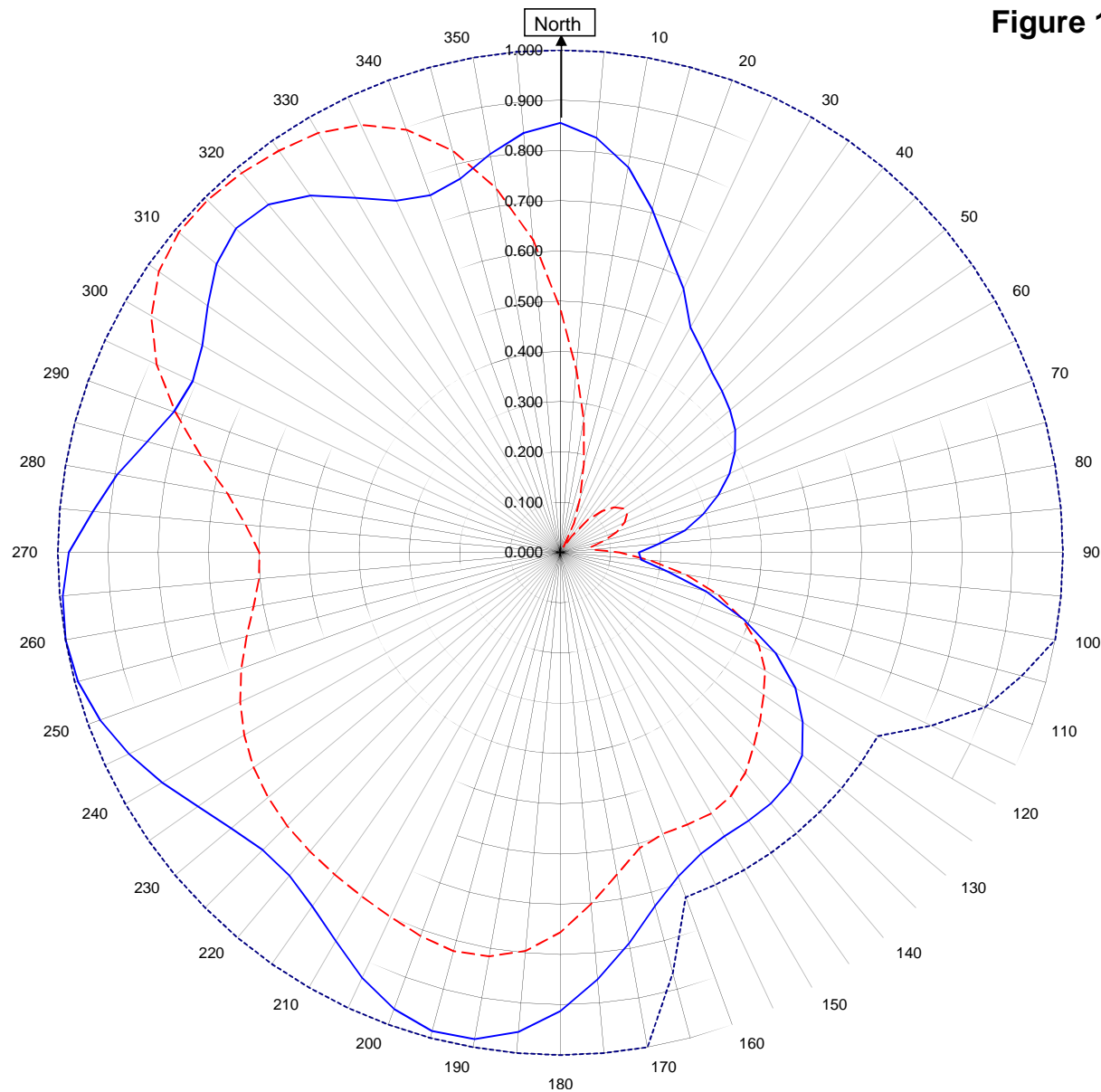


Shively Labs

Shively Labs, a division of Howell Laboratories, Inc. Bridgton, ME (207)647-3327

Figure 1A



W252CT BANGOR, MAINE
31793
June 4, 2014

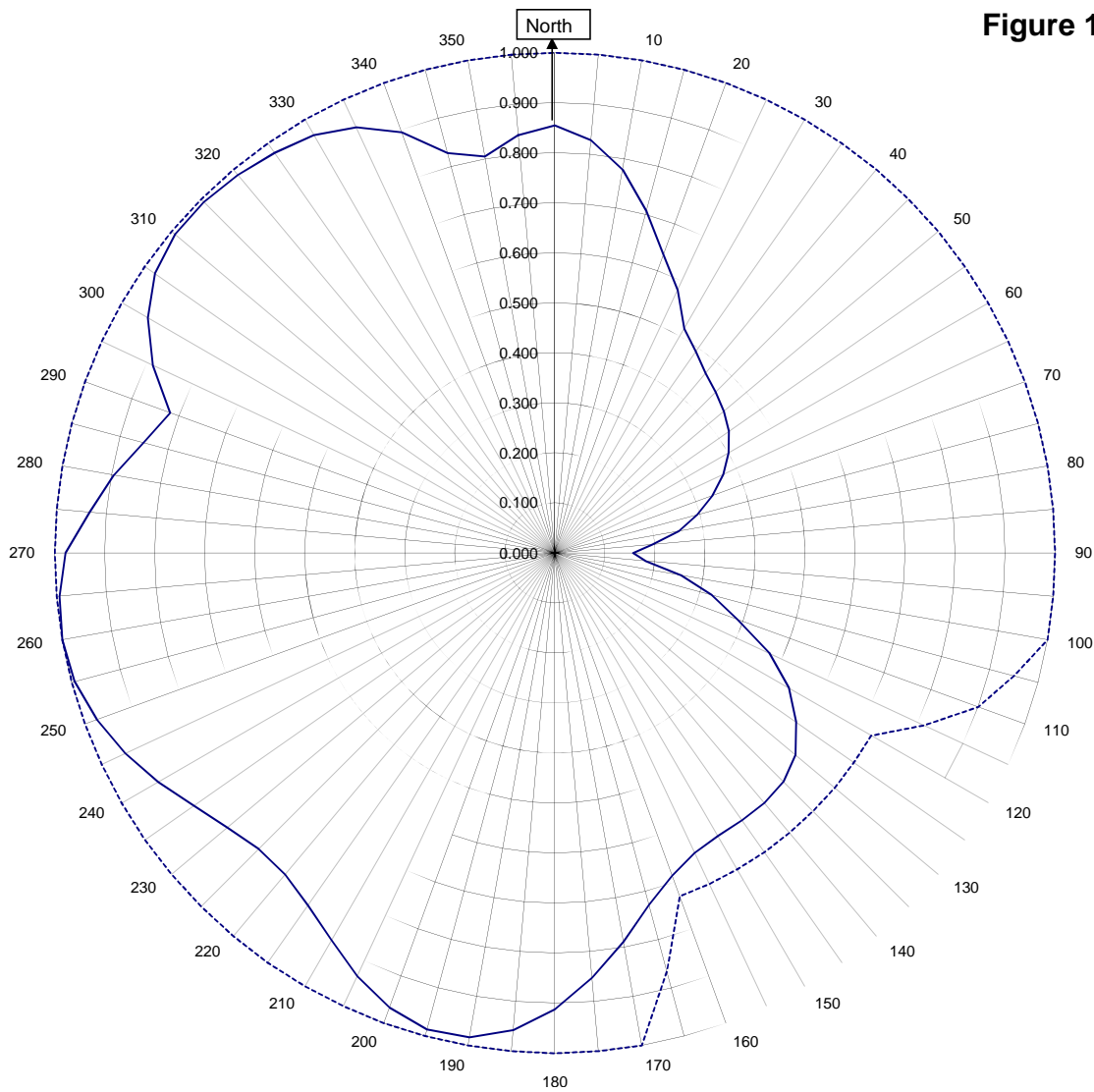
Horizontal RMS	0.745	Frequency	98.3 / 442.35 mHz
Vertical RMS	0.629	Plot	Relative Field
H/V Composite RMS	0.765	Scale	4.5 : 1
FCC Composite RMS	0.964	See Figure 2 for Mechanical Details	

Antenna Model	6810-1R-DA
Pattern Type	Directional Azimuth

Shively Labs

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Figure 1B



W252CT BANGOR, MAINE

31793
June 4, 2014

—————H/V Composite RMS	0.765
.....FCC Composite RMS	0.964

Frequency	98.3 / 442.35 mHz
Plot	Relative Field
Scale	4.5 : 1
See Figure 2 for Mechanical Details	

Antenna Model	6810-1R-DA
Pattern Type	Directional H/V Composite

Figure 1C

Tabulation of Horizontal Azimuth Pattern
W252CT BANGOR, MAINE

Azimuth	Rel Field	Azimuth	Rel Field
0	0.855	180	0.913
10	0.778	190	0.983
20	0.634	200	0.967
30	0.517	210	0.894
40	0.468	220	0.839
45	0.455	225	0.837
50	0.441	230	0.855
60	0.401	240	0.916
70	0.334	250	0.975
80	0.252	260	1.000
90	0.156	270	0.978
100	0.217	280	0.895
110	0.387	290	0.819
120	0.540	300	0.823
130	0.628	310	0.893
135	0.646	315	0.912
140	0.652	320	0.904
150	0.653	330	0.815
160	0.686	340	0.757
170	0.789	350	0.805

Figure 1D

Tabulation of Vertical Azimuth Pattern
W252CT BANGOR, MAINE

Azimuth	Rel Field	Azimuth	Rel Field
0	0.485	180	0.756
10	0.268	190	0.816
20	0.112	200	0.812
30	0.012	210	0.790
40	0.085	220	0.776
45	0.117	225	0.769
50	0.140	230	0.759
60	0.153	240	0.727
70	0.119	250	0.675
80	0.061	260	0.620
90	0.118	270	0.599
100	0.255	280	0.672
110	0.385	290	0.815
120	0.470	300	0.940
130	0.519	310	0.991
135	0.545	315	0.992
140	0.573	320	0.986
150	0.600	330	0.964
160	0.596	340	0.895
170	0.650	350	0.736

Figure 1E

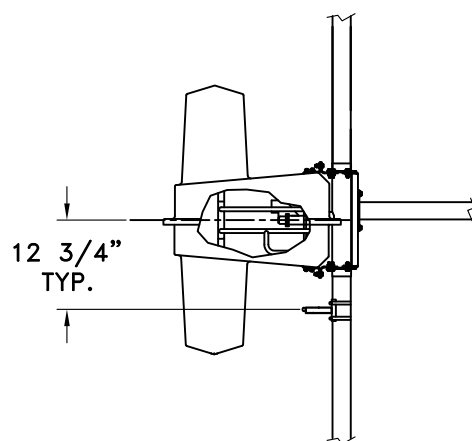
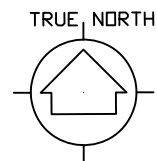
Tabulation of Composite Azimuth Pattern
W252CT BANGOR, MAINE

Azimuth	Rel Field	Azimuth	Rel Field
0	0.855	180	0.913
10	0.778	190	0.983
20	0.634	200	0.967
30	0.517	210	0.894
40	0.468	220	0.839
45	0.455	225	0.837
50	0.441	230	0.855
60	0.401	240	0.916
70	0.334	250	0.975
80	0.252	260	1.000
90	0.156	270	0.978
100	0.255	280	0.895
110	0.387	290	0.819
120	0.540	300	0.940
130	0.628	310	0.991
135	0.646	315	0.992
140	0.652	320	0.986
150	0.653	330	0.964
160	0.686	340	0.895
170	0.789	350	0.805

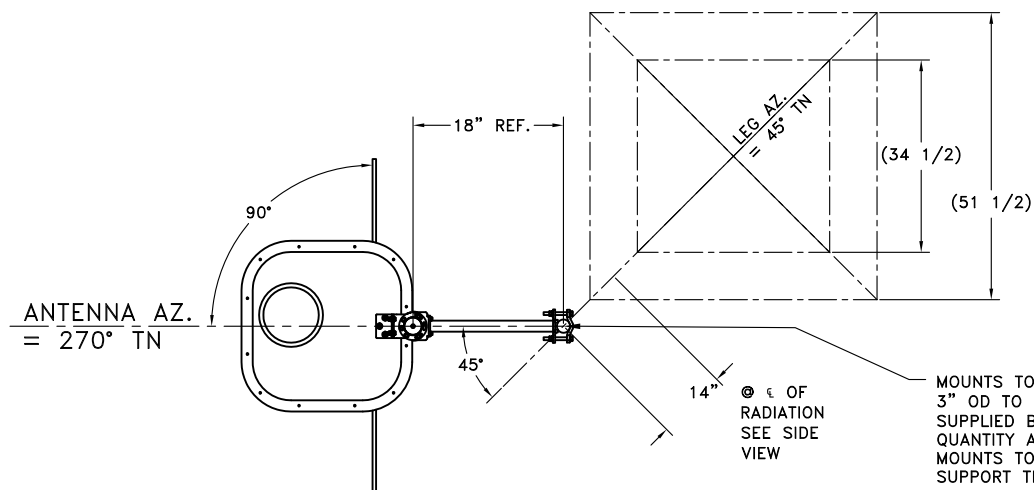
Figure 1F

Tabulation of FCC Directional Composite
W252CT BANGOR, MAINE

Azimuth	Rel Field	Azimuth	Rel Field
0	1.000	180	1.000
10	1.000	190	1.000
20	1.000	200	1.000
30	1.000	210	1.000
40	1.000	220	1.000
50	1.000	230	1.000
60	1.000	240	1.000
70	1.000	250	1.000
80	1.000	260	1.000
90	1.000	270	1.000
100	1.000	280	1.000
110	0.900	290	1.000
120	0.730	300	1.000
130	0.730	310	1.000
140	0.730	320	1.000
150	0.730	330	1.000
160	0.730	340	1.000
170	1.000	350	1.000



SIDE VIEW



MOUNTS TO FIT:
3" OD TO 3 1/2" OD POLE
SUPPLIED BY CUSTOMER.
QUANTITY AND LOCATION OF
MOUNTS TO ADEQUATELY
SUPPORT THE ANTENNA AND
POLE TO BE DETERMINED/
SUPPLIED BY CUSTOMER.

TOP VIEW
TOWER MAKE: UNKNOWN
SQUARE SSV

ANTENNA HEADING 270° TRUE NORTH

SHIVELY LABS			
A DIVISION OF HOWELL LABORATORIES INC., BRIDGTON, MAINE			
SHOP ORDER:	FREQUENCY:	SCALE:	DRAWN BY:
31793	98.3	N.T.S.	ASP
TITLE:	APPROVED BY:		
MODEL-6810-1R-DIRECTIONAL ANTENNA	DAB		
DATE:	FIGURE 2		
6-5-14			

Antenna Mfg.: Shively Labs

Antenna Type: 6810-1R-DA

Station: W252CT

Frequency: 98.3

Channel #: 252

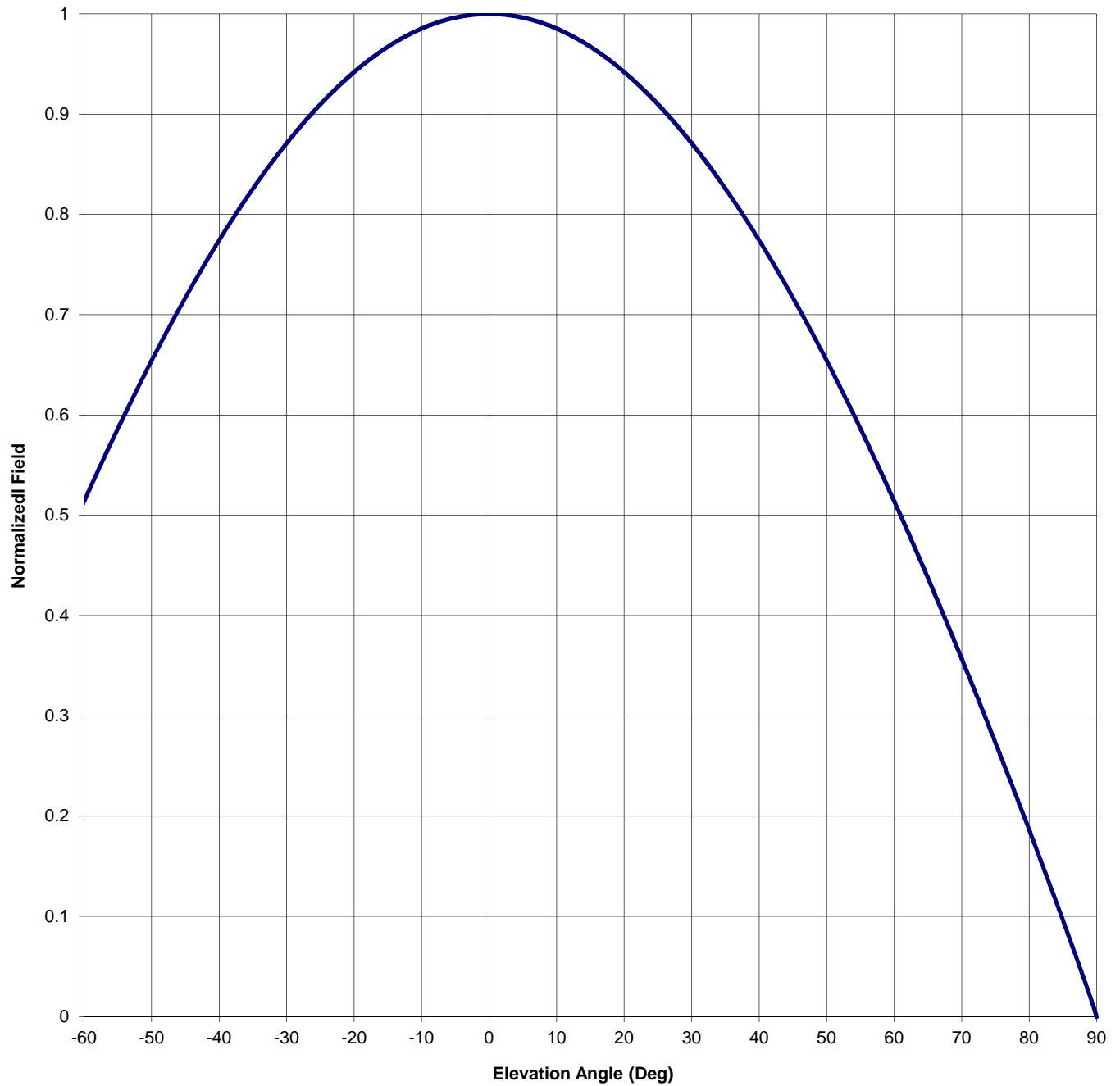
Figure: Figure 3

Date: 6/4/2014

Beam Tilt 0

Gain (Max) 0.983 -0.075 dB

Gain (Horizon) 0.983 -0.075 dB



Antenna Mfg.: Shively Labs

Date: 6/4/2014

Antenna Type: 6810-1R-DA

Station: W252CT

Beam Tilt 0

Frequency: 98.3

Gain (Max) 0.983

-0.075 dB

Channel #: 252

Gain (Horizon) 0.983

-0.075 dB

Figure: Figure 3

Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field
-90	0.000	-44	0.729	0	1.000	46	0.705
-89	0.021	-43	0.741	1	1.000	47	0.693
-88	0.040	-42	0.752	2	0.999	48	0.680
-87	0.059	-41	0.763	3	0.999	49	0.667
-86	0.078	-40	0.774	4	0.998	50	0.654
-85	0.096	-39	0.785	5	0.996	51	0.641
-84	0.114	-38	0.796	6	0.995	52	0.628
-83	0.133	-37	0.806	7	0.993	53	0.614
-82	0.151	-36	0.816	8	0.991	54	0.600
-81	0.168	-35	0.826	9	0.988	55	0.586
-80	0.186	-34	0.835	10	0.985	56	0.572
-79	0.204	-33	0.845	11	0.982	57	0.558
-78	0.221	-32	0.854	12	0.979	58	0.544
-77	0.239	-31	0.862	13	0.975	59	0.529
-76	0.256	-30	0.871	14	0.971	60	0.514
-75	0.273	-29	0.879	15	0.967	61	0.499
-74	0.290	-28	0.887	16	0.963	62	0.484
-73	0.307	-27	0.895	17	0.958	63	0.469
-72	0.324	-26	0.903	18	0.953	64	0.453
-71	0.341	-25	0.910	19	0.948	65	0.437
-70	0.357	-24	0.917	20	0.942	66	0.422
-69	0.373	-23	0.924	21	0.936	67	0.406
-68	0.390	-22	0.930	22	0.930	68	0.390
-67	0.406	-21	0.936	23	0.924	69	0.373
-66	0.422	-20	0.942	24	0.917	70	0.357
-65	0.437	-19	0.948	25	0.910	71	0.341
-64	0.453	-18	0.953	26	0.903	72	0.324
-63	0.469	-17	0.958	27	0.895	73	0.307
-62	0.484	-16	0.963	28	0.887	74	0.290
-61	0.499	-15	0.967	29	0.879	75	0.273
-60	0.514	-14	0.971	30	0.871	76	0.256
-59	0.529	-13	0.975	31	0.862	77	0.239
-58	0.544	-12	0.979	32	0.854	78	0.221
-57	0.558	-11	0.982	33	0.845	79	0.204
-56	0.572	-10	0.985	34	0.835	80	0.186
-55	0.586	-9	0.988	35	0.826	81	0.168
-54	0.600	-8	0.991	36	0.816	82	0.151
-53	0.614	-7	0.993	37	0.806	83	0.133
-52	0.628	-6	0.995	38	0.796	84	0.114
-51	0.641	-5	0.996	39	0.785	85	0.096
-50	0.654	-4	0.998	40	0.774	86	0.078
-49	0.667	-3	0.999	41	0.763	87	0.059
-48	0.680	-2	0.999	42	0.752	88	0.040
-47	0.693	-1	1.000	43	0.741	89	0.021
-46	0.705	0	1.000	44	0.729	90	0.000
-45	0.717			45	0.717		