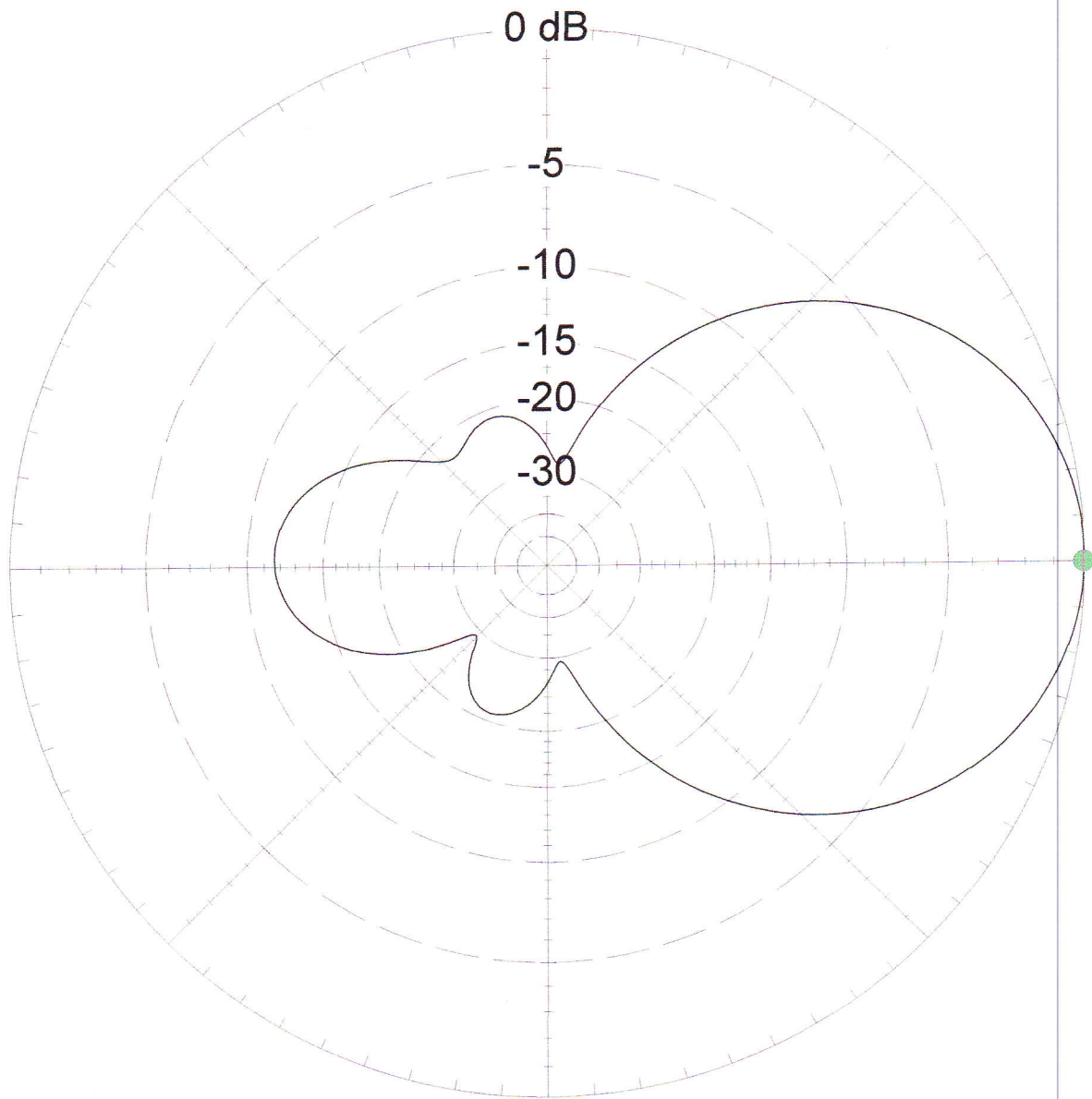


L4+Vw-match 28.7mhz FS

FREE SPACE

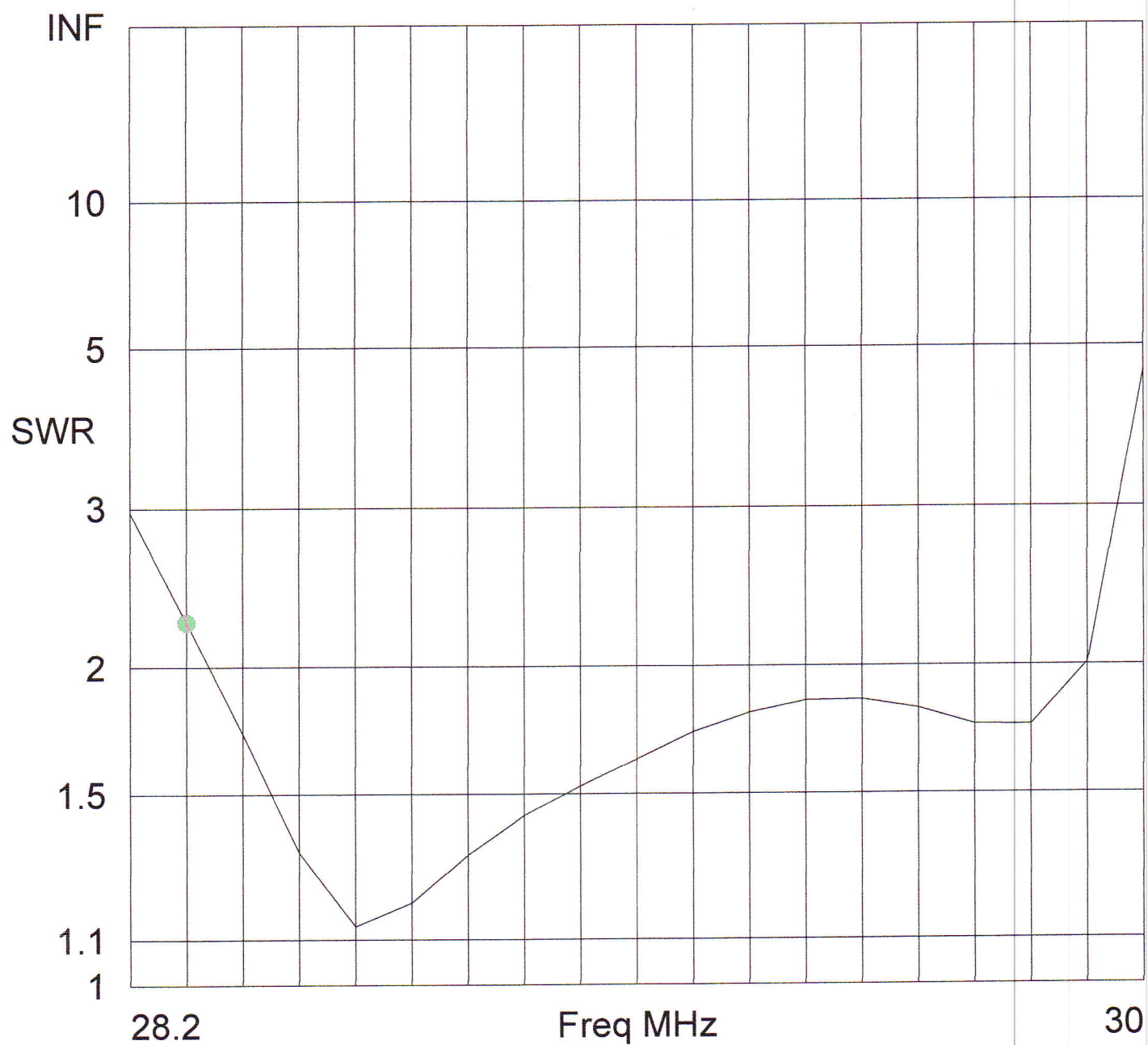
Wire Number	1
Length	104.25 in
Seg Length	17.375 in
Diameter	#12



L4+Vw-match 28.7mhz FS

28.7 MHz

Elevation Plot		Cursor Elev	0.0 deg.
Azimuth Angle	0.0 deg.	Gain	10.2 dBi
Outer Ring	10.2 dBi		0.0 dBmax
			0.0 dBmax3D
3D Max Gain	10.2 dBi		
Slice Max Gain	10.2 dBi @ Elev Angle = 0.0 deg.		
Front/Back	11.64 dB		
Beamwidth	62.3 deg.; -3dB @ 329.7, 32.0 deg.		
Sidelobe Gain	-1.42 dBi @ Elev Angle = 178.0 deg.		
Front/Sidelobe	11.62 dB		



L4+Vw-match 28.7mhz FS

Freq 28.3 MHz  
**SWR 2.23**  
Z 35.31 at -37.6 deg.  
= 27.98 - j 21.55 ohms  
Refl Coeff 0.3809 at -120.18 deg.  
= -0.1915 - j 0.3292  
Ret Loss 8.4 dB

Source # 1  
Z0 50 ohms

EZNEC ver. 5.0

L4+Vw-match 28.7mhz FS

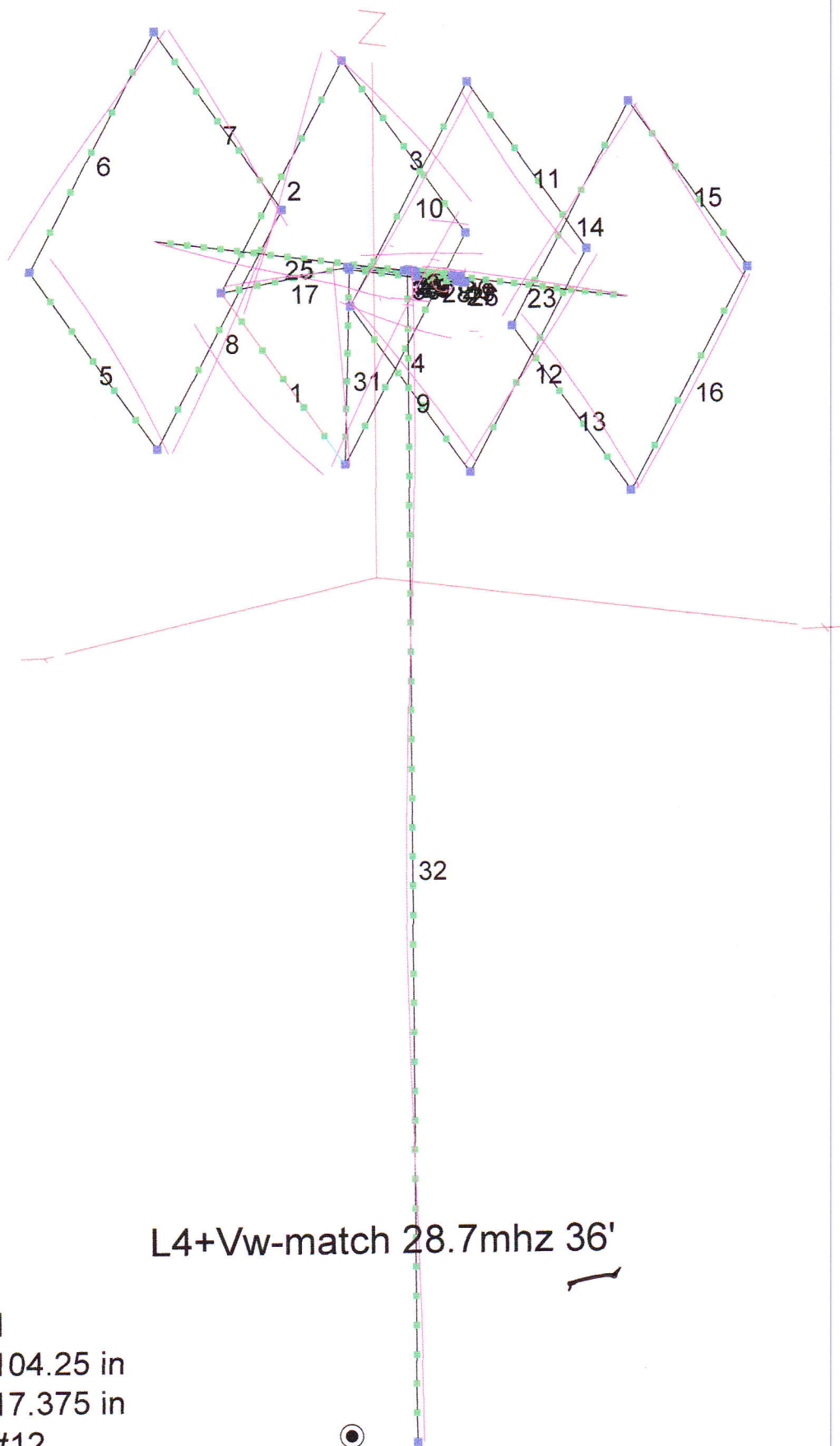
4/21/2017

8:54:39 AM

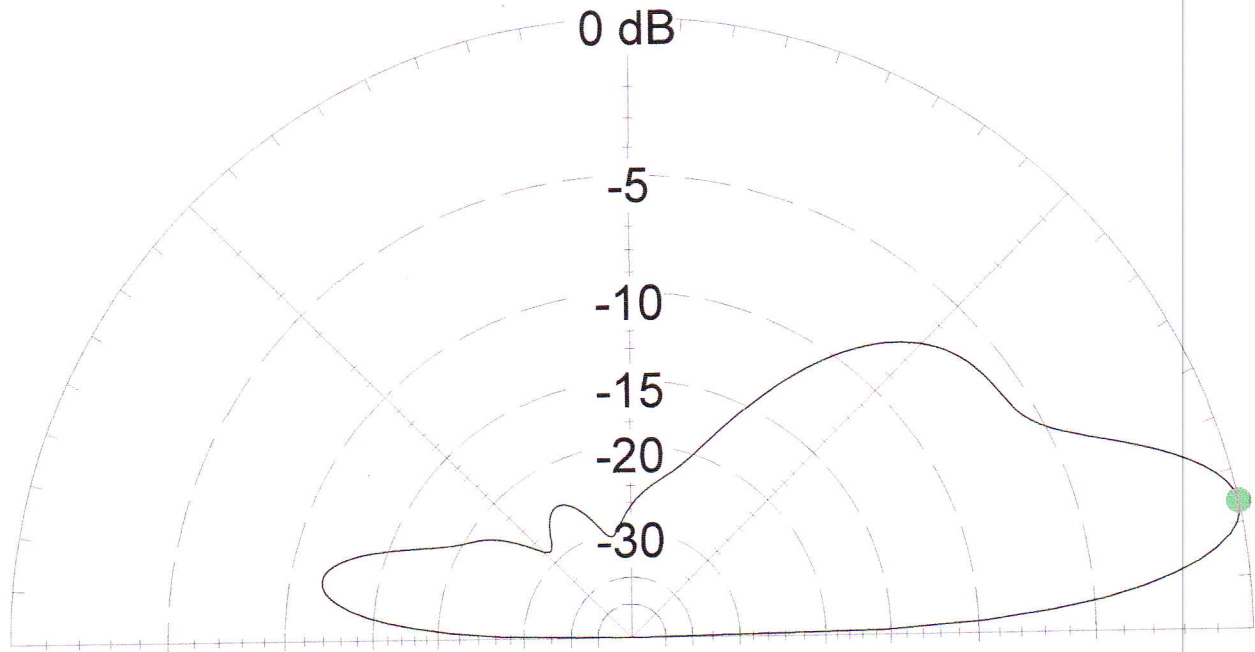
----- SOURCE DATA -----

Frequency = 28.7 MHz

Source 1      Voltage = 1 V at 0.0 deg.  
              Current = 0.0187 A at -9.08 deg.  
              Impedance = 52.81 + J 8.441 ohms  
              Power = 0.01847 watts  
              SWR (50 ohm system) = 1.189    (75 ohm system) = 1.455



Wire Number	1
Length	104.25 in
Seg Length	17.375 in
Diameter	#12



L4+Vw-match 28.7mhz 36'

28.7 MHz

Elevation Plot

Azimuth Angle 0.0 deg.

Outer Ring 12.77 dBi

Cursor Elev 12.0 deg.

Gain 12.77 dBi

0.0 dBmax

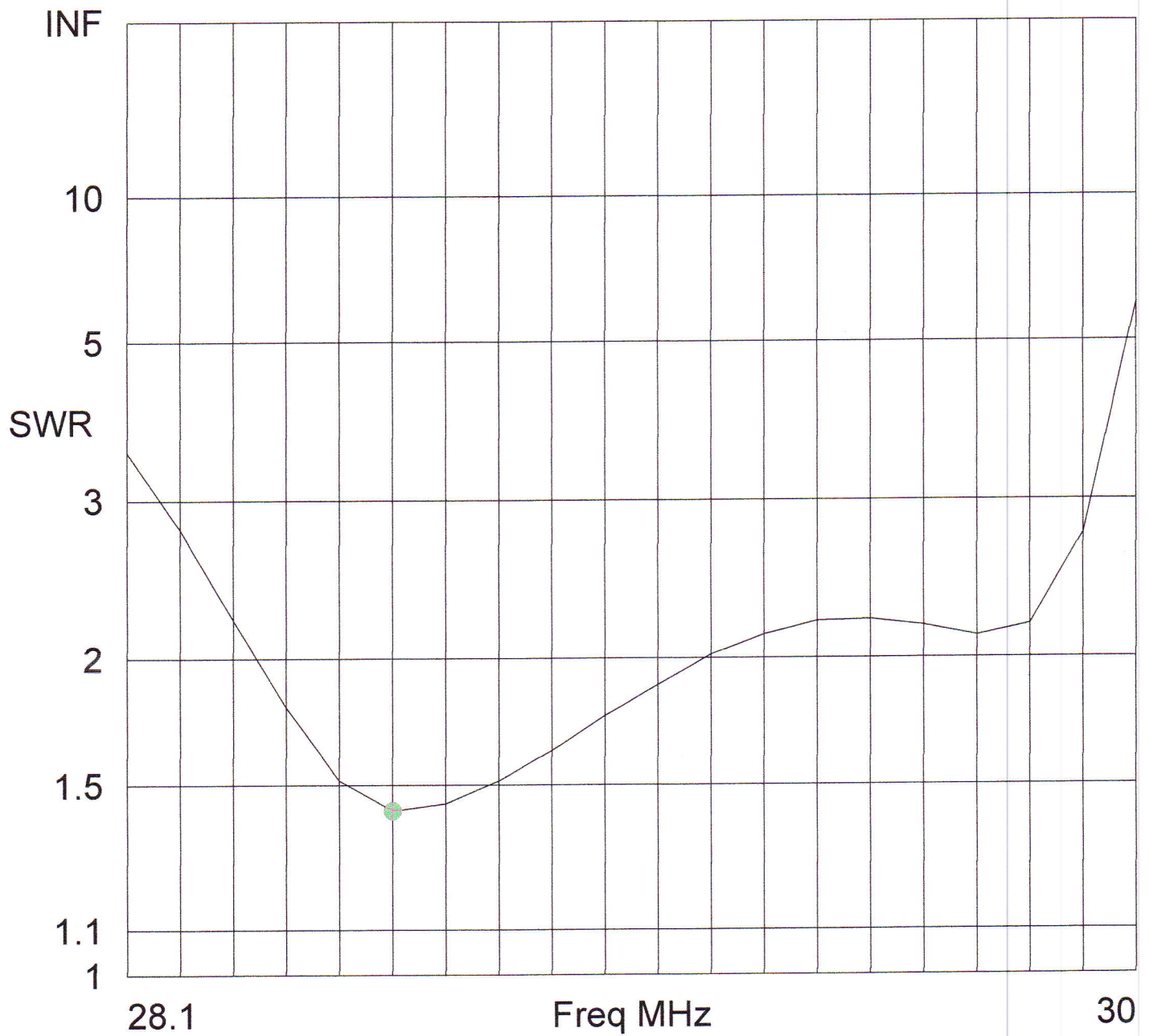
Slice Max Gain 12.77 dBi @ Elev Angle = 12.0 deg.

Beamwidth 16.3 deg.; -3dB @ 5.2, 21.5 deg.

Sidelobe Gain 1.12 dBi @ Elev Angle = 169.0 deg.

Front/Sidelobe 11.65 dB





L4+Vw-match 28.7mhz 36'

Freq 28.6 MHz  
**SWR 1.42**  
Z 39.78 at 14.86 deg.  
= 38.45 + j 10.21 ohms  
Refl Coeff 0.1731 at 131.95 deg.  
= -0.1157 + j 0.1287  
Ret Loss 15.2 dB

Source # 1  
Z0 50 ohms

## ----- WIRES -----

No.	Conn.	End 1 X	Coord. (in) Y Z	Conn.	End 2 X	Coord. (in) Y Z	Dia (in)	Segs	Insulation	
Thk(in)									Diel	C
1	W4E2	0,	-1,358.283	W2E1	0,72.7158,431.999	#12	6	1	0	
2	W17E2	0,72.7158,431.999		W3E1	0,-1,505.716	#12	6	1	0	
3	W2E2	0,-1,505.716		W4E1	0,-74.716,431.999	#12	6	1	0	
4	W3E2	0,-74.716,431.999		W31E2	0,-1,358.283	#12	6	1	0	
5	W8E2	-84.25,-1,355.809		W6E1	-84.25,75.1906,431.999	#12	6	1	0	
6	W5E2	-84.25,75.1906,431.999		W7E1	-84.25,-1,508.19	#12	6	1	0	
7	W6E2	-84.25,-1,508.19		W8E1	-84.25,-77.191,431.999	#12	6	1	0	
8	W7E2	-84.25,-77.191,431.999		W5E1	-84.25,-1,355.809	#12	6	1	0	
9	W12E2	56,-1,360.758		W10E1	56,70.2409,431.999	#12	5	1	0	
10	W9E2	56,70.2409,431.999		W11E1	56,-1,503.241	#12	5	1	0	
11	W10E2	56,-1,503.241		W12E1	56,-72.241,431.999	#12	5	1	0	
12	W11E2	56,-72.241,431.999		W9E1	56,-1,360.758	#12	5	1	0	
13	W16E2	128.25,-1,360.935		W14E1	128.25,70.0641,431.999	#12	5	1	0	
14	W13E2	128.25,70.0641,431.999		W15E1	128.25,-1,503.064	#12	5	1	0	
15	W14E2	128.25,-1,503.064		W16E1	128.25,-72.064,431.999	#12	5	1	0	
16	W15E2	128.25,-72.064,431.999		W13E1	128.25,-1,360.935	#12	5	1	0	
17	W18E1	4,1.88514,431.311		W1E2	0,72.7158,431.999	#12	7	1	0	
18	W17E1	4,1.88514,431.311		W19E1	54.875,1.88514,431.311	#12	7	1	0	
19	W18E2	54.875,1.88514,431.311		W20E1	54.875,1.88514,432.687	#12	1	1	0	
20	W19E2	54.875,1.88514,432.687		W21E2	51,1.88514,432.687	#12	1	1	0	
21	W22E1	33,1.88514,432.687		W20E2	51,1.88514,432.687	0.125	14	1	0	
22	W21E1	33,1.88514,432.687		W23E1	33,0,432	0.125	1	1	0	
23	W24E1	33,0,432			128.25,0,432	1.875	15	1	0	
24	W29E2	33,0,432		W25E1	28,0,432	1.875	1	1	0	
25	W33E1	28,0,432			-84.25,0,432	1.875	15	1	0	
26	W30E2	54.875,0.6875,430.115		W27E1	54.875,-0.6875,430.115	#12	1	1	0	
27	W26E2	54.875,-0.6875,430.115		W28E2	51,-0.6875,430.115	#12	1	1	0	
28	W29E1	33,-0.6875,430.115		W27E2	51,-0.6875,430.115	0.125	14	1	0	
29	W28E1	33,-0.6875,430.115		W22E2	33,0,432	0.125	1	1	0	
30	W31E1	4,.6875,430.114		W26E1	54.875,0.6875,430.115	#12	7	1	0	
31	W30E1	4,.6875,430.114		W1E1	0,-1,358.283	#12	7	1	0	
32	GND	28,-2,0		W33E2	28,-2,432	1	40	1	0	
33	W24E2	28,0,432		W32E2	28,-2,432	1	1	1	0	



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L4+Vw-match 28.7mhz 36'

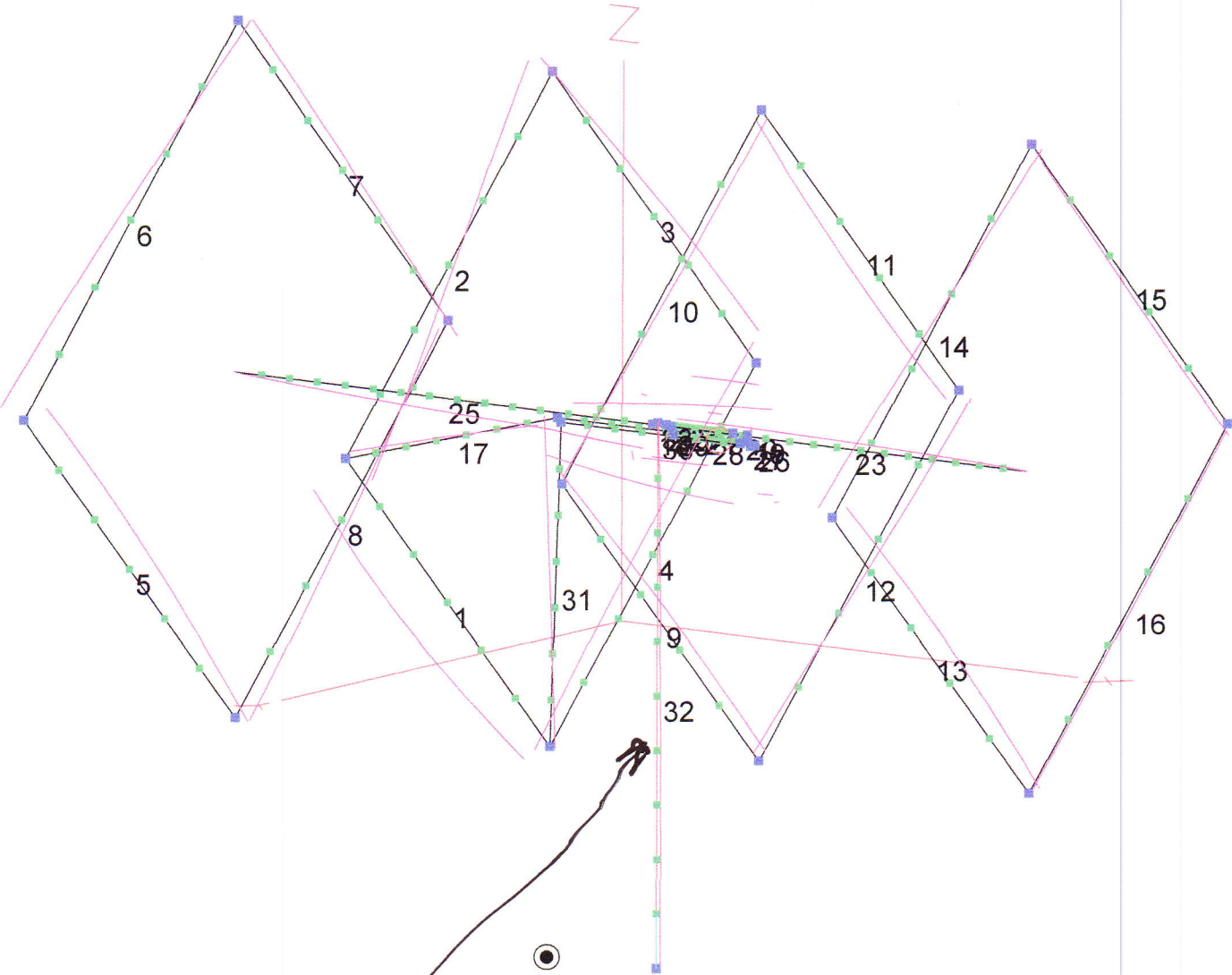
4/21/2017

8:19:59 AM

----- SOURCE DATA -----

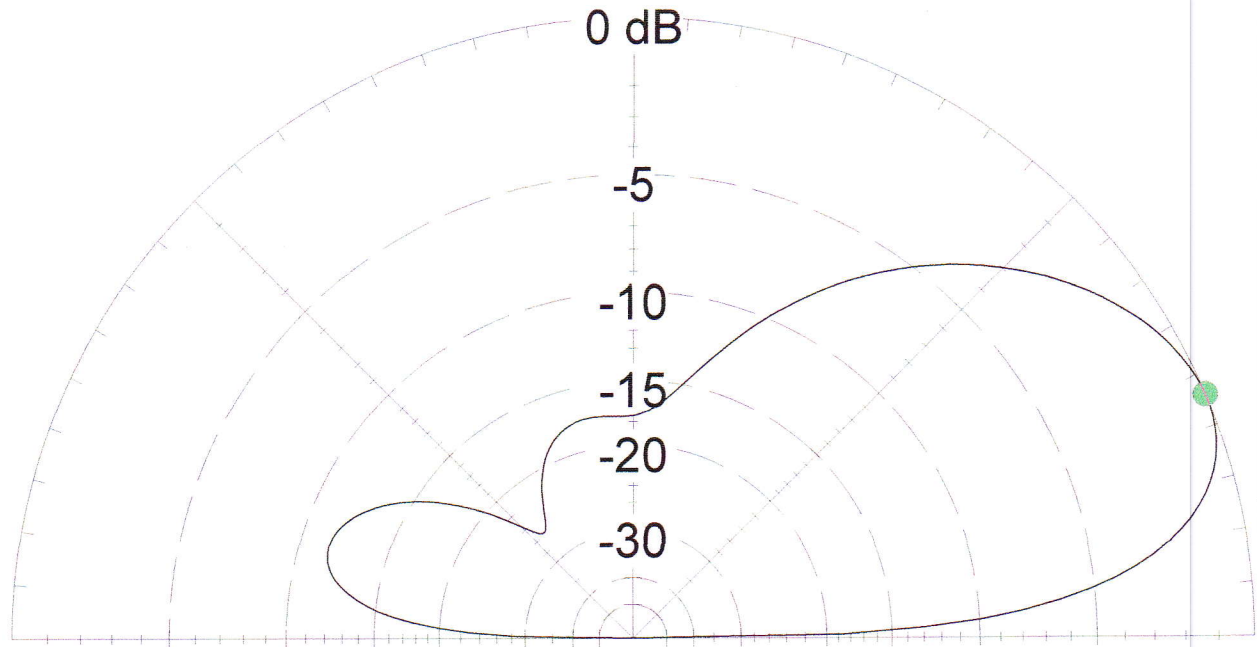
Frequency = 28.7 MHz

Source 1      Voltage = 1 V at 0.0 deg.  
              Current = 0.02107 A at -20.29 deg.  
              Impedance = 44.51 + J 16.45 ohms  
              Power = 0.01977 watts  
              SWR (50 ohm system) = 1.441    (75 ohm system) = 1.806



L4+Vw-match 28.7mhz 10'

Wire Number	32
Length	9.99996 ft
Seg Length	0.999996 ft
Diameter	1 in



L4+Vw-match 28.7mhz 10'

28.7 MHz

Elevation Plot

Azimuth Angle 0.0 deg.

Outer Ring 9.15 dBi

Cursor Elev

23.0 deg.

Gain

9.15 dBi

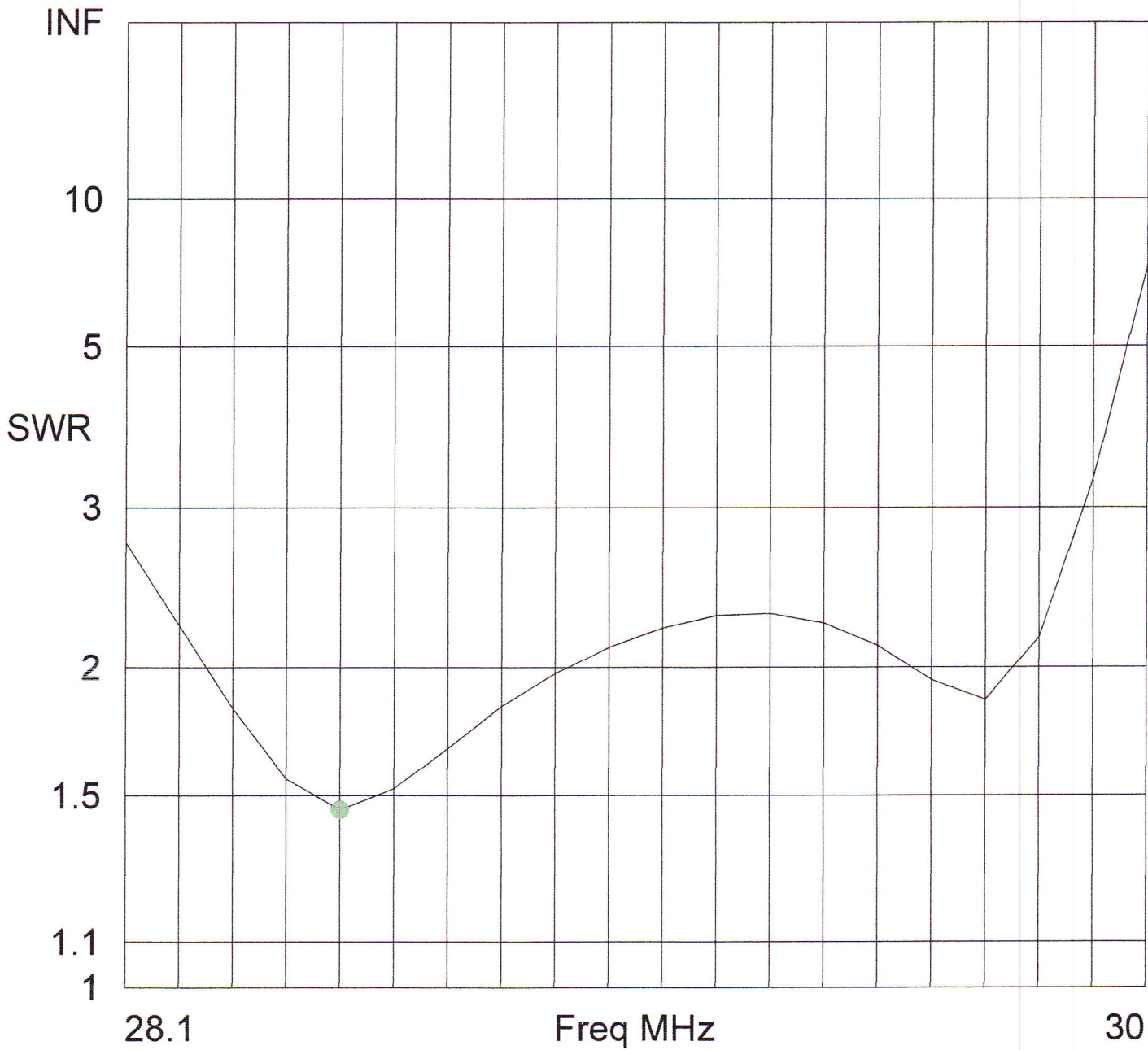
0.0 dBmax

Slice Max Gain 9.15 dBi @ Elev Angle = 23.0 deg.

Beamwidth 36.5 deg.; -3dB @ 8.7, 45.2 deg.

Sidelobe Gain -2.35 dBi @ Elev Angle = 163.0 deg.

Front/Sidelobe 11.5 dB



L4+Vw-match 28.7mhz 10'

Freq	28.5 MHz	Source #	1
SWR	1.46	Z0	50 ohms
Z	37.35 at 13.24 deg. = 36.36 + j 8.557 ohms		
Refl Coeff	0.1855 at 142.24 deg. = -0.1467 + j 0.1136		
Ret Loss	14.6 dB		

## ----- WIRES -----

No.	Conn.	End 1 X	Coord. (ft) Y Z	Conn.	End 2 X	Coord. (ft) Y Z	Dia (in)	Segs	Insulation	
									Dielectric	C
Thk(in)										
1	W4E2	0,-.08333,3.85696	W2E1	0,6.05965,9.99992	#12	6	1	0		
2	W17E2	0,6.05965,9.99992	W3E1	0,-.08333,16.143	#12	6	1	0		
3	W2E2	0,-.08333,16.143	W4E1	0,-6.2263,9.99992	#12	6	1	0		
4	W3E2	0,-6.2263,9.99992	W31E2	0,-.08333,3.85696	#12	6	1	0		
5	W8E2	-7.0208,-.08333,3.65072	W6E1	-7.0208,6.26588,9.99992	#12	6	1	0		
6	W5E2	-7.0208,6.26588,9.99992	W7E1	-7.0208,-.08333,16.3492	#12	6	1	0		
7	W6E2	-7.0208,-.08333,16.3492	W8E1	-7.0208,-6.4325,9.99992	#12	6	1	0		
8	W7E2	-7.0208,-6.4325,9.99992	W5E1	-7.0208,-.08333,3.65072	#12	6	1	0		
9	W12E2	4.66667,-.08333,4.0632	W10E1	4.66667,5.85341,9.99992	#12	5	1	0		
10	W9E2	4.66667,5.85341,9.99992	W11E1	4.66667,-.08333,15.9367	#12	5	1	0		
11	W10E2	4.66667,-.08333,15.9367	W12E1	4.66667,-6.0201,9.99992	#12	5	1	0		
12	W11E2	4.66667,-6.0201,9.99992	W9E1	4.66667,-.08333,4.0632	#12	5	1	0		
13	W16E2	10.6875,-.08333,4.07792	W14E1	10.6875,5.83868,9.99992	#12	5	1	0		
14	W13E2	10.6875,5.83868,9.99992	W15E1	10.6875,-.08333,15.922	#12	5	1	0		
15	W14E2	10.6875,-.08333,15.922	W16E1	10.6875,-6.0053,9.99992	#12	5	1	0		
16	W15E2	10.6875,-6.0053,9.99992	W13E1	10.6875,-.08333,4.07792	#12	5	1	0		
17	W18E1	.333333,.157095,9.94262	W1E2	0,6.05965,9.99992	#12	7	1	0		
18	W17E1	.333333,.157095,9.94262	W19E1	4.57292,.157095,9.94262	#12	7	1	0		
19	W18E2	4.57292,.157095,9.94262	W20E1	4.57292,.157095,10.0573	#12	1	1	0		
20	W19E2	4.57292,.157095,10.0573	W21E2	4.25,.157095,10.0573	#12	1	1	0		
21	W22E1	2.75,.157095,10.0573	W20E2	4.25,.157095,10.0573	0.125	14	1	0		
22	W21E1	2.75,.157095,10.0573	W23E1	2.75,0,9.99996	0.125	1	1	0		
23	W24E1	2.75,0,9.99996		10.6875,0,9.99996	1.875	15	1	0		
24	W29E2	2.75,0,9.99996	W25E1	2.33333,0,9.99996	1.875	1	1	0		
25	W33E1	2.33333,0,9.99996		-7.0208,0,9.99996	1.875	15	1	0		
26	W30E2	4.57292,.057292,9.84291	W27E1	4.57292,-.05729,9.84291	#12	1	1	0		
27	W26E2	4.57292,-.05729,9.84291	W28E2	4.25,-.05729,9.84291	#12	1	1	0		
28	W29E1	2.75,-.05729,9.84291	W27E2	4.25,-.05729,9.84291	0.125	14	1	0		
29	W28E1	2.75,-.05729,9.84291	W22E2	2.75,0,9.99996	0.125	1	1	0		
30	W31E1	.333333,.057292,9.84287	W26E1	4.57292,.057292,9.84291	#12	7	1	0		
31	W30E1	.333333,.057292,9.84287	W1E1	0,-.08333,3.85696	#12	7	1	0		
32	GND	2.33333,-.16667,0	W33E2	2.33333,-.16667,9.99996	1	10	1	0		
33	W24E2	2.33333,0,9.99996	W32E2	2.33333,-.16667,9.99996	1	1	1	0		



EZNEC ver. 5.0

L4+Vw-match 28.7mhz 10'

4/21/2017

8:39:40 AM

----- SOURCE DATA -----

Frequency = 28.7 MHz

Source 1      Voltage = 1 V at 0.0 deg.  
              Current = 0.01826 A at -27.55 deg.  
              Impedance = 48.54 + J 25.33 ohms  
              Power = 0.01619 watts  
              SWR (50 ohm system) = 1.664    (75 ohm system) = 1.819