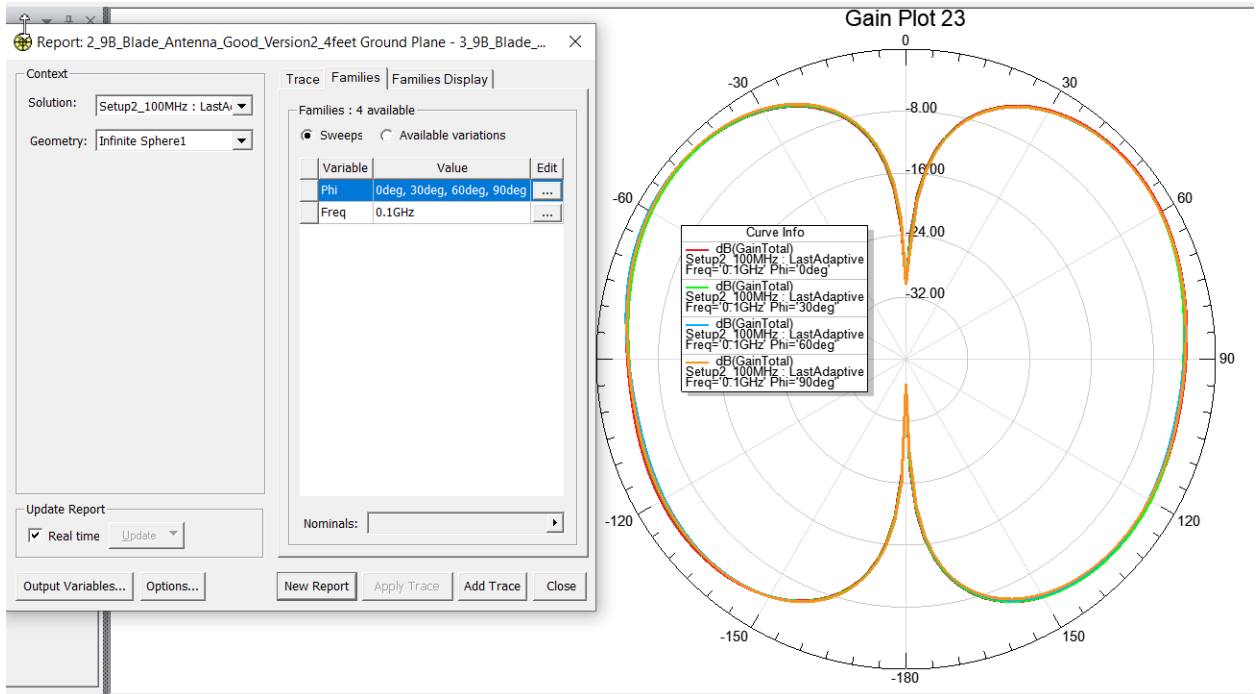
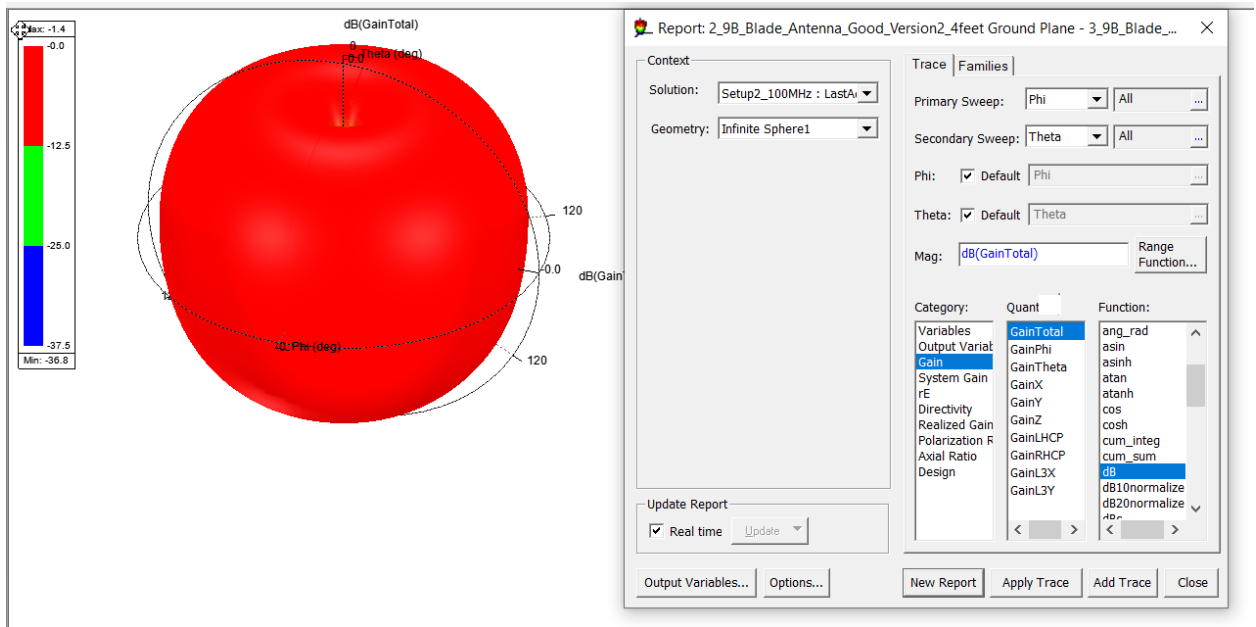
3_9B_Blade_Antenna_Good_Version4



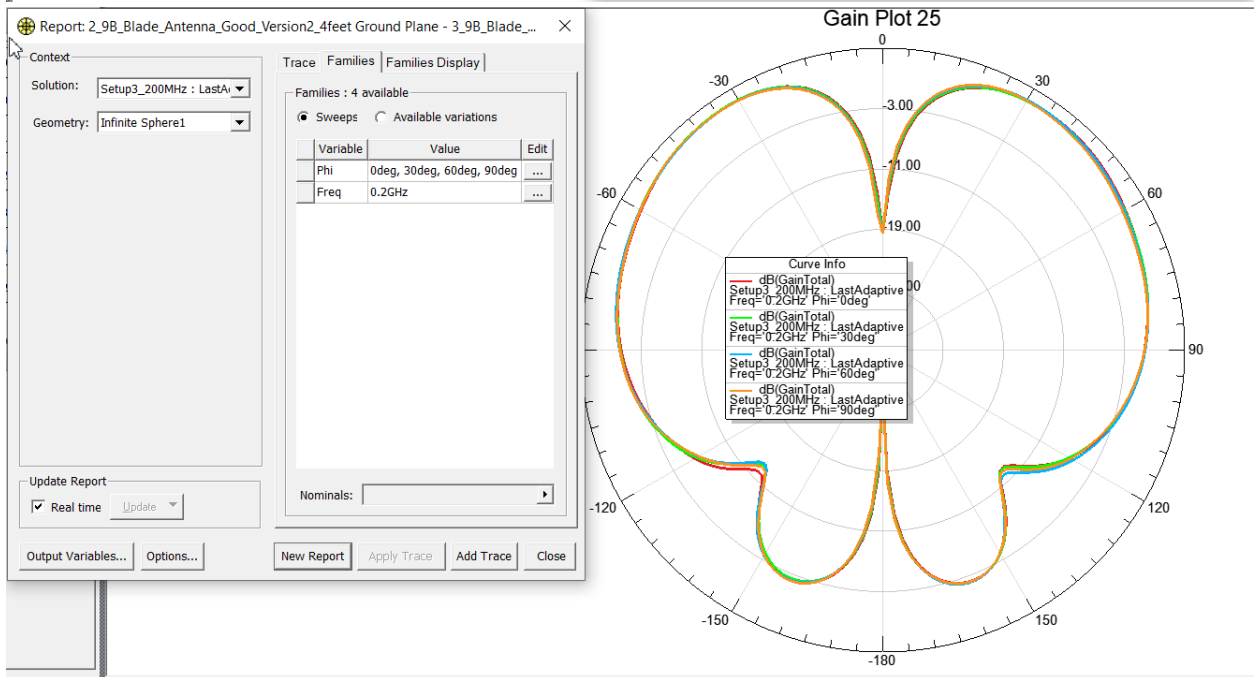
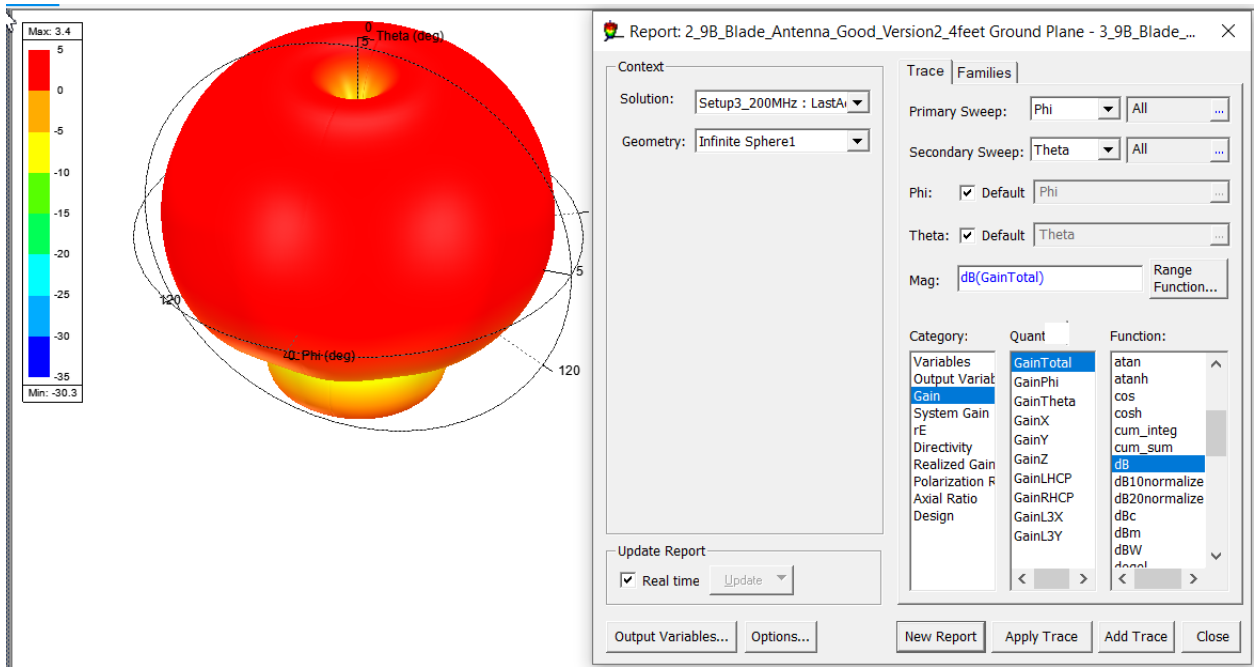
1) Gain at 20 MHz(-18dB)



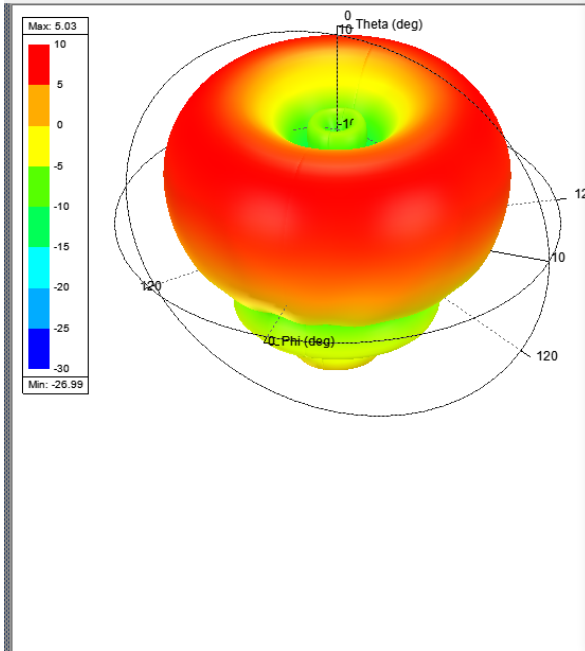
2)100MHz(-1.4dB)



3)200MHz(3.4dB)



4)300MHz(5.0dB)



Report: 2_9B_Blade_Antenna_Good_Version2_4feet Ground Plane - 3_9B_Blade_...

Context: Solution: Setup4_300MHz : LastAv Geometry: Infinite Sphere1

Trace Families: Primary Sweep: Phi All Secondary Sweep: Theta All

Phi: Default Phi Theta: Default Theta

Mag: dB(GainTotal) Range Function...

Variables	Quant	Function:
GainTotal		acosh
GainPhi		ang_deg
GainTheta		ang_deg_val
GainX		ang_rad
GainY		asin
GainZ		asinh
GainLHCP		atan
GainRHCP		atanh
GainL3X		cos
GainL3Y		cosh
		cum_integ
		cum_sum
		sin

Update Report: Real time Update

Output Variables... Options... New Report Apply Trace Add Trace Close

Report: 2_9B_Blade_Antenna_Good_Version2_4feet Ground Plane - 3_9B_Blade_...

Context: Solution: Setup4_300MHz : LastAv Geometry: Infinite Sphere1

Trace Families Families Display: Families: 4 available

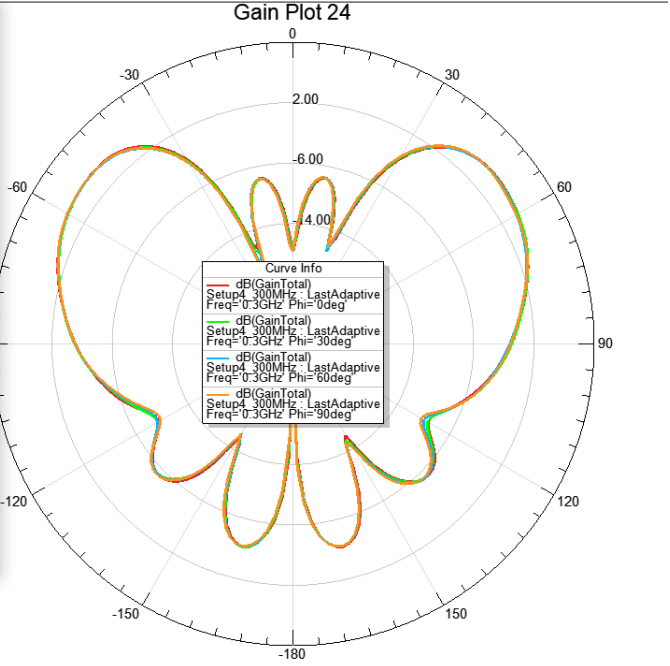
Sweeps Available variations

Variable	Value	Edit
Phi	0deg, 30deg, 60deg, 90deg	...
Freq	0.3GHz	...

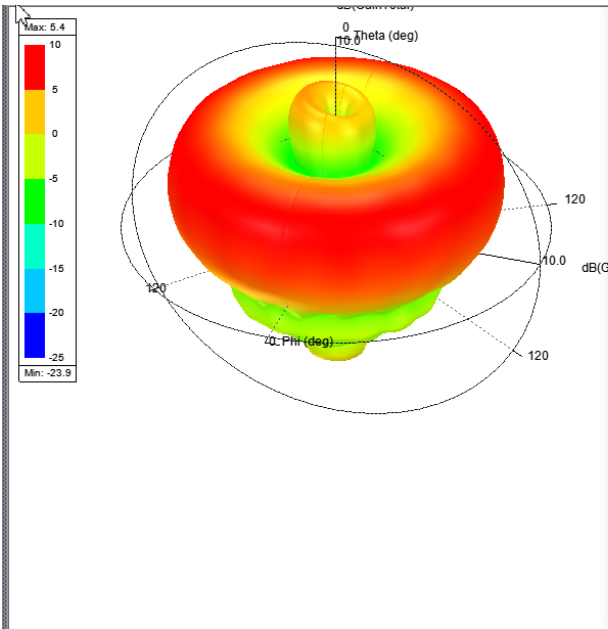
Nominals: []

Update Report: Real time Update

Output Variables... Options... New Report Apply Trace Add Trace Close



5) 400MHz(5.4dB)



Report: 2_9B_Blade_Antenna_Good_Version2_4feet Ground Plane - 3_9B_Blade_...

Context: Solution: Setup5_400MHz : LastAv
Geometry: Infinite Sphere1

Trace Families: Primary Sweep: Phi | All
Secondary Sweep: Theta | All

Phi: Default Phi
Theta: Default Theta

Mag: dB(GainTotal) Range Function...

Variables	Quant	Function
GainTotal		acosh
GainPhi		ang_deg
GainTheta		ang_deg_val
GainX		ang_rad
GainY		asin
GainZ		asinh
GainLHCP		atan
GainRHCP		atanh
GainL3X		cos
GainL3Y		cosh
		cum_integ
		cum_sum
		sin

Update Report: Real time Update

Output Variables... Options... New Report Apply Trace Add Trace Close

Report: 2_9B_Blade_Antenna_Good_Version2_4feet Ground Plane - 3_9B_Blade_...

Context: Solution: Setup5_400MHz : LastAv
Geometry: Infinite Sphere1

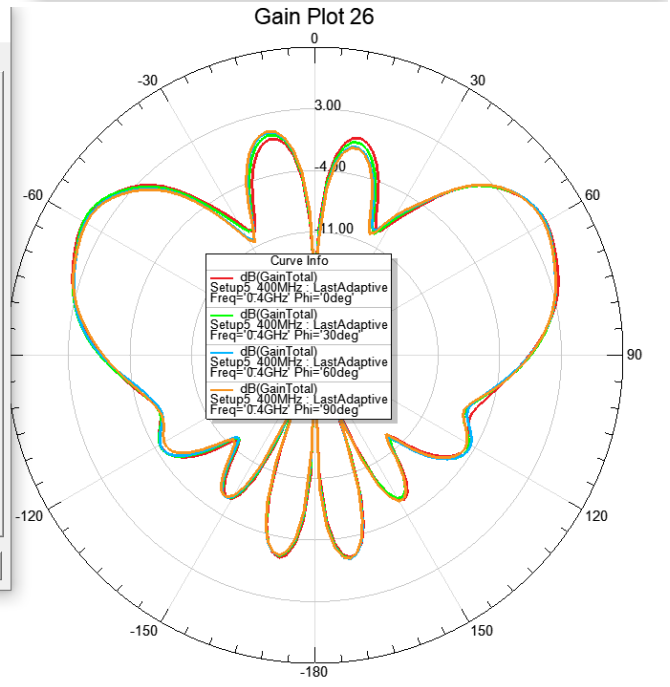
Trace Families Families Display: Families: 4 available
 Sweeps Available variations

Variable	Value	Edit
Phi	0deg, 30deg, 60deg, 90deg	...
Freq	0.4GHz	...

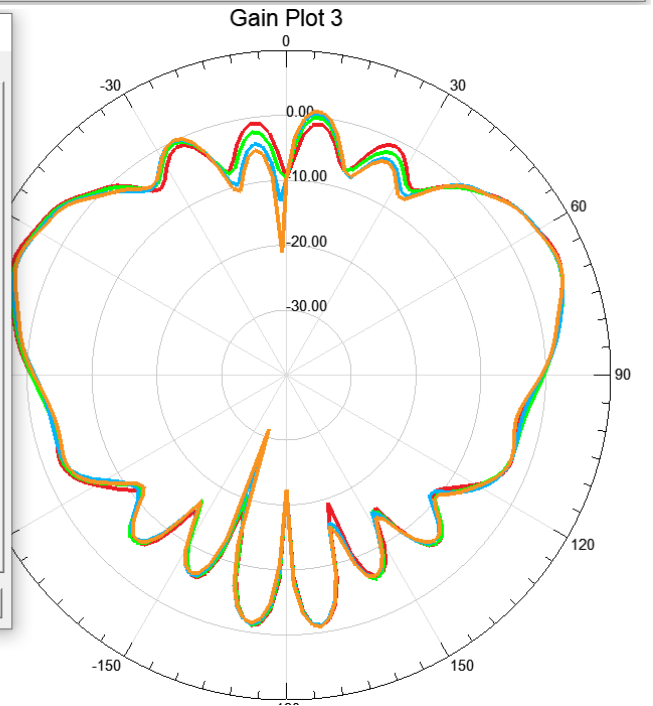
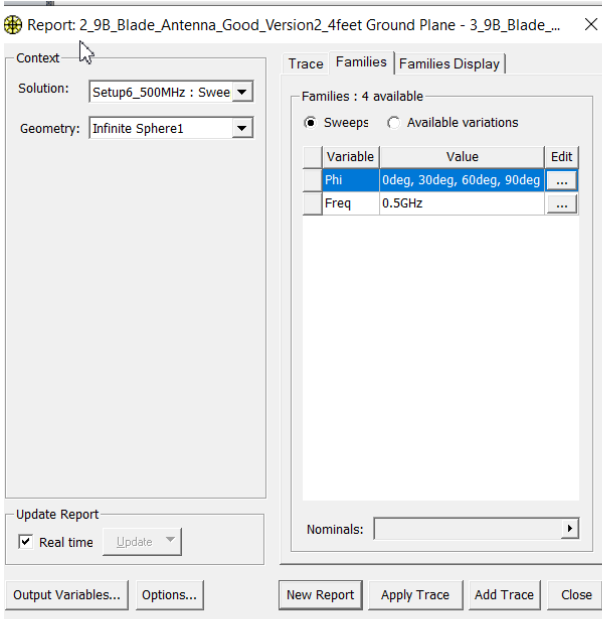
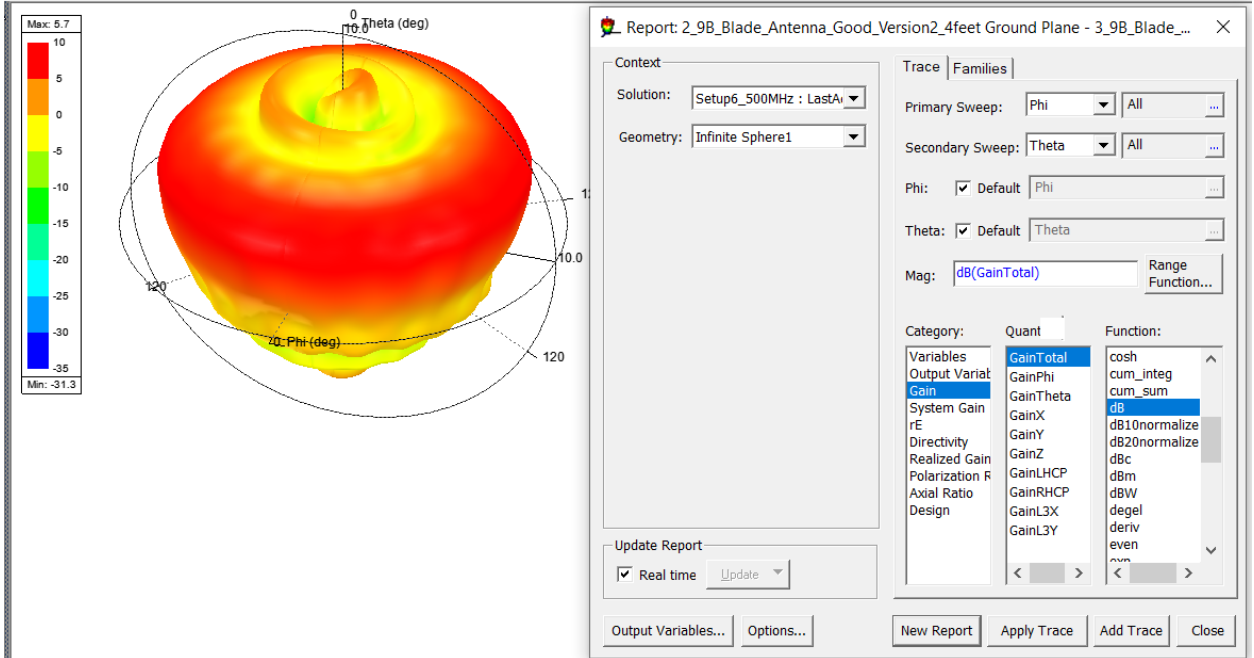
Nominals:

Update Report: Real time Update

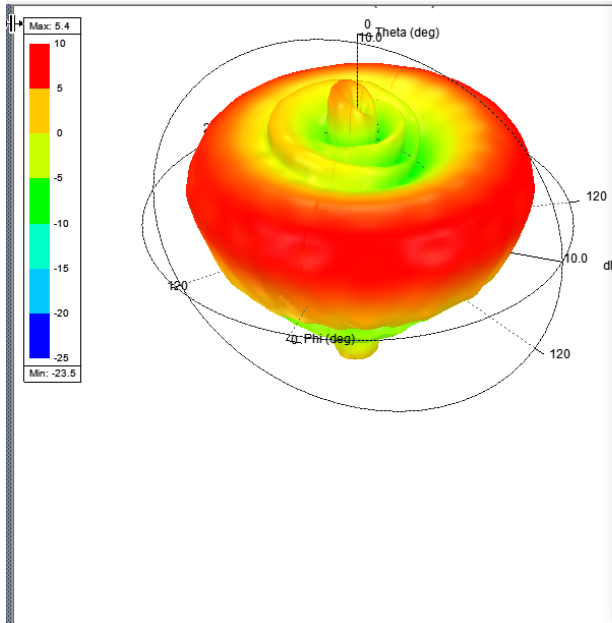
Output Variables... Options... New Report Apply Trace Add Trace Close



6) 500 MHz (5.7dB)



7)600MHz(5.4dB)



Report: 2_9B_Blade_Antenna_Good_Version2_4feet Ground Plane - 3_9B_Blade_...

Context: Solution: Setup7_600MHz : LastAv Geometry: Infinite Sphere1

Trace Families: Primary Sweep: Phi Secondary Sweep: Theta

Phi: Default Phi Theta: Default Theta

Mag: dB(GainTotal) Range Function...

Category	Quant	Function
Variables	GainTotal	atan
Output Variat	GainPhi	atanh
Gain	GainTheta	cos
System Gain	GainX	cosh
rE	GainY	cum_integ
Directivity	GainZ	cum_sum
Realized Gain	GainLHCP	dB
Polarization R	GainRHCP	dB10normalize
Axial Ratio	GainL3X	dB20normalize
Design	GainL3Y	dBc
	GainL3Z	dBm
		dBW
		dBo

Update Report: Real time Update

Output Variables... Options... New Report Apply Trace Add Trace Close

Report: 2_9B_Blade_Antenna_Good_Version2_4feet Ground Plane - 3_9B_Blade_...

Context: Solution: Setup7_600MHz : Swee Geometry: Infinite Sphere1

Trace Families Families Display: Families: 3 available

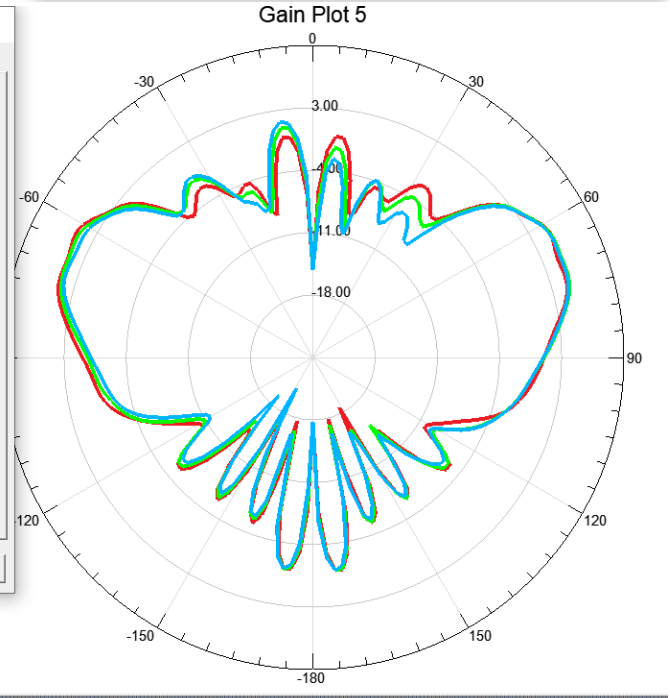
Sweeps Available variations

Variable	Value	Edit
Phi	0deg, 30deg, 60deg	...
Freq	0.60213333GHz	...

Nominals: []

Update Report: Real time Update

Output Variables... Options... New Report Apply Trace Add Trace Close



8) 700MHz (6.5dB)

