

### **Exhibit 7**

The purpose of this exhibit is to explain that there has been a substitution in the manufacturer and model number for the Dielectric TLS-V8 granted in the Construction Permit. The antenna constructed was a ATC-BCE780-8 manufactured by Alive Telecommunications and is electrically identical in the horizontal plane. Also, the antenna is elliptically polarized with the vertical component supplying values less than the horizontal. The horizontal and vertical patterns as well as electrical specifications for this antenna are supplied in this exhibit.

The differences do not effect the horizontal radiation pattern, effective radiated power or height of the center of radiation.

Submitted by,

A handwritten signature in black ink, appearing to read "Ben Miller". The signature is fluid and cursive, with the first name "Ben" being more prominent than the last name "Miller".

Ben Miller  
Technical Consultant



## ANTENNA SPECIFICATIONS



**CALL SIGN:** WMWC  
**CITY OF LICENSE:** Galesburg  
**STATE:** IL  
  
**ANTENNA TYPE:** EP Bcast Slot  
**ANTENNA MODEL:** ATC-BCE78O-8

### ELECTRICAL CHARACTERISTICS

<b>Channel(s):</b>	<b>8</b>
<b>Frequency Range(s) (MHz):</b>	<b>180-186</b>
<b>Azimuth Pattern:</b>	<b>Directivity</b> <b>dB</b>
Hpol	1.70   2.30
Vpol	2.30   3.62
<b>Elevation Pattern:</b>	
Peak of Beam:	8.10   9.08
Horizontal:	7.38   8.68
<b>V/H Ratio:</b>	0.35
<b>Peak Power Gain:</b>	13.77   11.39
Hpol	10.94   10.39
Vpol	3.83   5.83
<b>Gain at Horizontal</b>	12.55   10.99
Hpol	9.97   9.99
Vpol	3.49   5.43
<b>Electrical Beam Tilt:</b>	0.50 Degrees
<b>Polarization:</b>	Elliptical - 35% V-Pol
<b>Power Handling (Max. Input, kW):</b>	10kW
<b>Input Type:</b>	1-5/8" EIA
<b>VSWR (Maximum):</b>	1.09

### MECHANICAL CHARACTERISTICS

<b>Mount Type:</b>	Side Mount
<b>Length of Antenna:</b>	48.25 ft.
<b>Center of Radiation:</b>	24.1 ft.
<b>Radome Diameter:</b>	18.2"
<b>Color:</b>	White
<b>Climbing Device:</b>	None
<b>Weight:</b>	1,100 lbs.   Note 1,2
<b>Force x Proj Area:</b>	73 ft <sup>2</sup> Note 1,2

#### NOTES:

- 1 Weights, dimensions, and windload data are approximate and site dependent. Localized conditions may require design reevaluation to higher wind speed values than TIA/EIA specifications.
- 2 Loads are typical for antennas designed to 85 MPH basic wind speed per EIA-222F.



## SYSTEM SPECIFICATIONS



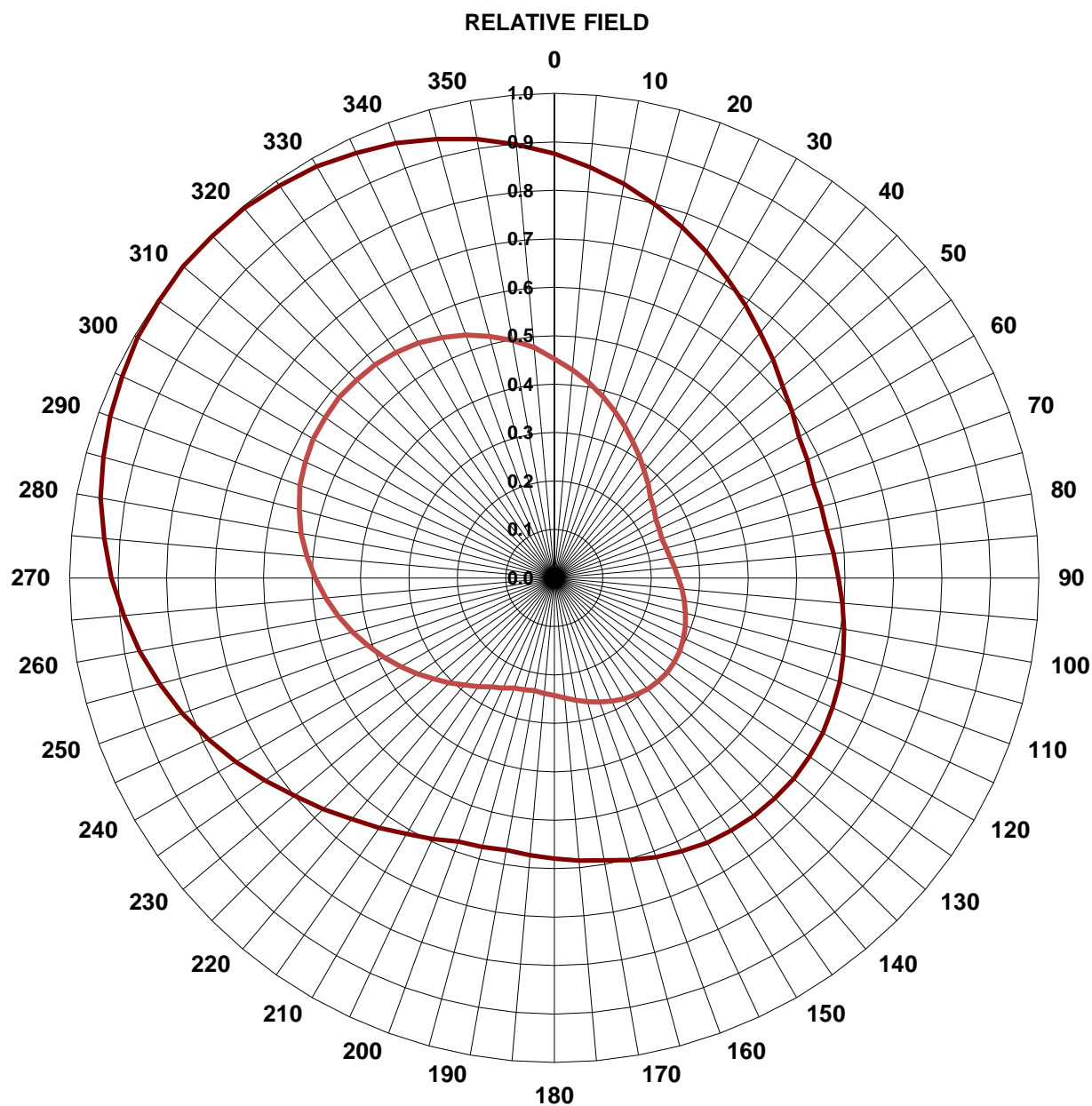
CALL SIGN:	WMWC
CITY OF LICENSE:	Galesburg
STATE:	IL
ANTENNA TYPE:	EP Bcast Slot
ANTENNA MODEL:	ATC-BCE78O-8

Channel(s):	8	
Frequency Range(s) (MHz):	180-183	
EFFECTIVE RADIATED POWER:	kW	dBk
H Pol	<u>23.00</u>	<u>13.62</u>
V Pol	<u>8.05</u>	<u>9.06</u>
ANTENNA PEAK POWER GAIN:		dBd
H Pol	<u>10.94</u>	<u>10.39</u>
V Pol	<u>3.83</u>	<u>5.83</u>
ANTENNA INPUT POWER:	kW	dBk
	<u>2.10</u>	<u>3.23</u>
TRANSMISSION LINE TYPE:		
LENGTH (ft.):	3" Flex Air Cable	1136
ATTENUATION/100 ft. (dB):		0.198
LENGTH (ft.):	1-5/8" Flex Air Cable	48
ATTENUATION/100 ft. (dB):		0.277
TOTAL LINE LOSS (dB):		2.382
LINE EFFICIENCY (%) :		57.78
TPO:	kW	dBk
	<u>3.64</u>	<u>5.61</u>

## AZIMUTH PATTERN



TYPE:	ATC-BCE780-8	
	Numeric	dB
Directivity:	1.70	2.30
Polarization:	Elliptical	
Channel:	8	
Location:	Galesburg	



## AZIMUTH PATTERN TABULATION

TYPE: ATC-BCE780-8

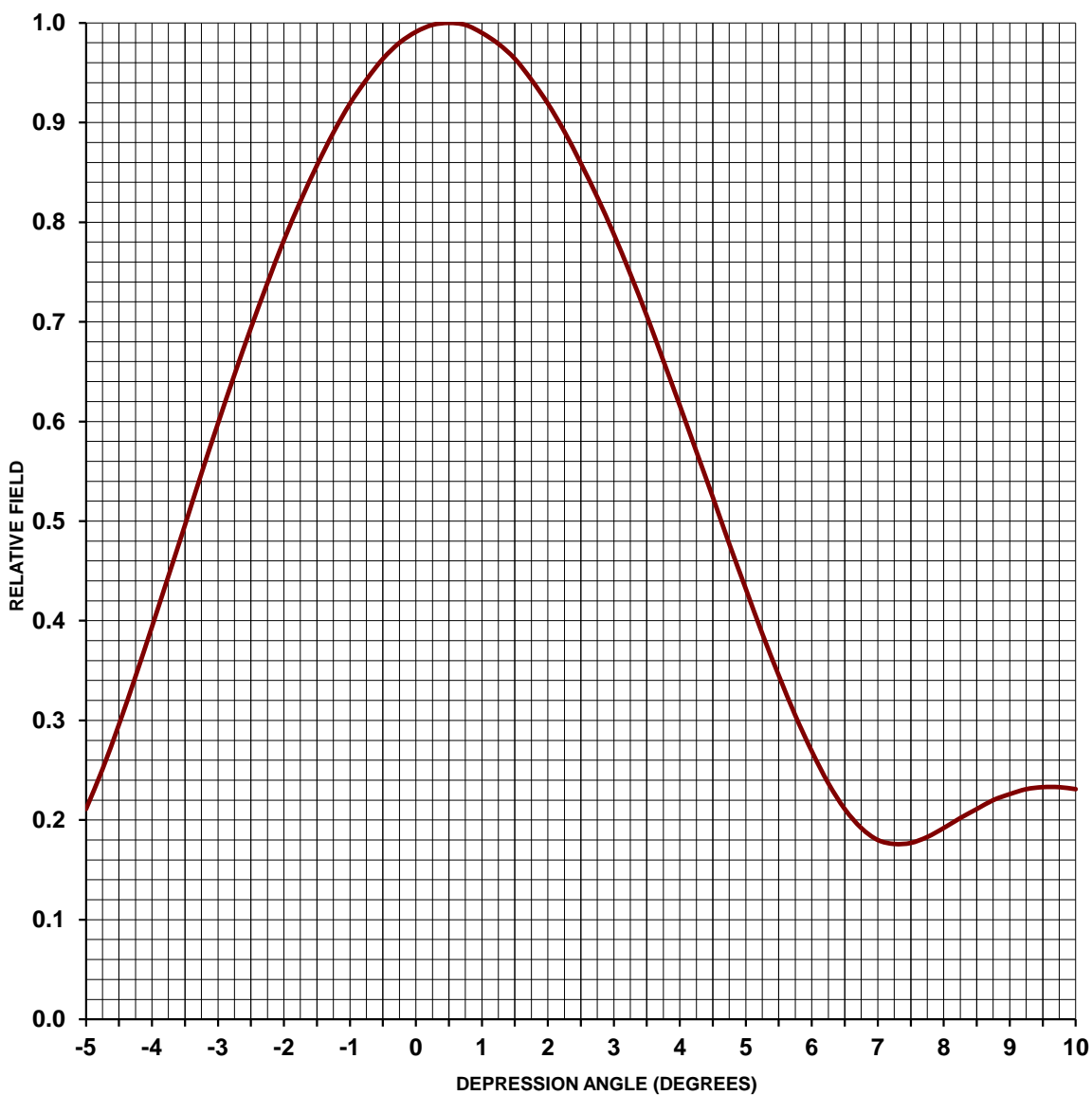


ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	0.876	-1.15	94	0.594	-4.53	188	0.571	-4.87	282	0.954	-0.41
2	0.876	-1.15	96	0.599	-4.45	190	0.570	-4.88	284	0.960	-0.35
4	0.857	-1.34	98	0.604	-4.37	192	0.571	-4.87	286	0.966	-0.30
6	0.845	-1.47	100	0.607	-4.34	194	0.573	-4.83	288	0.972	-0.25
8	0.839	-1.53	102	0.610	-4.30	196	0.576	-4.80	290	0.975	-0.22
10	0.826	-1.66	104	0.615	-4.23	198	0.578	-4.76	292	0.977	-0.20
12	0.826	-1.66	106	0.620	-4.16	200	0.579	-4.75	294	0.982	-0.16
14	0.805	-1.88	108	0.625	-4.09	202	0.583	-4.69	296	0.986	-0.12
16	0.792	-2.03	110	0.627	-4.05	204	0.591	-4.57	298	0.991	-0.08
18	0.778	-2.18	112	0.629	-4.03	206	0.598	-4.46	300	0.993	-0.06
20	0.771	-2.26	114	0.632	-3.99	208	0.606	-4.35	302	0.994	-0.05
22	0.764	-2.34	116	0.635	-3.94	210	0.610	-4.29	304	0.996	-0.04
24	0.750	-2.50	118	0.638	-3.90	212	0.615	-4.22	306	0.997	-0.02
26	0.735	-2.67	120	0.640	-3.88	214	0.625	-4.08	308	0.999	-0.01
28	0.721	-2.84	122	0.641	-3.87	216	0.635	-3.94	310	1.000	0.00
30	0.714	-2.93	124	0.642	-3.85	218	0.645	-3.81	312	1.000	0.00
32	0.707	-3.01	126	0.643	-3.83	220	0.650	-3.74	314	0.999	-0.01
34	0.694	-3.17	128	0.644	-3.82	222	0.656	-3.66	316	0.998	-0.02
36	0.681	-3.34	130	0.645	-3.81	224	0.668	-3.50	318	0.997	-0.03
38	0.668	-3.51	132	0.644	-3.82	226	0.681	-3.34	320	0.996	-0.03
40	0.661	-3.60	134	0.643	-3.83	228	0.693	-3.19	322	0.994	-0.05
42	0.655	-3.67	136	0.643	-3.84	230	0.699	-3.11	324	0.990	-0.08
44	0.644	-3.83	138	0.642	-3.85	232	0.707	-3.02	326	0.987	-0.12
46	0.632	-3.98	140	0.641	-3.86	234	0.722	-2.84	328	0.983	-0.15
48	0.621	-4.14	142	0.640	-3.88	236	0.737	-2.66	330	0.981	-0.17
50	0.615	-4.22	144	0.637	-3.91	238	0.752	-2.48	332	0.978	-0.20
52	0.611	-4.28	146	0.635	-3.95	240	0.759	-2.40	334	0.971	-0.25
54	0.603	-4.39	148	0.632	-3.98	242	0.766	-2.31	336	0.965	-0.31
56	0.595	-4.51	150	0.631	-4.00	244	0.781	-2.15	338	0.958	-0.37
58	0.587	-4.63	152	0.629	-4.03	246	0.795	-1.99	340	0.955	-0.40
60	0.583	-4.69	154	0.624	-4.09	248	0.810	-1.83	342	0.951	-0.44
62	0.581	-4.71	156	0.620	-4.16	250	0.817	-1.76	344	0.942	-0.52
64	0.578	-4.77	158	0.615	-4.22	252	0.824	-1.69	346	0.933	-0.60
66	0.574	-4.82	160	0.613	-4.25	254	0.837	-1.55	348	0.924	-0.68
68	0.571	-4.87	162	0.610	-4.29	256	0.850	-1.42	350	0.920	-0.72
70	0.569	-4.90	164	0.605	-4.36	258	0.863	-1.28	352	0.915	-0.78
72	0.569	-4.89	166	0.600	-4.44	260	0.869	-1.22	354	0.904	-0.88
74	0.570	-4.89	168	0.595	-4.52	262	0.875	-1.16	356	0.893	-0.99
76	0.570	-4.88	170	0.592	-4.55	264	0.886	-1.05	358	0.882	-1.10
78	0.571	-4.87	172	0.590	-4.58	266	0.897	-0.94	360	0.876	-1.15
80	0.571	-4.87	174	0.587	-4.63	268	0.908	-0.83			
82	0.573	-4.84	176	0.584	-4.67	270	0.914	-0.78			
84	0.577	-4.78	178	0.581	-4.72	272	0.919	-0.74			
86	0.580	-4.73	180	0.579	-4.75	274	0.928	-0.65			
88	0.584	-4.67	182	0.578	-4.76	276	0.937	-0.56			
90	0.586	-4.64	184	0.576	-4.80	278	0.946	-0.48			
92	0.589	-4.60	186	0.573	-4.83	280	0.951	-0.44			

# ELEVATION PATTERN



TYPE:	ATC-BCE780-8	
Directivity:	Numeric	dBd
Main Lobe:	8.10	9.1
Horizontal:	7.38	8.7
Beam Tilt:	0.50	
Polarization:	Elliptical	
Channel:	8	
Location:	Galesburg	



# ELEVATION PATTERN TABULATION

ATC-BCE780-8

-5 to 10 in 0.25 increments

10 to 90 in 0.50 increments



ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-5.00	0.211	-13.51	6.75	0.192	-14.33	27.00	0.034	-29.37	50.50	0.071	-22.97	74.00	0.040	-27.96
-4.75	0.251	-12.01	7.00	0.180	-14.89	27.50	0.015	-36.48	51.00	0.066	-23.61	74.50	0.042	-27.54
-4.50	0.296	-10.57	7.25	0.176	-15.09	28.00	0.010	-40.00	51.50	0.058	-24.73	75.00	0.045	-26.94
-4.25	0.344	-9.27	7.50	0.177	-15.04	28.50	0.028	-31.06	52.00	0.048	-26.38	75.50	0.048	-26.38
-4.00	0.394	-8.09	7.75	0.183	-14.75	29.00	0.044	-27.13	52.50	0.038	-28.40	76.00	0.050	-26.02
-3.75	0.445	-7.03	8.00	0.192	-14.33	29.50	0.059	-24.58	53.00	0.027	-31.37	76.50	0.052	-25.68
-3.50	0.496	-6.09	8.25	0.202	-13.89	30.00	0.072	-22.85	53.50	0.017	-35.39	77.00	0.054	-25.35
-3.25	0.548	-5.22	8.50	0.211	-13.51	30.50	0.082	-21.72	54.00	0.013	-37.72	77.50	0.056	-25.04
-3.00	0.598	-4.47	8.75	0.220	-13.15	31.00	0.087	-21.21	54.50	0.021	-33.56	78.00	0.057	-24.88
-2.75	0.647	-3.78	9.00	0.226	-12.92	31.50	0.089	-21.01	55.00	0.034	-29.37	78.50	0.057	-24.88
-2.50	0.694	-3.17	9.25	0.231	-12.73	32.00	0.087	-21.21	55.50	0.046	-26.74	79.00	0.058	-24.73
-2.25	0.739	-2.63	9.50	0.233	-12.65	32.50	0.082	-21.72	56.00	0.059	-24.58	79.50	0.058	-24.73
-2.00	0.782	-2.14	9.75	0.233	-12.65	33.00	0.073	-22.73	56.50	0.072	-22.85	80.00	0.057	-24.88
-1.75	0.821	-1.71	10.00	0.231	-12.73	33.50	0.061	-24.29	57.00	0.084	-21.51	80.50	0.057	-24.88
-1.50	0.857	-1.34	10.50	0.220	-13.15	34.00	0.048	-26.38	57.50	0.096	-20.35	81.00	0.056	-25.04
-1.25	0.890	-1.01	11.00	0.200	-13.98	34.50	0.033	-29.63	58.00	0.106	-19.49	81.50	0.054	-25.35
-1.00	0.919	-0.73	11.50	0.173	-15.24	35.00	0.015	-36.48	58.50	0.116	-18.71	82.00	0.052	-25.68
-0.75	0.943	-0.51	12.00	0.143	-16.89	35.50	0.004	-47.96	59.00	0.124	-18.13	82.50	0.050	-26.02
-0.50	0.964	-0.32	12.50	0.112	-19.02	36.00	0.020	-33.98	59.50	0.131	-17.65	83.00	0.048	-26.38
-0.25	0.980	-0.18	13.00	0.086	-21.31	36.50	0.037	-28.64	60.00	0.137	-17.27	83.50	0.045	-26.94
0.00	0.991	-0.08	13.50	0.072	-22.85	37.00	0.052	-25.68	60.50	0.141	-17.02	84.00	0.042	-27.54
0.25	0.998	-0.02	14.00	0.076	-22.38	37.50	0.066	-23.61	61.00	0.143	-16.89	84.50	0.040	-27.96
0.50	1.000	0.00	14.50	0.093	-20.63	38.00	0.078	-22.16	61.50	0.145	-16.77	85.00	0.036	-28.87
0.75	0.998	-0.02	15.00	0.113	-18.94	38.50	0.087	-21.21	62.00	0.145	-16.77	85.50	0.033	-29.63
1.00	0.990	-0.09	15.50	0.130	-17.72	39.00	0.093	-20.63	62.50	0.144	-16.83	86.00	0.029	-30.75
1.25	0.979	-0.18	16.00	0.142	-16.95	39.50	0.097	-20.26	63.00	0.142	-16.95	86.50	0.026	-31.70
1.50	0.964	-0.32	16.50	0.147	-16.65	40.00	0.098	-20.18	63.50	0.140	-17.08	87.00	0.022	-33.15
1.75	0.943	-0.51	17.00	0.146	-16.71	40.50	0.096	-20.35	64.00	0.136	-17.33	87.50	0.018	-34.89
2.00	0.919	-0.73	17.50	0.140	-17.08	41.00	0.091	-20.82	64.50	0.131	-17.65	88.00	0.014	-37.08
2.25	0.891	-1.00	18.00	0.127	-17.92	41.50	0.084	-21.51	65.00	0.125	-18.06	88.50	0.010	-40.00
2.50	0.859	-1.32	18.50	0.109	-19.25	42.00	0.075	-22.50	65.50	0.118	-18.56	89.00	0.007	-43.10
2.75	0.825	-1.67	19.00	0.088	-21.11	42.50	0.064	-23.88	66.00	0.112	-19.02	89.50	0.002	-53.98
3.00	0.788	-2.07	19.50	0.064	-23.88	43.00	0.051	-25.85	66.50	0.104	-19.66	90.00	0.001	-60.00
3.25	0.748	-2.52	20.00	0.040	-27.96	43.50	0.037	-28.64	67.00	0.097	-20.26			
3.50	0.706	-3.02	20.50	0.022	-33.15	44.00	0.022	-33.15	67.50	0.089	-21.01			
3.75	0.661	-3.60	21.00	0.028	-31.06	44.50	0.008	-41.94	68.00	0.082	-21.72			
4.00	0.616	-4.21	21.50	0.047	-26.56	45.00	0.008	-41.94	68.50	0.073	-22.73			
4.25	0.570	-4.88	22.00	0.066	-23.61	45.50	0.021	-33.56	69.00	0.066	-23.61			
4.50	0.524	-5.61	22.50	0.083	-21.62	46.00	0.035	-29.12	69.50	0.059	-24.58			
4.75	0.477	-6.43	23.00	0.094	-20.54	46.50	0.046	-26.74	70.00	0.052	-25.68			
5.00	0.432	-7.29	23.50	0.102	-19.83	47.00	0.056	-25.04	70.50	0.046	-26.74			
5.25	0.387	-8.25	24.00	0.104	-19.66	47.50	0.065	-23.74	71.00	0.042	-27.54			
5.50	0.345	-9.24	24.50	0.102	-19.83	48.00	0.071	-22.97	71.50	0.038	-28.40			
5.75	0.305	-10.31	25.00	0.095	-20.45	48.50	0.075	-22.50	72.00	0.036	-28.87			
6.00	0.269	-11.40	25.50	0.084	-21.51	49.00	0.077	-22.27	72.50	0.036	-28.87			
6.25	0.237	-12.51	26.00	0.070	-23.10	49.50	0.077	-22.27	73.00	0.036	-28.87			
6.50	0.211	-13.51	26.50	0.052	-25.68	50.00	0.075	-22.50	73.50	0.038	-28.40			