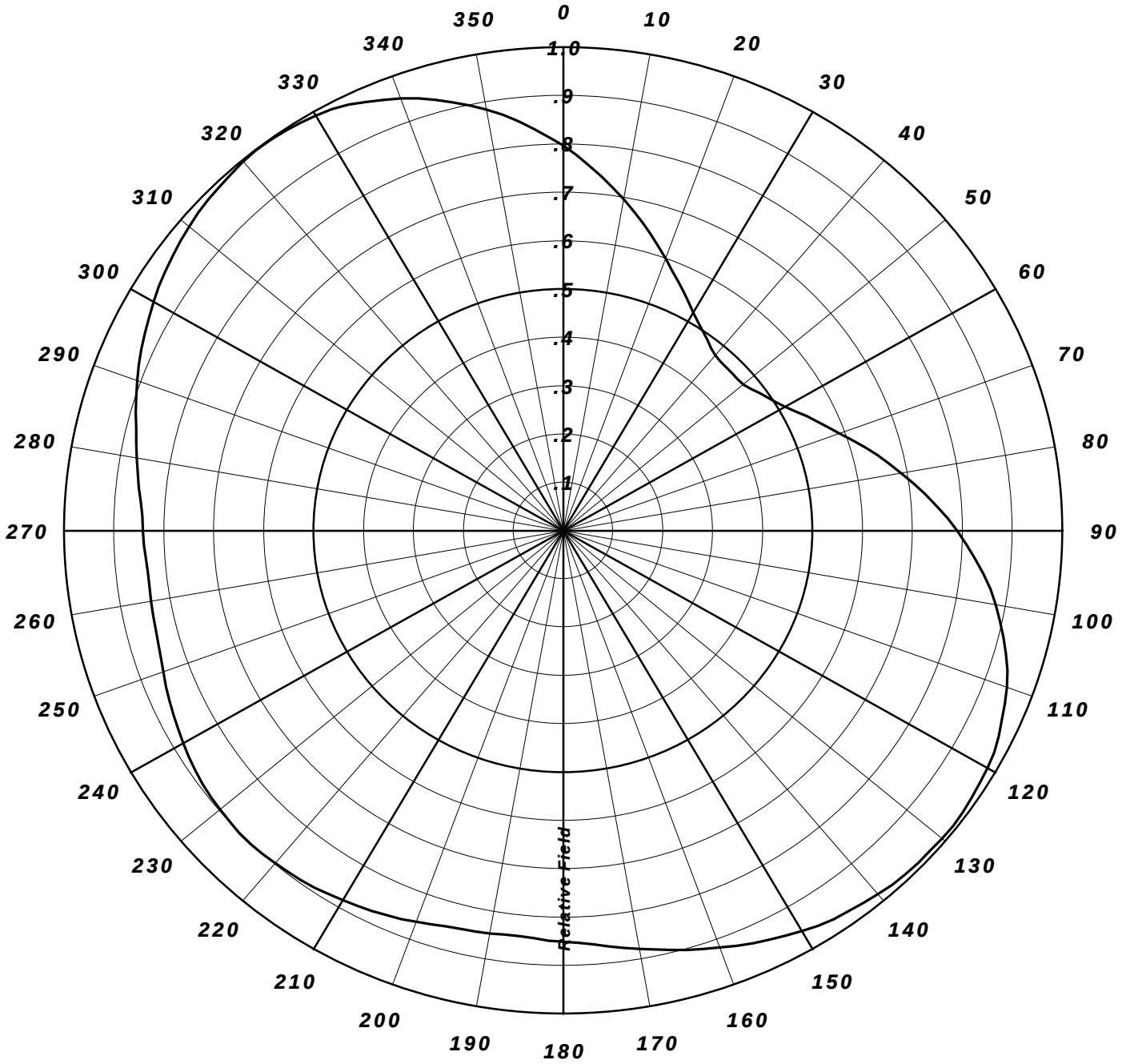
Exhibit #1

ANDREW
AZIMUTH PATTERN

Type:	ATW28H3H	
	Numeric	dBd
Directivity:	1.42	(1.52)
Peak(s) At:		
Polarization:	Horizontal	
Channel:	24	
Location:	Newark, OH	



ANDREW CORPORATION
10500 W. 153rd Street
Orland Park, Illinois U.S.A. 60462

Exhibit #1

ANDREW

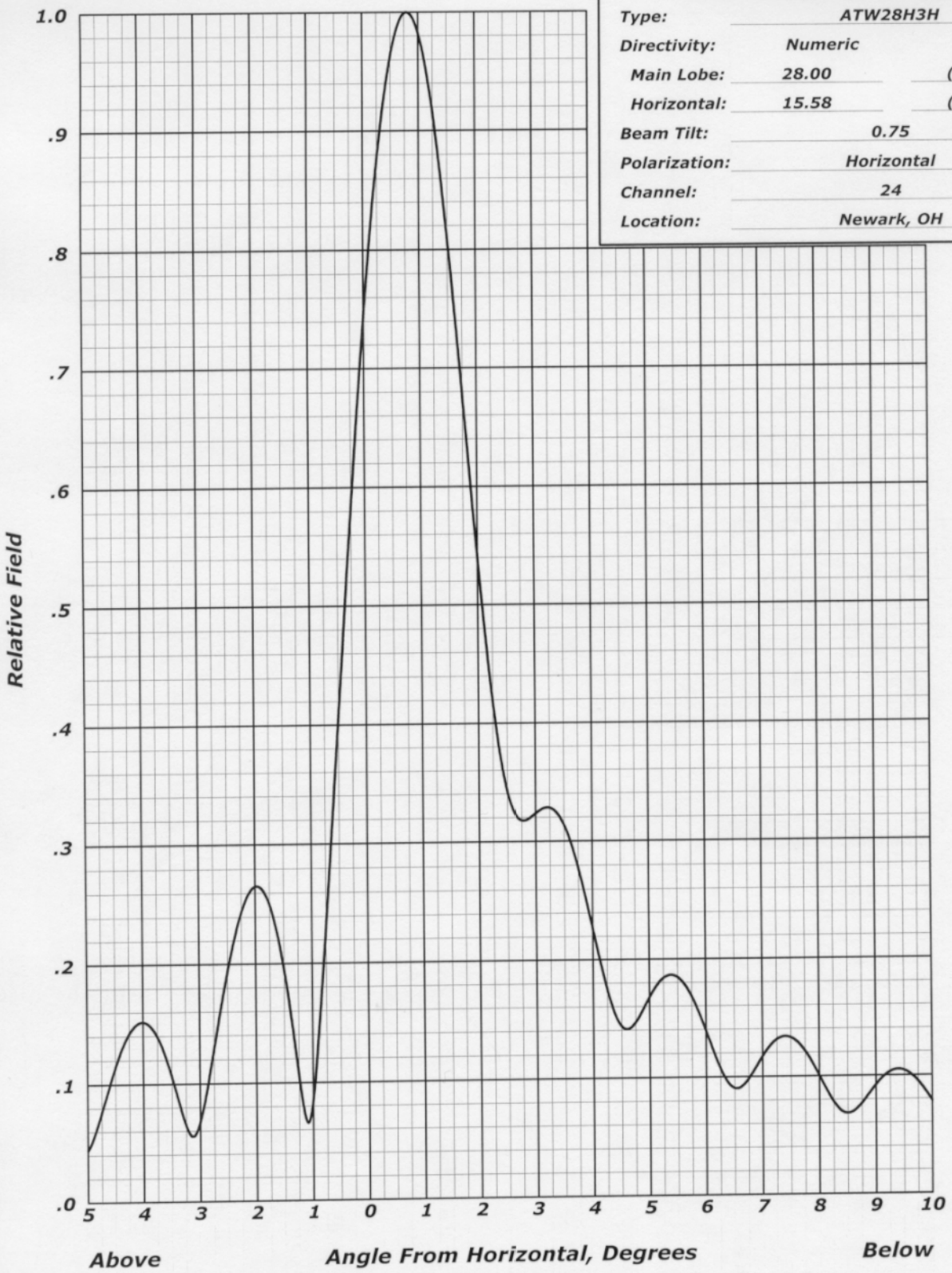
TABULATED DATA FOR AZIMUTH PATTERN
TYPE : ATW28H3H

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
0	0.797	-1.97	110	0.945	-0.49	220	0.897	-0.94	330	0.992	-0.07
2	0.778	-2.19	112	0.953	-0.42	222	0.899	-0.92	332	0.989	-0.10
4	0.757	-2.42	114	0.961	-0.35	224	0.901	-0.91	334	0.981	-0.17
6	0.737	-2.66	116	0.969	-0.27	226	0.901	-0.91	336	0.971	-0.26
8	0.716	-2.90	118	0.977	-0.21	228	0.899	-0.92	338	0.961	-0.35
10	0.696	-3.15	120	0.981	-0.17	230	0.897	-0.94	340	0.952	-0.43
12	0.676	-3.40	122	0.984	-0.14	232	0.895	-0.96	342	0.941	-0.53
14	0.657	-3.66	124	0.986	-0.12	234	0.893	-0.99	344	0.927	-0.66
16	0.637	-3.92	126	0.989	-0.10	236	0.888	-1.03	346	0.913	-0.79
18	0.618	-4.19	128	0.990	-0.08	238	0.883	-1.08	348	0.899	-0.92
20	0.599	-4.46	130	0.990	-0.09	240	0.879	-1.13	350	0.885	-1.06
22	0.581	-4.72	132	0.989	-0.10	242	0.874	-1.17	352	0.870	-1.21
24	0.566	-4.95	134	0.988	-0.11	244	0.869	-1.22	354	0.852	-1.40
26	0.550	-5.19	136	0.987	-0.12	246	0.864	-1.27	356	0.833	-1.59
28	0.535	-5.44	138	0.985	-0.14	248	0.858	-1.33	358	0.815	-1.78
30	0.520	-5.68	140	0.981	-0.17	250	0.852	-1.39	360	0.797	-1.97
32	0.509	-5.87	142	0.976	-0.21	252	0.847	-1.44			
34	0.499	-6.04	144	0.972	-0.25	254	0.844	-1.48			
36	0.490	-6.20	146	0.968	-0.28	256	0.841	-1.50			
38	0.481	-6.37	148	0.963	-0.33	258	0.840	-1.52			
40	0.474	-6.49	150	0.956	-0.40	260	0.838	-1.54			
42	0.471	-6.55	152	0.948	-0.46	262	0.837	-1.55			
44	0.470	-6.56	154	0.941	-0.53	264	0.836	-1.56			
46	0.470	-6.57	156	0.934	-0.60	266	0.838	-1.54			
48	0.469	-6.58	158	0.926	-0.67	268	0.840	-1.51			
50	0.471	-6.54	160	0.917	-0.75	270	0.842	-1.49			
52	0.477	-6.43	162	0.909	-0.83	272	0.844	-1.47			
54	0.486	-6.28	164	0.901	-0.91	274	0.848	-1.43			
56	0.494	-6.13	166	0.893	-0.99	276	0.855	-1.37			
58	0.502	-5.98	168	0.885	-1.07	278	0.861	-1.30			
60	0.513	-5.80	170	0.878	-1.14	280	0.868	-1.23			
62	0.526	-5.57	172	0.870	-1.20	282	0.874	-1.16			
64	0.542	-5.33	174	0.863	-1.27	284	0.882	-1.09			
66	0.557	-5.09	176	0.857	-1.34	286	0.891	-1.01			
68	0.571	-4.86	178	0.853	-1.39	288	0.900	-0.92			
70	0.588	-4.61	180	0.850	-1.41	290	0.908	-0.84			
72	0.608	-4.32	182	0.848	-1.44	292	0.917	-0.76			
74	0.628	-4.04	184	0.845	-1.47	294	0.925	-0.68			
76	0.647	-3.78	186	0.843	-1.49	296	0.932	-0.61			
78	0.667	-3.52	188	0.843	-1.48	298	0.940	-0.54			
80	0.687	-3.26	190	0.845	-1.46	300	0.948	-0.47			
82	0.708	-3.01	192	0.847	-1.44	302	0.955	-0.40			
84	0.728	-2.75	194	0.849	-1.43	304	0.962	-0.34			
86	0.749	-2.51	196	0.851	-1.40	306	0.967	-0.29			
88	0.770	-2.28	198	0.856	-1.36	308	0.973	-0.24			
90	0.789	-2.06	200	0.861	-1.30	310	0.979	-0.19			
92	0.807	-1.86	202	0.866	-1.25	312	0.984	-0.14			
94	0.826	-1.66	204	0.870	-1.21	314	0.988	-0.11			
96	0.845	-1.46	206	0.875	-1.16	316	0.990	-0.08			
98	0.863	-1.27	208	0.879	-1.13	318	0.994	-0.05			
100	0.879	-1.12	210	0.882	-1.09	320	0.998	-0.02			
102	0.893	-0.98	212	0.886	-1.05	322	0.999	-0.00			
104	0.907	-0.84	214	0.890	-1.01	324	0.999	-0.01			
106	0.922	-0.71	216	0.893	-0.98	326	0.997	-0.03			
108	0.935	-0.58	218	0.895	-0.96	328	0.995	-0.05			

Exhibit #1

ANDREW
ELEVATION PATTERN

Type:	ATW28H3H	
Directivity:	Numeric	dBd
Main Lobe:	28.00	(14.47)
Horizontal:	15.58	(11.93)
Beam Tilt:	0.75	
Polarization:	Horizontal	
Channel:	24	
Location:	Newark, OH	



ANDREW CORPORATION
10500 W. 153rd Street
Orland Park, Illinois U.S.A. 60462

LJS021700-630

Exhibit #1

ANDREW

TABULATED DATA FOR ELEVATION PATTERN
TYPE : ATW28H3H

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-5 To 10			10 To 90								
In 0.25 Increments			In 0.5 Increments								
-5.00	0.044	-27.06	8.75	0.077	-22.31	35.00	0.033	-29.58	62.50	0.020	-34.04
-4.75	0.076	-22.39	9.00	0.092	-20.70	35.50	0.025	-32.00	63.00	0.010	-40.30
-4.50	0.114	-18.86	9.25	0.103	-19.73	36.00	0.015	-36.55	63.50	0.005	-46.01
-4.25	0.142	-16.97	9.50	0.104	-19.64	36.50	0.021	-33.38	64.00	0.015	-36.45
-4.00	0.152	-16.39	9.75	0.095	-20.45	37.00	0.031	-30.12	64.50	0.024	-32.22
-3.75	0.139	-17.11	10.00	0.078	-22.12	37.50	0.032	-29.98	65.00	0.031	-30.13
-3.50	0.107	-19.45	10.50	0.055	-25.23	38.00	0.023	-32.89	65.50	0.034	-29.30
-3.25	0.065	-23.80	11.00	0.077	-22.32	38.50	0.014	-37.14	66.00	0.034	-29.48
-3.00	0.068	-23.39	11.50	0.087	-21.26	39.00	0.022	-33.15	66.50	0.029	-30.67
-2.75	0.128	-17.84	12.00	0.065	-23.73	39.50	0.031	-30.12	67.00	0.022	-33.15
-2.50	0.194	-14.25	12.50	0.046	-26.71	40.00	0.031	-30.03	67.50	0.013	-37.98
-2.25	0.244	-12.26	13.00	0.065	-23.70	40.50	0.023	-32.85	68.00	0.003	-51.08
-2.00	0.266	-11.52	13.50	0.074	-22.58	41.00	0.013	-37.50	68.50	0.009	-40.66
-1.75	0.251	-12.02	14.00	0.056	-24.98	41.50	0.020	-33.97	69.00	0.019	-34.36
-1.50	0.195	-14.19	14.50	0.040	-27.97	42.00	0.030	-30.56	69.50	0.027	-31.22
-1.25	0.106	-19.47	15.00	0.056	-24.97	42.50	0.031	-30.03	70.00	0.034	-29.46
-1.00	0.085	-21.38	15.50	0.065	-23.73	43.00	0.024	-32.22	70.50	0.037	-28.57
-0.75	0.230	-12.78	16.00	0.050	-26.00	43.50	0.014	-37.22	71.00	0.038	-28.35
-0.50	0.406	-7.83	16.50	0.034	-29.25	44.00	0.016	-35.87	71.50	0.037	-28.74
-0.25	0.584	-4.67	17.00	0.049	-26.27	44.50	0.027	-31.46	72.00	0.033	-29.74
0.00	0.746	-2.55	17.50	0.058	-24.78	45.00	0.032	-29.96	72.50	0.027	-31.49
0.25	0.876	-1.15	18.00	0.046	-26.83	45.50	0.028	-30.97	73.00	0.019	-34.33
0.50	0.963	-0.33	18.50	0.030	-30.52	46.00	0.018	-34.78	73.50	0.011	-39.28
0.75	0.999	-0.01	19.00	0.041	-27.66	46.50	0.011	-38.80	74.00	0.002	-53.29
1.00	0.982	-0.16	19.50	0.052	-25.73	47.00	0.020	-33.89	74.50	0.007	-43.41
1.25	0.915	-0.77	20.00	0.043	-27.34	47.50	0.029	-30.72	75.00	0.015	-36.47
1.50	0.809	-1.84	20.50	0.027	-31.35	48.00	0.031	-30.13	75.50	0.022	-32.96
1.75	0.677	-3.39	21.00	0.035	-29.14	48.50	0.025	-31.87	76.00	0.029	-30.79
2.00	0.539	-5.37	21.50	0.046	-26.69	49.00	0.015	-36.54	76.50	0.034	-29.36
2.25	0.419	-7.56	22.00	0.041	-27.76	49.50	0.011	-39.18	77.00	0.038	-28.42
2.50	0.342	-9.32	22.50	0.025	-32.00	50.00	0.021	-33.59	77.50	0.040	-27.86
2.75	0.318	-9.96	23.00	0.028	-30.96	50.50	0.029	-30.71	78.00	0.042	-27.59
3.00	0.323	-9.80	23.50	0.041	-27.70	51.00	0.031	-30.19	78.50	0.042	-27.57
3.25	0.328	-9.68	24.00	0.040	-27.94	51.50	0.026	-31.80	79.00	0.041	-27.77
3.50	0.314	-10.07	24.50	0.026	-31.63	52.00	0.016	-36.16	79.50	0.039	-28.16
3.75	0.278	-11.13	25.00	0.023	-32.78	52.50	0.009	-40.91	80.00	0.037	-28.73
4.00	0.227	-12.90	25.50	0.036	-28.95	53.00	0.018	-35.06	80.50	0.034	-29.48
4.25	0.175	-15.16	26.00	0.039	-28.26	53.50	0.027	-31.42	81.00	0.030	-30.40
4.50	0.143	-16.87	26.50	0.028	-31.15	54.00	0.031	-30.21	81.50	0.027	-31.48
4.75	0.147	-16.68	27.00	0.018	-34.72	54.50	0.029	-30.90	82.00	0.023	-32.74
5.00	0.168	-15.51	27.50	0.030	-30.56	55.00	0.021	-33.72	82.50	0.020	-34.18
5.25	0.184	-14.70	28.00	0.037	-28.58	55.50	0.010	-39.89	83.00	0.016	-35.80
5.50	0.185	-14.67	28.50	0.031	-30.13	56.00	0.010	-40.10	83.50	0.013	-37.62
5.75	0.168	-15.50	29.00	0.018	-34.73	56.50	0.020	-33.91	84.00	0.010	-39.65
6.00	0.139	-17.16	29.50	0.023	-32.83	57.00	0.028	-31.03	84.50	0.008	-41.87
6.25	0.107	-19.39	30.00	0.034	-29.35	57.50	0.031	-30.16	85.00	0.006	-44.25
6.50	0.091	-20.87	30.50	0.034	-29.32	58.00	0.028	-30.92	85.50	0.005	-46.66
6.75	0.098	-20.15	31.00	0.023	-32.79	58.50	0.021	-33.57	86.00	0.004	-48.89
7.00	0.117	-18.63	31.50	0.016	-35.90	59.00	0.011	-39.51	86.50	0.003	-50.67
7.25	0.131	-17.66	32.00	0.027	-31.30	59.50	0.007	-43.54	87.00	0.003	-51.97
7.50	0.133	-17.55	32.50	0.034	-29.37	60.00	0.017	-35.56	87.50	0.002	-53.08
7.75	0.121	-18.33	33.00	0.029	-30.80	60.50	0.026	-31.79	88.00	0.002	-54.39
8.00	0.100	-19.97	33.50	0.017	-35.37	61.00	0.031	-30.17	88.50	0.002	-56.30
8.25	0.078	-22.13	34.00	0.019	-34.33	61.50	0.032	-29.99	89.00	0.001	-59.37
8.50	0.068	-23.32	34.50	0.030	-30.33	62.00	0.028	-31.15	89.50	0.001	-60.00