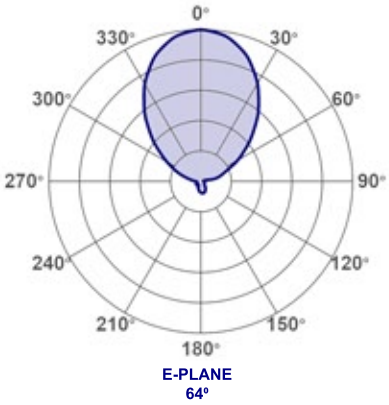
reliable, durable, customizable, affordable

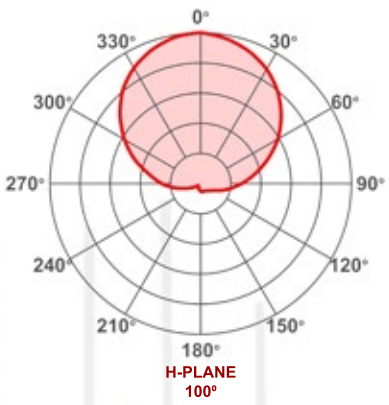
[broadcast antenna systems]

MODEL **PSIFM3Y**

3 ELEMENT YAGI FM ANTENNA

LOW COST | LOW WEIGHT & WIND AREA | HIGH POWER





Electrical Specifications

Frequency: 88 - 108 MHz

Gain: 5.01 (7.0 dBd)

VSWR: < 1.1:1 (± 200 KHz)

Polarization: Linear

HPBW: E-Plane 64°

H-Plane 100°

F/B: 20 dB

Element Input: 7-16 DIN Female

Power Rating: 1000 W

Mechanical Specifications

Physical Characteristics: Chromated Aluminum, Teflon

Mounting: Accomodates 1-1/2" to 4" Diameter Support

Positionable for H-Pol or V-Pol Operation

Dimensions: 58" x 3" x 60" (1473 x 76 x 1524mm)

Weight: 11 lbs (5 kg)

Wind Area: 2.23 ft^2 (.21 m^2)

Wind Survival Rating: 100 mph (160 km/h)

PSIFM3Y antenna model is an optimized frequency tuned, linearly polarized antenna intended for FM broadcast applications up to 1 kW of input power. Treated aluminum, plated brass, and teflon construction with hot dip galvanized mounting bracket make it suitable for any environment.

Standard with the PSIFM3Y is integrated mounting that will accomodate a mast from 1-1/2" to 4" in diameter, and can be mounted vertically or horizontally.

This model is also available in array configurations for custom patterns. For multi-element custom arrays, the PSIFM3Y includes a multi-power divider network, corresponding cables, and site specific mounting. Total weight, wind area, gain, and power rating are dependent on pattern requirements and configuration.

FM BROADCAST ANTENNAS

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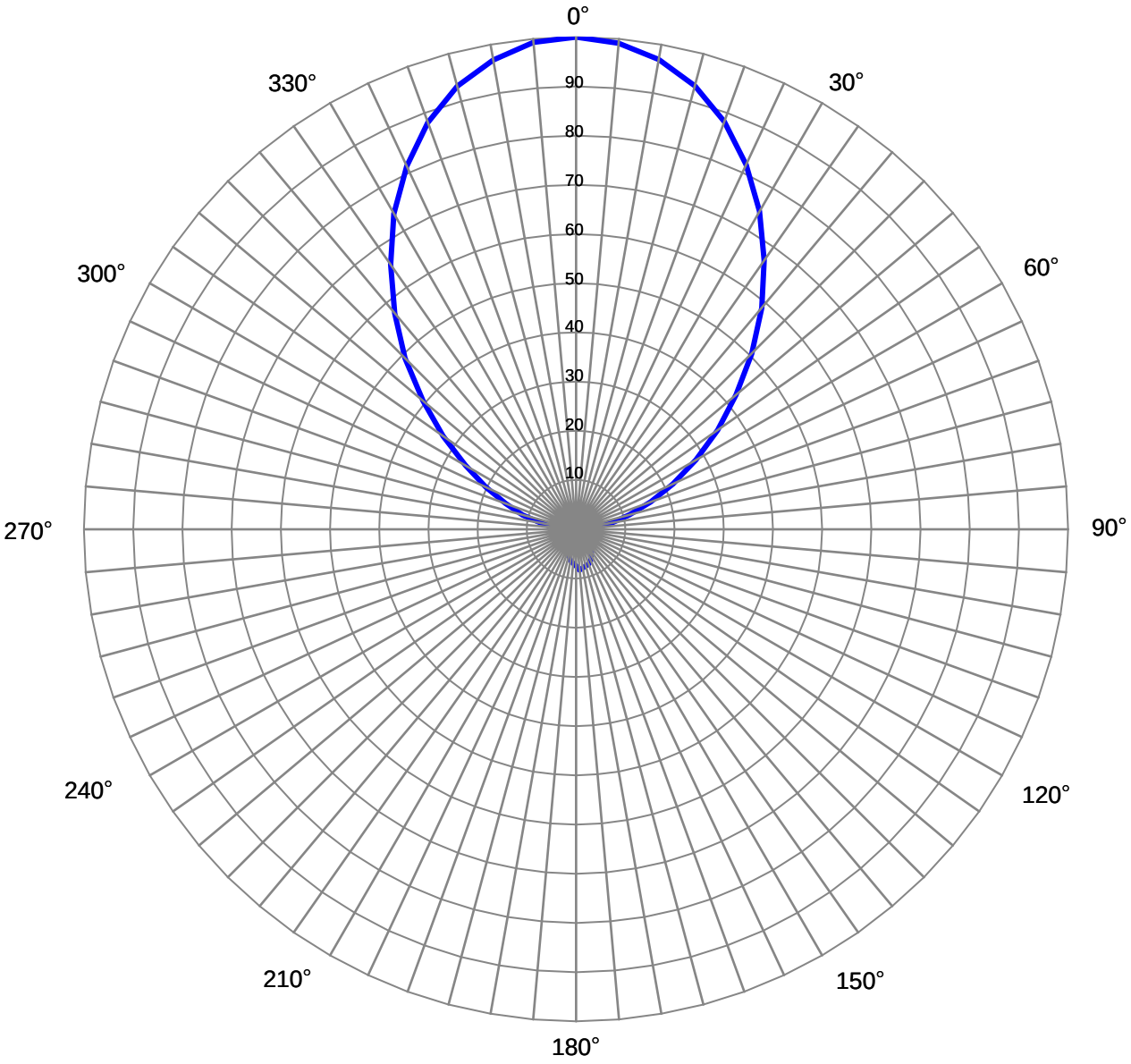
Propagation Systems, Inc.

Relative Field
Azimuth Plane Pattern



------- E-plane

Pattern Type:	**Relative Field**	Antenna Type:	**3-Element FM Yagi**
Antenna Model:	**PSIFM3Y**	Mount:	**Horizontal Mount**
Polarization:	**Linear**	Configuration:	**Single Element**
Gain:	**5.01 (7.0 dB)**	Beamwidth:	**64 Degrees**
Pattern:	**E-Plane**	Date:	**10/8/2025**

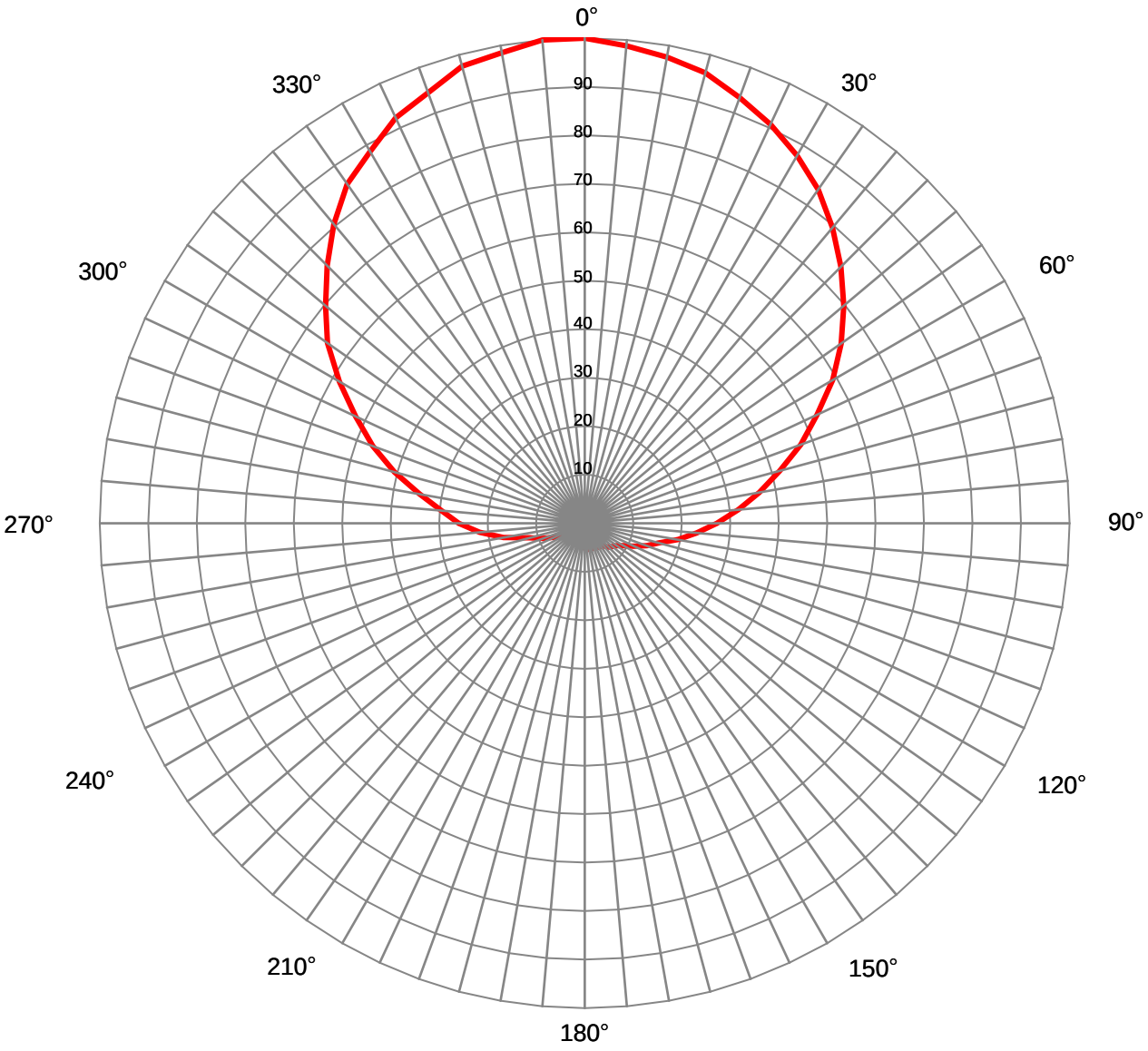
Relative Field Tabulation
Azimuth Plane Pattern

Antenna Model: PSIFM3Y
Horizontal Polarization (E-plane)
Horizontal Mount

Angle	Relative Field	Power Gain	Gain (dB)	Angle	Relative Field	Power Gain	Gain (dB)
0	1.000	5.010	7.00	180	0.075	0.028	-15.53
5	0.991	4.923	6.92	185	0.069	0.024	-16.19
10	0.969	4.705	6.73	190	0.064	0.021	-16.82
15	0.933	4.362	6.40	195	0.056	0.016	-18.04
20	0.882	3.894	5.90	200	0.049	0.012	-19.17
25	0.818	3.348	5.25	205	0.038	0.007	-21.35
30	0.746	2.790	4.46	210	0.031	0.005	-23.08
35	0.667	2.227	3.48	215	0.028	0.004	-23.92
40	0.587	1.729	2.38	220	0.026	0.003	-24.65
45	0.505	1.277	1.06	225	0.036	0.007	-21.84
50	0.424	0.902	-0.45	230	0.038	0.007	-21.42
55	0.352	0.620	-2.08	235	0.039	0.008	-21.08
60	0.282	0.397	-4.01	240	0.037	0.007	-21.58
65	0.217	0.236	-6.26	245	0.034	0.006	-22.45
70	0.162	0.131	-8.82	250	0.028	0.004	-23.93
75	0.113	0.064	-11.95	255	0.024	0.003	-25.42
80	0.073	0.027	-15.70	260	0.023	0.003	-25.88
85	0.040	0.008	-21.06	265	0.023	0.003	-25.64
90	0.018	0.002	-28.13	270	0.032	0.005	-22.97
95	0.015	0.001	-29.34	275	0.048	0.011	-19.39
100	0.023	0.003	-25.59	280	0.072	0.026	-15.81
105	0.030	0.005	-23.36	285	0.112	0.063	-11.99
110	0.028	0.004	-24.02	290	0.152	0.116	-9.37
115	0.032	0.005	-22.95	295	0.203	0.206	-6.86
120	0.029	0.004	-23.82	300	0.259	0.337	-4.72
125	0.031	0.005	-23.26	305	0.330	0.546	-2.63
130	0.029	0.004	-23.63	310	0.406	0.825	-0.84
135	0.041	0.008	-20.81	315	0.491	1.209	0.82
140	0.045	0.010	-19.96	320	0.573	1.643	2.16
145	0.056	0.015	-18.11	325	0.657	2.160	3.35
150	0.061	0.018	-17.36	330	0.740	2.743	4.38
155	0.070	0.025	-16.09	335	0.814	3.316	5.21
160	0.075	0.028	-15.50	340	0.880	3.876	5.88
165	0.077	0.030	-15.22	345	0.932	4.355	6.39
170	0.080	0.032	-14.97	350	0.968	4.696	6.72
175	0.083	0.035	-14.58	355	0.993	4.942	6.94

Propagation Systems, Inc.

Relative Field
Azimuth Plane Pattern



Pattern Type:	**Relative Field**	Type:	**3-Element FM Yagi**
Antenna Model:	**PSIFM3Y**	Mount:	**Vertical Mount**
Polarization:	**Linear**	Configuration:	**Single Element**
Gain:	**5.01 (7.0 dB)**	Beamwidth:	**100 Degrees**
Pattern:	**H-Plane**	Date:	**10/8/2025**

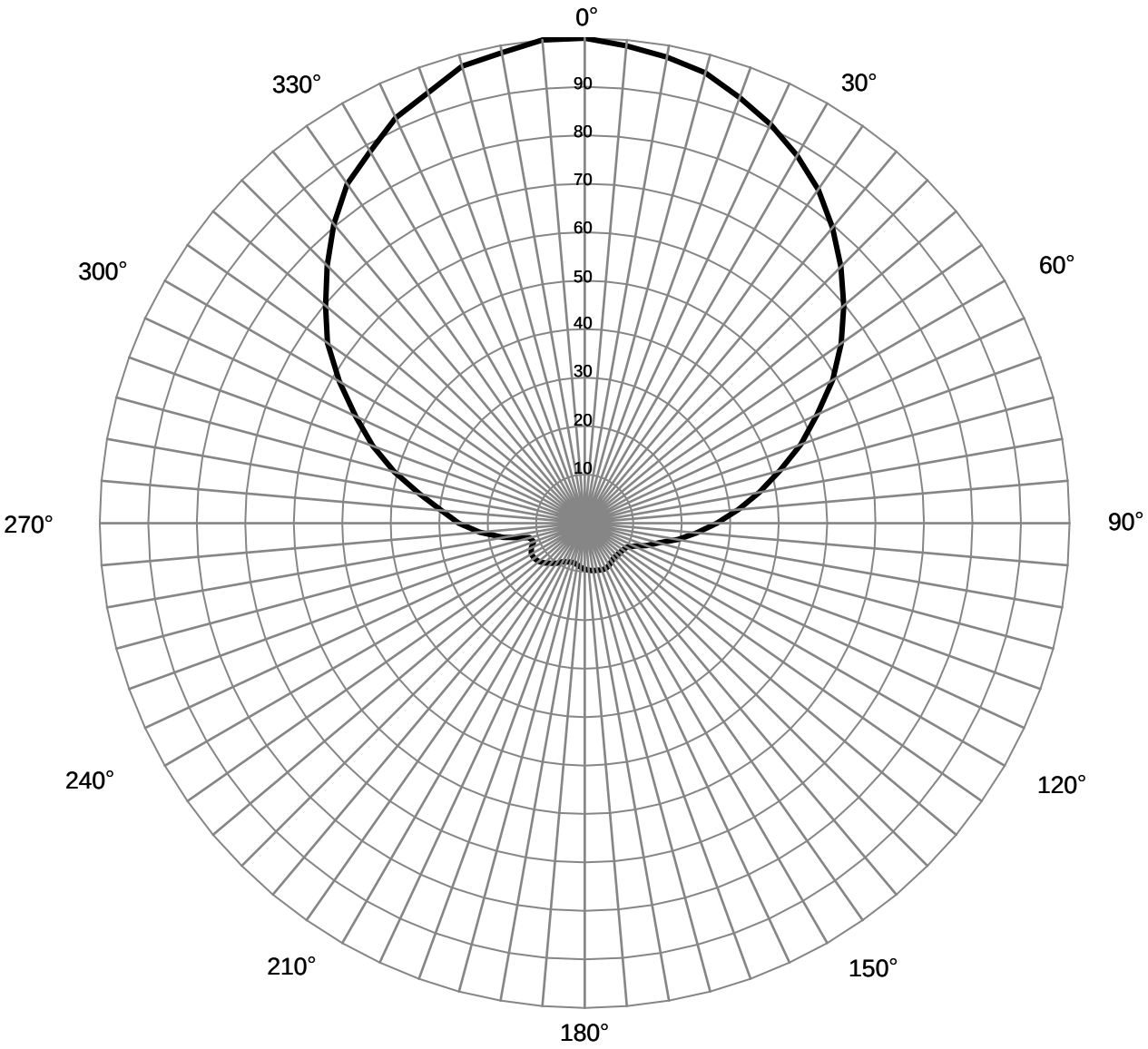
Relative Field Tabulation
Azimuth Plane Pattern

Antenna Model: PSIFM3Y
Vertical Polarization (H-plane)
Vertical Mount

Angle	Relative Field	Power Gain	Gain (dB)	Angle	Relative Field	Power Gain	Gain (dB)
0	1.000	5.010	7.00	180	0.052	0.013	-18.72
5	0.988	4.890	6.89	185	0.045	0.010	-19.87
10	0.976	4.773	6.79	190	0.040	0.008	-20.93
15	0.962	4.632	6.66	195	0.038	0.007	-21.40
20	0.934	4.374	6.41	200	0.039	0.007	-21.27
25	0.907	4.121	6.15	205	0.037	0.007	-21.57
30	0.876	3.840	5.84	210	0.032	0.005	-22.83
35	0.840	3.534	5.48	215	0.021	0.002	-26.61
40	0.795	3.169	5.01	220	0.020	0.002	-27.09
45	0.748	2.800	4.47	225	0.033	0.005	-22.71
50	0.698	2.438	3.87	230	0.023	0.003	-25.75
55	0.646	2.090	3.20	235	0.031	0.005	-23.31
60	0.591	1.750	2.43	240	0.044	0.010	-20.05
65	0.529	1.403	1.47	245	0.069	0.024	-16.19
70	0.475	1.128	0.52	250	0.092	0.042	-13.76
75	0.416	0.869	-0.61	255	0.118	0.069	-11.59
80	0.366	0.671	-1.73	260	0.170	0.144	-8.40
85	0.318	0.508	-2.95	265	0.218	0.237	-6.24
90	0.273	0.373	-4.29	270	0.260	0.337	-4.72
95	0.233	0.271	-5.67	275	0.297	0.441	-3.56
100	0.195	0.191	-7.19	280	0.346	0.599	-2.22
105	0.157	0.124	-9.07	285	0.406	0.825	-0.83
110	0.136	0.093	-10.31	290	0.465	1.085	0.35
115	0.112	0.063	-12.02	295	0.521	1.362	1.34
120	0.092	0.043	-13.69	300	0.584	1.708	2.33
125	0.080	0.032	-14.89	305	0.648	2.102	3.23
130	0.074	0.028	-15.56	310	0.697	2.437	3.87
135	0.070	0.025	-16.09	315	0.751	2.822	4.51
140	0.061	0.019	-17.24	320	0.805	3.246	5.11
145	0.059	0.017	-17.60	325	0.853	3.649	5.62
150	0.057	0.016	-17.84	330	0.885	3.925	5.94
155	0.056	0.016	-18.06	335	0.922	4.259	6.29
160	0.055	0.015	-18.17	340	0.944	4.466	6.50
165	0.054	0.015	-18.30	345	0.975	4.767	6.78
170	0.054	0.015	-18.31	350	0.985	4.860	6.87
175	0.054	0.015	-18.28	355	1.000	5.010	7.00

Propagation Systems, Inc.

Relative Field
Azimuth Plane Pattern



Pattern Type:	**Relative Field**	Type:	**3-Element FM Yagi**
Antenna Model:	**PSIFM3Y**	Mount:	**45 Degree Slant Mount**
Polarization:	**Slant 45**	Configuration:	**Single Element**
Gain:	**2.50 (3.98 dB)**	Beamwifth:	**100 Degrees**
Pattern:	**Combined E/H**	Date:	**10/8/2025**

Relative Field Tabulation
Azimuth Plane Pattern

Antenna Model: PSIFM3Y

Slant Polarization (45 degree)

Combined H-pol and V-pol component

Angle	Relative Field	Power Gain	Gain (dB)	Angle	Relative Field	Power Gain	Gain (dB)
0	1.000	2.500	3.98	180	0.095	0.022	-16.49
5	0.988	2.440	3.87	185	0.092	0.021	-16.79
10	0.976	2.382	3.77	190	0.087	0.019	-17.20
15	0.962	2.311	3.64	195	0.085	0.018	-17.47
20	0.934	2.183	3.39	200	0.086	0.018	-17.36
25	0.907	2.056	3.13	205	0.088	0.020	-17.09
30	0.876	1.916	2.82	210	0.092	0.021	-16.71
35	0.840	1.763	2.46	215	0.101	0.026	-15.93
40	0.795	1.582	1.99	220	0.108	0.029	-15.33
45	0.748	1.397	1.45	225	0.117	0.034	-14.68
50	0.698	1.217	0.85	230	0.123	0.038	-14.21
55	0.646	1.043	0.18	235	0.127	0.040	-13.96
60	0.591	0.873	-0.59	240	0.127	0.040	-13.94
65	0.529	0.700	-1.55	245	0.121	0.037	-14.35
70	0.475	0.563	-2.50	250	0.112	0.031	-15.03
75	0.416	0.434	-3.63	255	0.118	0.035	-14.61
80	0.366	0.335	-4.75	260	0.170	0.072	-11.42
85	0.318	0.253	-5.96	265	0.218	0.118	-9.26
90	0.273	0.186	-7.30	270	0.260	0.168	-7.74
95	0.233	0.135	-8.69	275	0.297	0.220	-6.57
100	0.195	0.095	-10.21	280	0.346	0.299	-5.24
105	0.157	0.062	-12.09	285	0.406	0.412	-3.85
110	0.136	0.046	-13.33	290	0.465	0.541	-2.67
115	0.112	0.031	-15.04	295	0.521	0.680	-1.68
120	0.099	0.025	-16.07	300	0.584	0.852	-0.69
125	0.096	0.023	-16.33	305	0.648	1.049	0.21
130	0.094	0.022	-16.52	310	0.697	1.216	0.85
135	0.093	0.022	-16.62	315	0.751	1.408	1.49
140	0.093	0.022	-16.62	320	0.805	1.620	2.09
145	0.096	0.023	-16.34	325	0.853	1.821	2.60
150	0.101	0.025	-15.97	330	0.885	1.959	2.92
155	0.104	0.027	-15.72	335	0.922	2.125	3.27
160	0.103	0.027	-15.75	340	0.944	2.228	3.48
165	0.101	0.025	-15.94	345	0.975	2.379	3.76
170	0.100	0.025	-16.05	350	0.985	2.425	3.85
175	0.097	0.024	-16.26	355	1.000	2.500	3.98