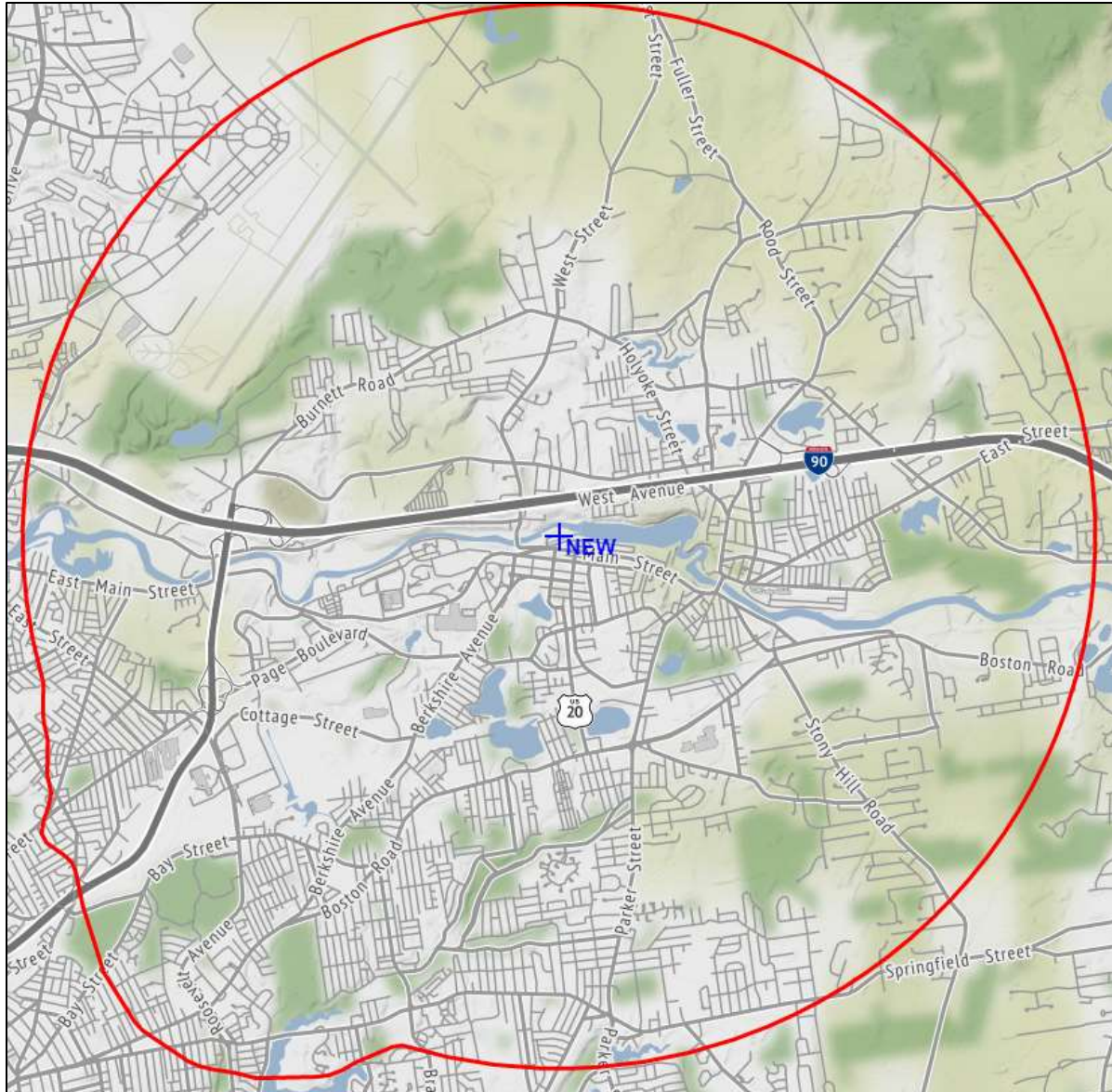




REC Networks
11541 Riverton Wharf Rd.
Mardela Springs, MD 21837
844.REC.LPFM/202.621.2355
recnet.com

CP Modify for **WIOM-LP**
SPRINGFIELD, MA
CATHOLIC COMMUNICATIONS CORP.
BMPL-20171003AAG

PROPOSED 60dBu F(50,50) SERVICE CONTOUR



SPRINGFIELD, MA – Channel 269L1 (101.7 MHz) ~ ERP 0.100 kW

Elev: 47 meters ~ RCAGL: 37 meters ~ RCAMSL: 84 meters ~ HAAT: minus ?m (FCC30)

Overall tower height: 39 meters – ASR: None required (passes glide slope)

NAD27 Latitude: 42° 09' 40.9" NL – Longitude: 72° 30' 15.7" WL

NAD83 Latitude: 42° 09' 41.2" NL – Longitude: 72° 30' 14.0" WL

No AM stations within 3 km of proposed site.

R E C NETWORKS
CHANNEL REPORT

NAD27 LATITUDE: 42 - 09' 40.9" - LONGITUDE: 72 - 30' 15.7"
CHANNEL: 269 - CLASS: LPFM(LP-100)

CHAN	FREQ	CALL	LOCATION	CLS	DIST	REQ	CLEAR	BEAR
266	101.1	WHYA : CODCOMM, INC. * Station carries radio reading service.	MASHPEE	MA A	186.5	29.0	157.5	105.7
267	101.3	WKCI-FM : CC LICENSES, LLC	HAMDEN	CT B	88.8	67.0	21.8	204.4
267	101.3	W267CD : FIRST CLASS RADIO CORP.	MILFORD	MA D6	79.0	21.0	58.0	90.2
267	101.3	NEW : P. & M. RADIO, LLC	GREENFIELD	MA D4	48.1	14.0	34.1	344.8
268	101.5	WRSY : SAGA COMMUNICATIONS OF NEW ENGLAND, LLC	MARLBORO	VT A	77.5	56.0	21.5	348.8
268	101.5	WWBB : CLEAR CHANNEL BROADCASTING LICENSES, INC.	PROVIDENCE	RI A	98.0	56.0	42.0	112.1
268	101.5	W268CQ : BLOUNT MASSCOM, INC.	LEICESTER	MA D6	52.5	28.0	24.5	72.3
268	101.5	NEW : SAGA COMMUNICATIONS OF NEW ENGLAND, LLC	NORTHAMPTON	MA D5	27.4	21.0	6.4	329.4
268	101.5	WPDH : TOWNSQUARE MEDIA	POUGHKEEPSIE POUGHKEEPSIE LICENSES, LLC	NY B	133.1	97.0	36.1	248.7
269	101.7	WBRK-FM : WBRK, INC.	PITTSFIELD	MA A	72.0	67.0	5.0	299.2
269	101.7	DWOGS-LP : SPIRITUAL RENEWAL CENTER, INC.	SOUTH WINDSOR	CT L1	40.3	24.0	16.3	174.3
269	101.7	WBWL : AMFM RADIO LICENSES, LLC	LYNN	MA B1	120.5	87.0	33.5	75.1
269	101.7	W269DE : GOIS BROADCASTING OF CONNECTICUT, LLC	NEW BRITAIN	CT D3	55.6	32.0	23.6	207.1
269	101.7	WCFV-LP : CALVARY FELLOWSHIP OF WILLIMANTIC	WILLIMANTIC	CT L1	64.5	24.0	40.5	151.5
269	101.7	WIOM-LP : CATHOLIC COMMUNICATIONS CORPORATION : Currently authorized facility	SPRINGFIELD	MA L1	0.1	24.0	-23.9	246.7
269	101.7	WNYQ : 6 JOHNSON ROAD LICENSES, INC.	HUDSON FALLS	NY A	165.2	67.0	98.2	325.3
269	101.7	WBEA : LRS RADIO, LLC	SOUTHOLD	NY A	143.6	67.0	76.6	182.3
270	101.9	WKKN : GREAT EASTERN RADIO, LLC	WESTMINSTER	VT A	97.5	56.0	41.5	6.5
271	102.1	WAQY : SAGA COMMUNICATIONS OF NEW ENGLAND, LLC	SPRINGFIELD	MA B	18.7	67.0	-48.3	242.2

WAIVER OF §73.807(a) REQUEST
SHORT-SPACED SECOND ADJACENT CHANNEL

NEW-LP
Springfield, Massachusetts
Channel 269L1 (101.7 MHz)

The proposed modified LPFM facility (“LPFM site”) meets all §73.807 minimum spacing requirements with the exception of WAQY, Springfield Massachusetts (Facility ID # 58551).

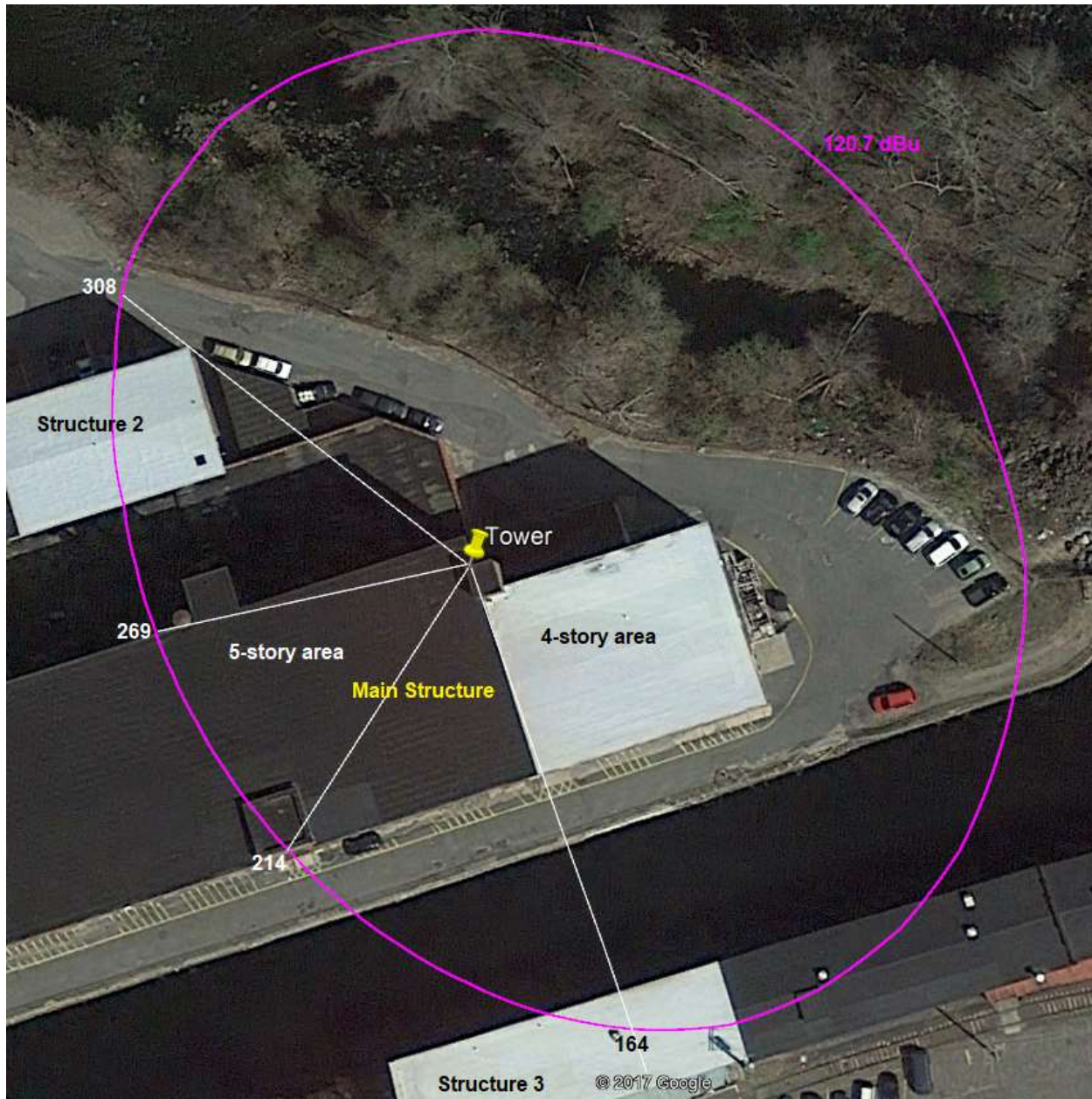
WAQY operates on Channel 271B with 17 kW effective radiated power (ERP) at 238 meters height above average terrain (HAAT) into a non-directional antenna. WAQY places an 80.7 dBu service contour at the LPFM site.

The proposed LPFM antenna radiation center will be at 37 meters above ground level and proposes operation at 100 watts ERP.

Using the U/D method¹, the proposed LPFM station is predicted to produce an undesired interference overlap in respect to WAQY to the proposed LPFM station’s 120.7 dBu F[50, 10] interfering contour (“overlap zone”). At 100 watts ERP, the overlap zone extends to 65 meters from the radiation center. The applicant is proposing to operate a two-bay Nicom BKG-88 at half-wave spacing (“BKG-88”). Using the published directional pattern for the BKG-88, the overlap zone is not a perfect circle as it does not distribute power fully omni-directional.

Within the overlap zone using the BKG-88 at a 60-degree rotation, there are 3 occupied structures as depicted in the following satellite photograph:

¹ - See *Living Way Ministries, Inc.* Memorandum Opinion and Order, 17 FCC Rcd 17054, 17056 (2002) at 5. *Recon denied* 23 FCC Rcd 15070 (2008).



Main Structure is a 5-story warehouse building with an attached 4-story adjunct on the east side of the building. Since this building used to be as a factory, there are very high ceilings on every floor. The floor of the 5th story of the building is at 19.2 meters above ground level. This means that the highest point of occupation would be at 21.2 meters above ground level (to accommodate the height of an average person). In the 4-story adjunct of the Main Structure, the 4th floor is at 12.4 meters above ground level making the highest occupied point 14.4 meters above ground level. On the roof of the structure is an equipment penthouse of 3 meters in height. The tower will be mounted on a structure attached to the penthouse section.

Structure 2 is a 3-story warehouse building with very high ceilings. This building is 14 meters to the roof line with the highest occupied point being at 10.33 meters above ground level.

Structure 3 is a single story building at a higher elevation. Compensating for the increase in elevation, the highest occupied point in this building is 7 meters above ground level based on elevation at the tower base.

Applicant proposes to use directional characteristics of BKG-88 antenna

Using the manufacturer's published directional pattern for the BKG-88 with 100 watts to the farthest lobe, we will evaluate protections individually in two different sectors:

Radii	Maximum ERP along these radials (watts):
308~164	100
164~308	70

308~164 degrees

In this area, the maximum ERP is 100 watts. At 100 watts ERP, the overlap zone does not reach any point lower than 18 meters above ground level (in respect to the elevation at the LPFM site). This means that the overlap zone will not reach any occupied area of structure 2 (highest point 10.33) and structure 3 (highest point 7 meters). In addition, the overlap zone will not reach the 4-story adjunct of the main structure (highest point 14.4 meters).

Proposed Power:	0.1 kW
Antenna Height AGL:	37 m
Interference Contour:	120.7 dBu
Artificial RX Antenna Height:	18 m
Antenna Type:	Nicom BKG77/BKG88 - 2 bay Half-wave spacing

Angle Below Horizon	Antenna Relative Field	ERP in kW	ERP in dBk	Distance from Ant to Interference Contour	Distance from Ant to Artificial Plane	Field Strength in dBu @ Artificial Plane	Distance from Ant to Ground Level	Field Strength in dBu @ Ground Level
5	0.988	0.098	-10.10	63.94	218.00	110.05	424.53	104.26
10	0.952	0.091	-10.43	61.61	109.42	115.71	213.07	109.92
15	0.881	0.078	-11.10	57.01	73.41	118.50	142.96	112.72
20	0.791	0.063	-12.04	51.19	55.55	119.99	108.18	114.20
25	0.686	0.047	-13.27	44.39	44.96	120.59	87.55	114.80
30	0.577	0.033	-14.78	37.34	38.00	120.55	74.00	114.76
35	0.463	0.021	-16.69	29.96	33.13	119.83	64.51	114.04
40	0.354	0.013	-19.02	22.91	29.56	118.49	57.56	112.70
45	0.256	0.007	-21.84	16.57	26.87	116.50	52.33	110.71
50	0.174	0.003	-25.19	11.26	24.80	113.84	48.30	108.05
55	0.110	0.001	-29.17	7.12	23.19	110.44	45.17	104.65
60	0.061	0.000	-34.29	3.95	21.94	105.80	42.72	100.01
65	0.028	0.000	-41.06	1.81	20.96	99.43	40.82	93.64
70	0.007	0.000	-53.10	0.45	20.22	87.71	39.37	81.92
75	0.004	0.000	-57.96	0.26	19.67	83.09	38.31	77.30
80	0.008	0.000	-51.94	0.52	19.29	89.27	37.57	83.48
85	0.008	0.000	-51.94	0.52	19.07	89.37	37.14	83.58
90	0.009	0.000	-50.92	0.58	19.00	90.43	37.00	84.64

This leaves us with the 5-story portion of the Main Structure. As mentioned before, the highest occupied point on this structure is at 21.2 meters, therefore a showing must be made that the overlap zone does not reach any point lower than 21.2 meters above ground level to demonstrate non-interference to WAQY.

164~308 degrees

Within this area, the ERP does not exceed 70 watts. According to the manufacturer's published elevation pattern for the BKG-88, we can show that the overlap will not reach a point of 21.2 meters above ground level or any point below.

Proposed Power:	0.07 kW
Antenna Height AGL:	37 m
Interference Contour:	120.7 dBu
Artificial RX Antenna Height:	21.2 m
Antenna Type:	Nicom BKG77/BKG88 - 2 bay Half-wave spacing

Angle Below Horizon	Antenna Relative Field	ERP in kW	ERP in dBk	Distance from Ant to Interference Contour	Distance from Ant to Artificial Plane	Field Strength in dBu @ Artificial Plane	Distance from Ant to Ground Level	Field Strength in dBu @ Ground Level
5	0.988	0.068	-11.65	53.49	181.28	110.10	424.53	102.71
10	0.952	0.063	-11.98	51.54	90.99	115.76	213.07	108.37
15	0.881	0.054	-12.65	47.70	61.05	118.56	142.96	111.17
20	0.791	0.044	-13.59	42.83	46.20	120.04	108.18	112.65
25	0.686	0.033	-14.82	37.14	37.39	120.64	87.55	113.25
30	0.577	0.023	-16.33	31.24	31.60	120.60	74.00	113.21
35	0.463	0.015	-18.24	25.07	27.55	119.88	64.51	112.49
40	0.354	0.009	-20.57	19.17	24.58	118.54	57.56	111.15
45	0.256	0.005	-23.38	13.86	22.34	116.55	52.33	109.16
50	0.174	0.002	-26.74	9.42	20.63	113.89	48.30	106.50
55	0.110	0.001	-30.72	5.96	19.29	110.49	45.17	103.10
60	0.061	0.000	-35.84	3.30	18.24	105.86	42.72	98.46
65	0.028	0.000	-42.61	1.52	17.43	99.49	40.82	92.10
70	0.007	0.000	-54.65	0.38	16.81	87.76	39.37	80.37
75	0.004	0.000	-59.51	0.22	16.36	83.14	38.31	75.75
80	0.008	0.000	-53.49	0.43	16.04	89.33	37.57	81.94
85	0.008	0.000	-53.49	0.43	15.86	89.43	37.14	82.04
90	0.009	0.000	-52.46	0.49	15.80	90.48	37.00	83.09

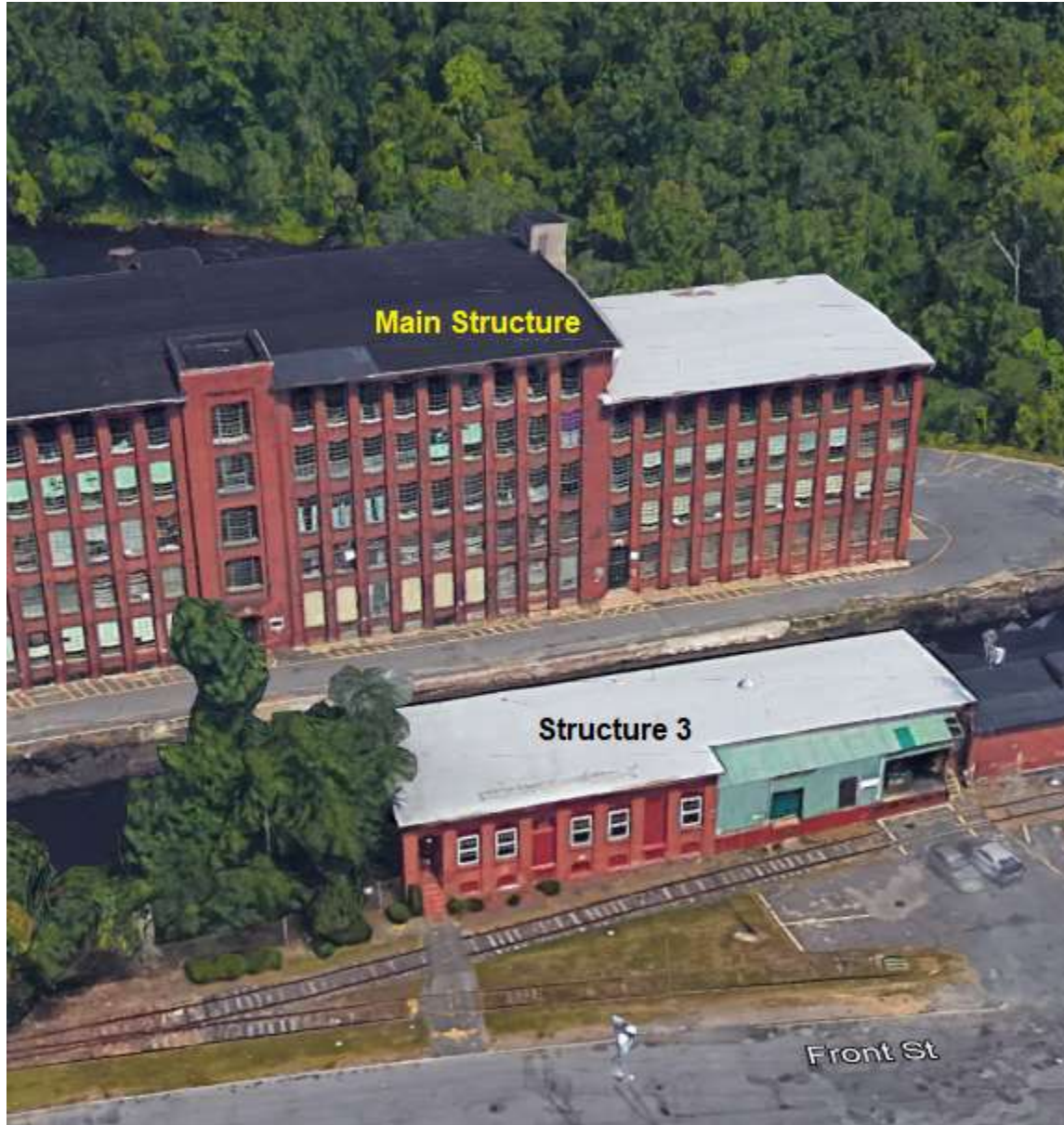
§73.807(e) of the Commission's Rules states that the Commission will entertain requests to waive the second adjacent channel separations on a case-by-case basis and in each case, the LPFM station must take into account *all relevant factors* that its proposed operations will not result in interference to *any radio service*.² In this request, we have demonstrated that based on the maximum ERP of 100 watts, interference will not reach Structures 2 or 3 as well as the 4-story portion of the main structure. In addition, we have shown that using the directional characteristics of the Nicom BKG-88 antenna, we can demonstrate that at no point along the bearings between the tower base and the edge of the roof of the Main Structure that the ERP exceeds 70 watts ERP and based on a the published elevation patterns for the 2-bay Nicom

² - 47 C.F.R. §73.807(e) (*emphasis added*).

BKG-88 antenna, a showing can be made that interference will not reach 21.2 meters above ground level, the highest occupied point in this hi-ceiling structure. In addition, the interference from the proposed LPFM operation does not reach any other structure not mentioned nor does it reach any 4-lane highways. Based on the information presented, the applicant requests a waiver of §73.807(a) in respect to WAQY, Springfield, Massachusetts.

Prepared by
Michelle Bradley
REC Networks
October 26, 2017

LOOKING NORTH



LOOKING SOUTHWEST

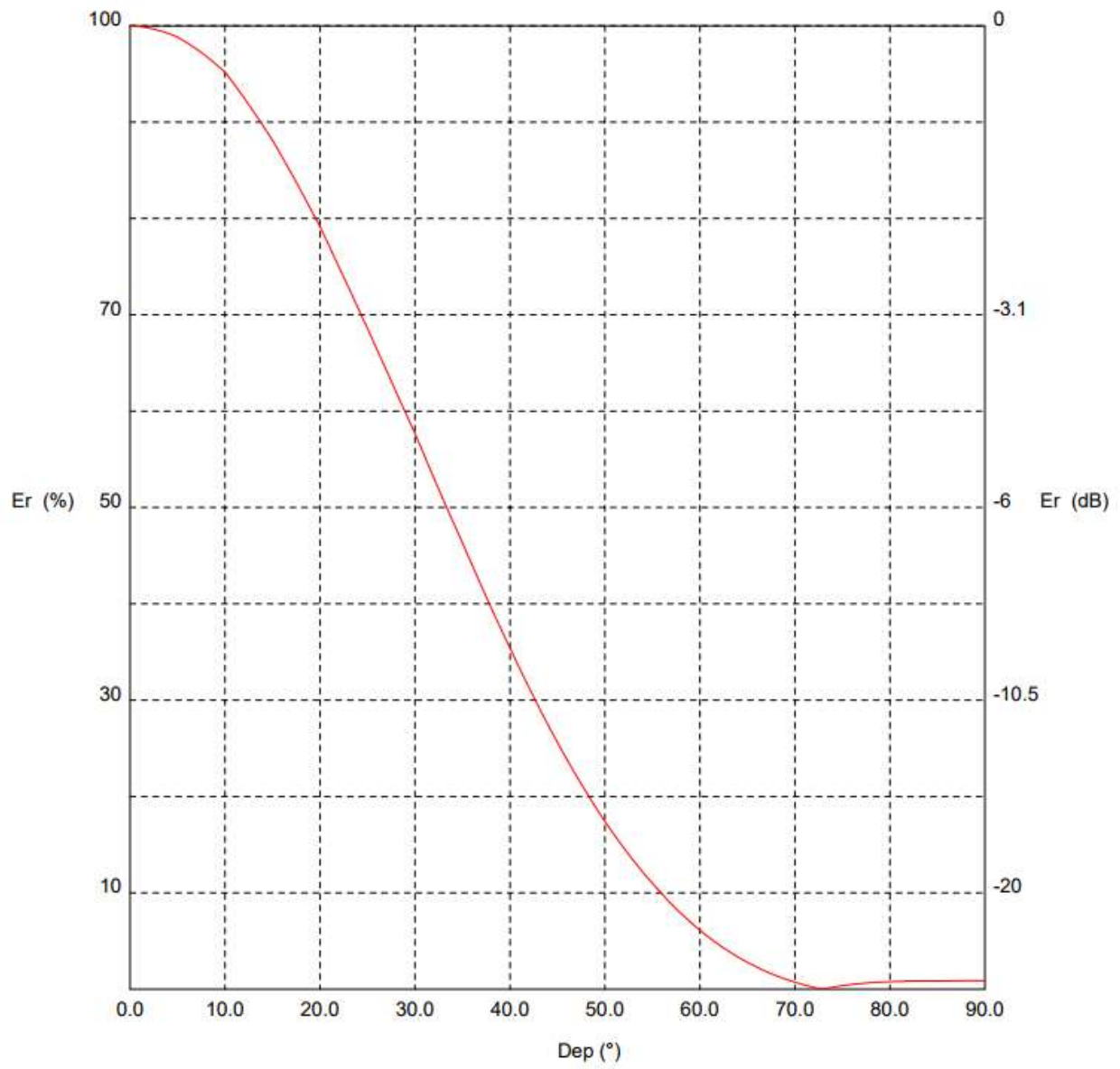


NICOM BKG-88 MANUFACTUER'S ELEVATION PATTERN FOR 2-BAY AT HALF-WAVE SPACING

Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
0.0	100.0	873.0	30.0	57.7	290.5	60.0	6.1	3.3
0.5	100.0	872.6	30.5	56.5	278.8	60.5	5.7	2.8
1.0	99.9	871.8	31.0	55.3	267.5	61.0	5.3	2.5
1.5	99.9	870.6	31.5	54.2	256.4	61.5	5.0	2.1
2.0	99.8	869.1	32.0	53.0	245.6	62.0	4.6	1.9
2.5	99.7	867.2	32.5	51.9	235.2	62.5	4.3	1.6
3.0	99.5	865.0	33.0	50.8	225.0	63.0	3.9	1.4
3.5	99.4	862.4	33.5	49.6	215.1	63.5	3.6	1.2
4.0	99.2	859.4	34.0	48.5	205.6	64.0	3.3	1.0
4.5	99.0	856.2	34.5	47.4	196.3	64.5	3.1	0.8
5.0	98.8	852.6	35.0	46.3	187.3	65.0	2.8	0.7
5.5	98.5	847.8	35.5	45.2	178.1	65.5	2.5	0.6
6.0	98.2	842.7	36.0	44.0	169.3	66.0	2.3	0.5
6.5	97.9	837.2	36.5	42.9	160.8	66.5	2.0	0.4
7.0	97.6	831.5	37.0	41.8	152.6	67.0	1.8	0.3
7.5	97.2	825.4	37.5	40.7	144.7	67.5	1.6	0.2
8.0	96.9	819.1	38.0	39.6	137.0	68.0	1.4	0.2
8.5	96.5	812.5	38.5	38.5	129.7	68.5	1.2	0.1
9.0	96.1	805.6	39.0	37.5	122.7	69.0	1.0	0.1
9.5	95.6	798.4	39.5	36.4	115.9	69.5	0.9	0.1
10.0	95.2	790.9	40.0	35.4	109.5	70.0	0.7	0.0
10.5	94.5	780.3	40.5	34.4	103.1	70.5	0.6	0.0
11.0	93.9	769.6	41.0	33.3	96.9	71.0	0.4	0.0
11.5	93.2	758.6	41.5	32.3	91.1	71.5	0.3	0.0
12.0	92.5	747.5	42.0	31.3	85.5	72.0	0.2	0.0
12.5	91.8	736.2	42.5	30.3	80.2	72.5	0.1	0.0
13.0	91.1	724.8	43.0	29.3	75.1	73.0	0.0	0.0
13.5	90.4	713.3	43.5	28.4	70.3	73.5	0.1	0.0
14.0	89.6	701.6	44.0	27.4	65.7	74.0	0.2	0.0
14.5	88.9	689.8	44.5	26.5	61.4	74.5	0.3	0.0
15.0	88.1	677.9	45.0	25.6	57.2	75.0	0.4	0.0
15.5	87.3	664.8	45.5	24.7	53.3	75.5	0.4	0.0
16.0	86.4	651.8	46.0	23.8	49.6	76.0	0.5	0.0
16.5	85.5	638.6	46.5	23.0	46.1	76.5	0.5	0.0
17.0	84.6	625.5	47.0	22.1	42.7	77.0	0.6	0.0
17.5	83.8	612.4	47.5	21.3	39.6	77.5	0.6	0.0
18.0	82.8	599.2	48.0	20.5	36.6	78.0	0.7	0.0
18.5	81.9	586.0	48.5	19.7	33.9	78.5	0.7	0.0
19.0	81.0	572.9	49.0	18.9	31.2	79.0	0.7	0.0
19.5	80.1	559.8	49.5	18.2	28.8	79.5	0.7	0.0
20.0	79.1	546.8	50.0	17.4	26.5	80.0	0.8	0.1
20.5	78.1	532.5	50.5	16.7	24.3	80.5	0.8	0.1
21.0	77.1	518.4	51.0	16.0	22.3	81.0	0.8	0.1
21.5	76.0	504.4	51.5	15.3	20.5	81.5	0.8	0.1
22.0	75.0	490.6	52.0	14.6	18.7	82.0	0.8	0.1
22.5	73.9	476.8	52.5	14.0	17.1	82.5	0.8	0.1
23.0	72.8	463.3	53.0	13.3	15.6	83.0	0.8	0.1
23.5	71.8	449.9	53.5	12.7	14.1	83.5	0.9	0.1
24.0	70.7	436.6	54.0	12.1	12.8	84.0	0.9	0.1
24.5	69.6	423.5	54.5	11.5	11.6	84.5	0.9	0.1
25.0	68.6	410.6	55.0	11.0	10.5	85.0	0.8	0.1
25.5	67.5	397.6	55.5	10.4	9.5	85.5	0.9	0.1
26.0	66.4	384.8	56.0	9.9	8.5	86.0	0.9	0.1
26.5	65.3	372.3	56.5	9.3	7.6	86.5	0.9	0.1
27.0	64.2	359.9	57.0	8.8	6.8	87.0	0.9	0.1
27.5	63.1	347.8	57.5	8.3	6.1	87.5	0.9	0.1
28.0	62.0	335.9	58.0	7.9	5.4	88.0	0.9	0.1
28.5	60.9	324.2	58.5	7.4	4.8	88.5	0.9	0.1
29.0	59.8	312.7	59.0	7.0	4.2	89.0	0.9	0.1
29.5	58.8	301.5	59.5	6.5	3.7	89.5	0.9	0.1

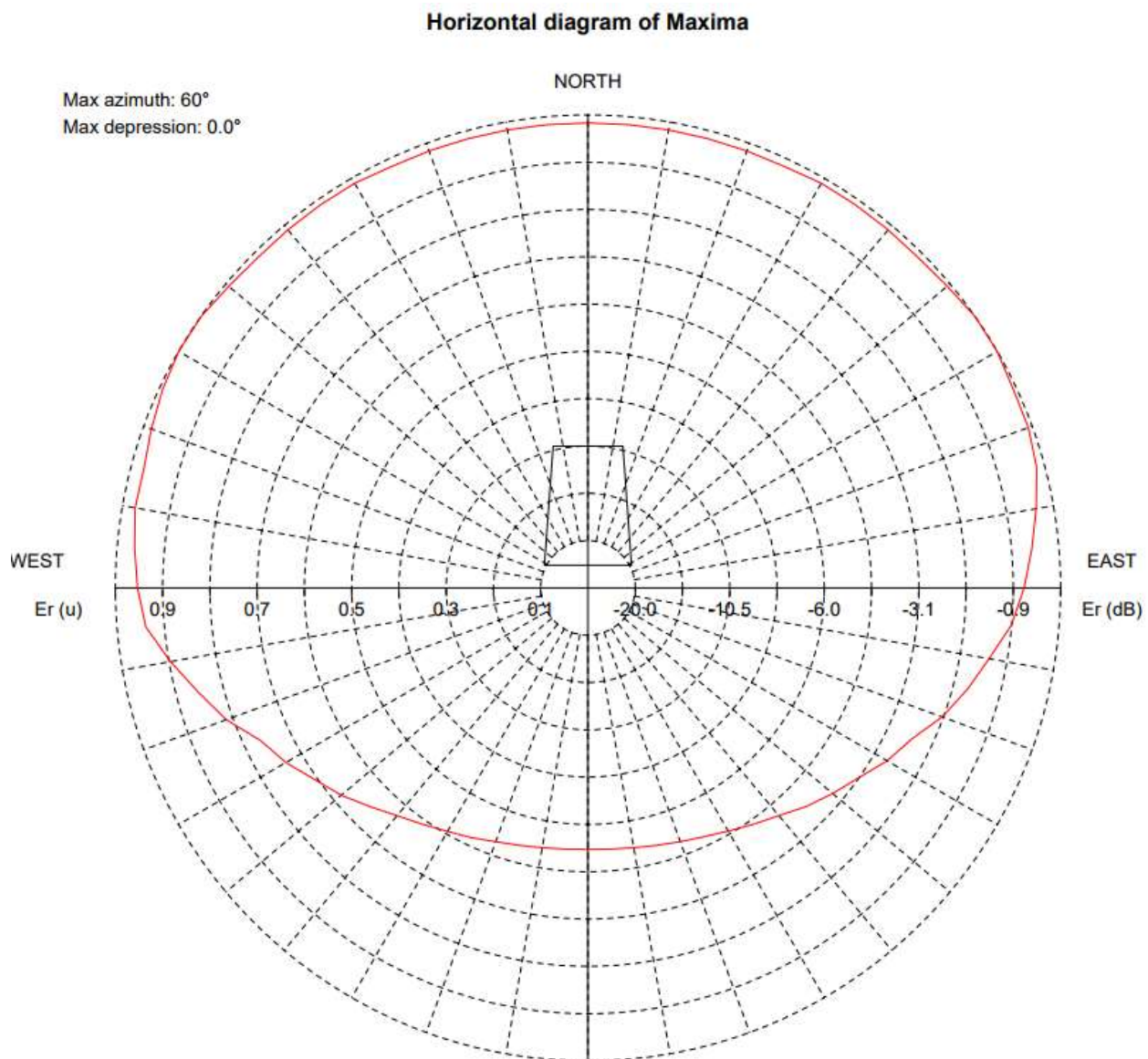
NicomUsa, Inc

Vertical diagram



— 0.0° Az. (Total antenna)

**MANUFACTURER'S PUBLISHED "OFF THE SHELF" DIRECTIONAL PATTERN OF
NICOM BKG-88**



Horizontal diagram of Maxima

Az (°)	Dep (°)	Er (%)	ERP (W)	Az (°)	Dep (°)	Er (%)	ERP (W)	Az (°)	Dep (°)	Er (%)	ERP (W)
0.0	0.0	98.3	373.6	120.0	0.0	73.1	206.6	240.0	0.0	73.8	210.7
5.0	0.0	98.3	373.6	125.0	0.0	69.9	189.2	245.0	0.0	76.4	225.7
10.0	0.0	98.3	373.6	130.0	0.0	67.6	176.7	250.0	0.0	81.5	256.6
15.0	0.0	98.3	373.6	135.0	0.0	65.3	165.1	255.0	0.0	85.3	281.6
20.0	0.0	98.3	373.6	140.0	0.0	62.8	152.7	260.0	0.0	89.7	311.1
25.0	0.0	98.3	373.6	145.0	0.0	61.0	144.0	265.0	0.0	93.9	341.1
30.0	0.0	98.8	377.5	150.0	0.0	59.4	136.3	270.0	0.0	95.3	351.1
35.0	0.0	98.8	377.5	155.0	0.0	58.0	130.3	275.0	0.0	96.3	358.5
40.0	0.0	98.8	377.5	160.0	0.0	57.1	126.1	280.0	0.0	97.3	366.1
45.0	0.0	98.8	377.5	165.0	0.0	56.3	122.8	285.0	0.0	97.3	366.1
50.0	0.0	99.2	380.8	170.0	0.0	55.8	120.3	290.0	0.0	98.3	373.6
55.0	0.0	100.0	386.5	175.0	0.0	55.4	118.7	295.0	0.0	99.3	381.4
60.0	0.0	100.0	386.7	180.0	0.0	55.3	118.2	300.0	0.0	100.0	386.7
65.0	0.0	99.3	381.4	185.0	0.0	55.4	118.7	305.0	0.0	100.0	386.5
70.0	0.0	99.1	380.0	190.0	0.0	55.8	120.3	310.0	0.0	99.2	380.8
75.0	0.0	98.3	373.6	195.0	0.0	56.3	122.8	315.0	0.0	98.8	377.5
80.0	0.0	96.3	358.5	200.0	0.0	57.1	126.1	320.0	0.0	98.8	377.5
85.0	0.0	94.3	343.8	205.0	0.0	58.3	131.4	325.0	0.0	98.8	377.5
90.0	0.0	92.3	329.3	210.0	0.0	59.4	136.5	330.0	0.0	98.8	377.5
95.0	0.0	90.0	312.9	215.0	0.0	61.0	144.0	335.0	0.0	98.3	373.6
100.0	0.0	86.2	287.1	220.0	0.0	62.8	152.7	340.0	0.0	98.3	373.6
105.0	0.0	83.0	266.7	225.0	0.0	65.3	165.1	345.0	0.0	98.3	373.6
110.0	0.0	79.7	245.9	230.0	0.0	68.2	179.6	350.0	0.0	98.3	373.6
115.0	0.0	75.6	221.0	235.0	0.0	70.6	192.7	355.0	0.0	98.3	373.6

Azimuth	Field	ERP	HAAT	Contour	Latitude	Longitude
0	1.000	0.100	-18.2	0.065	42.16203473	-72.50389444
1	0.999	0.100	-19.0	0.065	42.16203419	-72.50388075
2	0.998	0.100	-18.1	0.065	42.16203347	-72.50386709
3	0.998	0.100	-15.5	0.065	42.16203258	-72.50385345
4	0.997	0.099	-13.3	0.065	42.16203143	-72.50383986
5	0.996	0.099	-13.9	0.064	42.16203018	-72.50382629
6	0.995	0.099	-14.8	0.064	42.16202877	-72.50381277
7	0.994	0.099	-14.7	0.064	42.16202718	-72.50379930
8	0.994	0.099	-14.4	0.064	42.16202541	-72.50378587
9	0.993	0.099	-14.2	0.064	42.16202348	-72.50377250
10	0.992	0.098	-14.6	0.064	42.16202128	-72.50375921
11	0.992	0.098	-14.8	0.064	42.16201927	-72.50374589
12	0.991	0.098	-15.4	0.064	42.16201700	-72.50373265
13	0.991	0.098	-15.5	0.064	42.16201464	-72.50371945
14	0.990	0.098	-15.8	0.064	42.16201203	-72.50370633
15	0.990	0.098	-16.4	0.064	42.16200925	-72.50369329
16	0.990	0.098	-17.1	0.064	42.16200639	-72.50368028
17	0.989	0.098	-18.0	0.064	42.16200328	-72.50366739
18	0.989	0.098	-19.5	0.064	42.16200009	-72.50365454
19	0.988	0.098	-22.2	0.064	42.16199664	-72.50364181
20	0.988	0.098	-26.3	0.064	42.16199312	-72.50362912
21	0.988	0.098	-30.5	0.064	42.16198961	-72.50361644
22	0.988	0.098	-34.3	0.064	42.16198593	-72.50360384
23	0.988	0.098	-38.1	0.064	42.16198209	-72.50359133
24	0.988	0.098	-42.5	0.064	42.16197809	-72.50357892
25	0.988	0.098	-47.6	0.064	42.16197393	-72.50356660
26	0.988	0.098	-53.2	0.064	42.16196961	-72.50355438
27	0.988	0.098	-58.5	0.064	42.16196513	-72.50354226
28	0.988	0.098	-62.4	0.064	42.16196049	-72.50353025
29	0.988	0.098	-64.3	0.064	42.16195571	-72.50351835
30	0.988	0.098	-65.3	0.064	42.16195076	-72.50350657
31	0.988	0.098	-65.9	0.064	42.16194536	-72.50349515
32	0.987	0.097	-66.2	0.064	42.16193989	-72.50348381
33	0.987	0.097	-66.0	0.064	42.16193428	-72.50347260
34	0.986	0.097	-65.2	0.064	42.16192853	-72.50346153
35	0.986	0.097	-62.9	0.064	42.16192256	-72.50345068
36	0.985	0.097	-59.7	0.064	42.16191653	-72.50343990
37	0.985	0.097	-56.5	0.064	42.16191036	-72.50342927
38	0.984	0.097	-53.3	0.064	42.16190406	-72.50341879
39	0.984	0.097	-50.2	0.064	42.16189756	-72.50340854
40	0.983	0.097	-47.2	0.064	42.16189100	-72.50339838

Azimuth	Field	ERP	HAAT	Contour	Latitude	Longitude
41	0.983	0.097	-44.2	0.064	42.16188451	-72.50338813
42	0.983	0.097	-41.6	0.064	42.16187790	-72.50337805
43	0.983	0.097	-39.5	0.064	42.16187115	-72.50336812
44	0.983	0.097	-37.8	0.064	42.16186428	-72.50335834
45	0.983	0.097	-37.0	0.064	42.16185728	-72.50334874
46	0.983	0.097	-36.8	0.064	42.16185016	-72.50333930
47	0.983	0.097	-36.9	0.064	42.16184292	-72.50333003
48	0.983	0.097	-36.9	0.064	42.16183556	-72.50332093
49	0.983	0.097	-36.4	0.064	42.16182808	-72.50331200
50	0.983	0.097	-35.7	0.064	42.16182049	-72.50330325
51	0.983	0.097	-35.0	0.064	42.16181278	-72.50329469
52	0.983	0.097	-33.9	0.064	42.16180497	-72.50328630
53	0.983	0.097	-32.8	0.064	42.16179705	-72.50327810
54	0.983	0.097	-31.7	0.064	42.16178902	-72.50327009
55	0.983	0.097	-30.9	0.064	42.16178089	-72.50326227
56	0.983	0.097	-30.3	0.064	42.16177267	-72.50325464
57	0.983	0.097	-29.9	0.064	42.16176434	-72.50324721
58	0.983	0.097	-29.8	0.064	42.16175592	-72.50323997
59	0.983	0.097	-30.1	0.064	42.16174741	-72.50323293
60	0.983	0.097	-30.7	0.064	42.16173880	-72.50322609
61	0.983	0.097	-31.3	0.064	42.16173011	-72.50321946
62	0.983	0.097	-32.2	0.064	42.16172134	-72.50321304
63	0.983	0.097	-32.9	0.064	42.16171248	-72.50320682
64	0.983	0.097	-33.8	0.064	42.16170355	-72.50320081
65	0.983	0.097	-34.6	0.064	42.16169454	-72.50319501
66	0.983	0.097	-35.2	0.064	42.16168545	-72.50318942
67	0.983	0.097	-35.1	0.064	42.16167630	-72.50318405
68	0.983	0.097	-34.3	0.064	42.16166707	-72.50317890
69	0.983	0.097	-33.3	0.064	42.16165778	-72.50317396
70	0.983	0.097	-32.0	0.064	42.16164843	-72.50316924
71	0.983	0.097	-30.4	0.064	42.16163902	-72.50316475
72	0.983	0.097	-28.4	0.064	42.16162955	-72.50316047
73	0.983	0.097	-26.5	0.064	42.16162003	-72.50315642
74	0.983	0.097	-24.9	0.064	42.16161046	-72.50315260
75	0.983	0.097	-24.7	0.064	42.16160083	-72.50314900
76	0.983	0.097	-25.5	0.064	42.16159117	-72.50314563
77	0.983	0.097	-27.4	0.064	42.16158146	-72.50314248
78	0.983	0.097	-29.6	0.064	42.16157171	-72.50313957
79	0.983	0.097	-31.5	0.064	42.16156193	-72.50313688
80	0.983	0.097	-33.5	0.064	42.16155211	-72.50313443
81	0.984	0.097	-34.9	0.064	42.16154231	-72.50313184

Azimuth	Field	ERP	HAAT	Contour	Latitude	Longitude
82	0.984	0.097	-37.4	0.064	42.16153248	-72.50312937
83	0.985	0.097	-40.7	0.064	42.16152260	-72.50312725
84	0.985	0.097	-43.3	0.064	42.16151269	-72.50312536
85	0.986	0.097	-44.7	0.064	42.16150276	-72.50312371
86	0.986	0.097	-45.5	0.064	42.16149281	-72.50312216
87	0.987	0.097	-44.9	0.064	42.16148282	-72.50312097
88	0.987	0.097	-41.8	0.064	42.16147282	-72.50312002
89	0.988	0.098	-38.6	0.064	42.16146280	-72.50311930
90	0.988	0.098	-35.4	0.064	42.16145278	-72.50311870
91	0.988	0.098	-32.1	0.064	42.16144274	-72.50311882
92	0.988	0.098	-30.7	0.064	42.16143271	-72.50311917
93	0.988	0.098	-31.4	0.064	42.16142268	-72.50311976
94	0.988	0.098	-32.6	0.064	42.16141266	-72.50312059
95	0.988	0.098	-34.4	0.064	42.16140266	-72.50312165
96	0.988	0.098	-36.5	0.064	42.16139267	-72.50312295
97	0.988	0.098	-38.4	0.064	42.16138270	-72.50312448
98	0.988	0.098	-40.7	0.064	42.16137275	-72.50312625
99	0.988	0.098	-43.2	0.064	42.16136282	-72.50312825
100	0.988	0.098	-45.4	0.064	42.16135292	-72.50313049
101	0.988	0.098	-46.6	0.064	42.16134302	-72.50313272
102	0.989	0.098	-47.7	0.064	42.16133313	-72.50313506
103	0.989	0.098	-49.1	0.064	42.16132328	-72.50313776
104	0.990	0.098	-50.8	0.064	42.16131345	-72.50314057
105	0.990	0.098	-52.4	0.064	42.16130367	-72.50314373
106	0.990	0.098	-53.4	0.064	42.16129391	-72.50314700
107	0.991	0.098	-54.8	0.064	42.16128418	-72.50315051
108	0.991	0.098	-56.4	0.064	42.16127453	-72.50315436
109	0.992	0.098	-58.0	0.064	42.16126489	-72.50315833
110	0.992	0.098	-60.0	0.064	42.16125534	-72.50316264
111	0.993	0.099	-62.0	0.064	42.16124571	-72.50316672
112	0.994	0.099	-64.6	0.064	42.16123615	-72.50317114
113	0.994	0.099	-68.3	0.064	42.16122665	-72.50317579
114	0.995	0.099	-71.9	0.064	42.16121721	-72.50318067
115	0.996	0.099	-75.2	0.064	42.16120782	-72.50318578
116	0.997	0.099	-77.8	0.065	42.16119849	-72.50319111
117	0.998	0.100	-80.2	0.065	42.16118919	-72.50319655
118	0.998	0.100	-82.1	0.065	42.16117999	-72.50320233
119	0.999	0.100	-83.8	0.065	42.16117086	-72.50320833
120	1.000	0.100	-85.2	0.065	42.16116180	-72.50321454
121	0.999	0.100	-86.6	0.065	42.16115333	-72.50322212
122	0.998	0.100	-87.9	0.065	42.16114491	-72.50322979

Azimuth	Field	ERP	HAAT	Contour	Latitude	Longitude
123	0.997	0.099	-88.5	0.065	42.16113666	-72.50323775
124	0.996	0.099	-88.2	0.064	42.16112851	-72.50324590
125	0.996	0.099	-87.3	0.064	42.16112048	-72.50325422
126	0.995	0.099	-85.9	0.064	42.16111256	-72.50326274
127	0.994	0.099	-84.5	0.064	42.16110477	-72.50327142
128	0.993	0.099	-82.3	0.064	42.16109704	-72.50328019
129	0.992	0.098	-79.0	0.064	42.16108949	-72.50328922
130	0.991	0.098	-74.8	0.064	42.16108206	-72.50329843
131	0.988	0.098	-69.9	0.064	42.16107547	-72.50330889
132	0.985	0.097	-64.5	0.064	42.16106903	-72.50331949
133	0.983	0.097	-58.7	0.064	42.16106276	-72.50333021
134	0.980	0.096	-53.3	0.063	42.16105670	-72.50334114
135	0.977	0.095	-49.2	0.063	42.16105075	-72.50335209
136	0.974	0.095	-46.6	0.063	42.16104496	-72.50336316
137	0.971	0.094	-44.1	0.063	42.16103933	-72.50337433
138	0.969	0.094	-41.3	0.063	42.16103387	-72.50338560
139	0.966	0.093	-37.9	0.063	42.16102857	-72.50339698
140	0.963	0.093	-34.3	0.062	42.16102344	-72.50340844
141	0.959	0.092	-31.4	0.062	42.16101904	-72.50342061
142	0.955	0.091	-29.7	0.062	42.16101482	-72.50343284
143	0.951	0.090	-29.1	0.062	42.16101078	-72.50344512
144	0.947	0.090	-29.4	0.061	42.16100692	-72.50345745
145	0.943	0.089	-30.6	0.061	42.16100325	-72.50346982
146	0.939	0.088	-33.1	0.061	42.16099977	-72.50348223
147	0.935	0.087	-35.9	0.061	42.16099639	-72.50349461
148	0.931	0.087	-37.1	0.060	42.16099327	-72.50350709
149	0.927	0.086	-36.7	0.060	42.16099033	-72.50351959
150	0.923	0.085	-35.2	0.060	42.16098758	-72.50353211
151	0.917	0.084	-32.6	0.059	42.16098611	-72.50354547
152	0.911	0.083	-29.0	0.059	42.16098476	-72.50355874
153	0.905	0.082	-24.8	0.059	42.16098370	-72.50357201
154	0.899	0.081	-21.0	0.058	42.16098275	-72.50358518
155	0.893	0.080	-15.9	0.058	42.16098200	-72.50359829
156	0.886	0.079	-9.7	0.057	42.16098152	-72.50361139
157	0.880	0.077	-4.2	0.057	42.16098116	-72.50362438
158	0.874	0.076	-0.7	0.057	42.16098108	-72.50363734
159	0.868	0.075	1.3	0.056	42.16098110	-72.50365018
160	0.862	0.074	3.0	0.056	42.16098139	-72.50366299
161	0.856	0.073	4.8	0.055	42.16098204	-72.50367578
162	0.849	0.072	6.4	0.055	42.16098287	-72.50368847
163	0.843	0.071	7.8	0.055	42.16098389	-72.50370105

Azimuth	Field	ERP	HAAT	Contour	Latitude	Longitude
164	0.836	0.070	9.0	0.054	42.16098509	-72.50371353
165	0.830	0.069	10.0	0.054	42.16098647	-72.50372589
166	0.823	0.068	11.0	0.053	42.16098803	-72.50373812
167	0.817	0.067	11.7	0.053	42.16098976	-72.50375024
168	0.810	0.066	12.0	0.052	42.16099166	-72.50376222
169	0.804	0.065	11.6	0.052	42.16099372	-72.50377407
170	0.797	0.064	10.6	0.052	42.16099596	-72.50378578
171	0.790	0.062	9.6	0.051	42.16099844	-72.50379737
172	0.784	0.061	8.1	0.051	42.16100108	-72.50380880
173	0.777	0.060	7.0	0.050	42.16100388	-72.50382009
174	0.771	0.059	5.8	0.050	42.16100674	-72.50383120
175	0.764	0.058	5.2	0.049	42.16100985	-72.50384217
176	0.757	0.057	4.8	0.049	42.16101309	-72.50385297
177	0.751	0.056	4.9	0.049	42.16101640	-72.50386359
178	0.744	0.055	5.1	0.048	42.16101993	-72.50387405
179	0.738	0.054	5.4	0.048	42.16102360	-72.50388434
180	0.731	0.053	5.7	0.047	42.16102740	-72.50389444
181	0.726	0.053	5.9	0.047	42.16103061	-72.50390439
182	0.720	0.052	8.7	0.047	42.16103404	-72.50391417
183	0.715	0.051	12.7	0.046	42.16103750	-72.50392380
184	0.709	0.050	16.4	0.046	42.16104117	-72.50393327
185	0.704	0.049	18.9	0.046	42.16104496	-72.50394258
186	0.698	0.049	21.2	0.045	42.16104878	-72.50395173
187	0.693	0.048	22.8	0.045	42.16105280	-72.50396070
188	0.687	0.047	23.5	0.044	42.16105683	-72.50396951
189	0.682	0.046	23.8	0.044	42.16106106	-72.50397814
190	0.676	0.046	23.6	0.044	42.16106530	-72.50398661
191	0.671	0.045	23.4	0.043	42.16106938	-72.50399498
192	0.666	0.044	23.4	0.043	42.16107346	-72.50400321
193	0.662	0.044	23.8	0.043	42.16107765	-72.50401128
194	0.657	0.043	24.5	0.043	42.16108192	-72.50401918
195	0.652	0.043	25.7	0.042	42.16108628	-72.50402692
196	0.647	0.042	27.0	0.042	42.16109073	-72.50403450
197	0.642	0.041	28.5	0.042	42.16109527	-72.50404190
198	0.638	0.041	30.0	0.041	42.16109988	-72.50404913
199	0.633	0.040	31.2	0.041	42.16110457	-72.50405619
200	0.628	0.039	32.3	0.041	42.16110934	-72.50406308
201	0.625	0.039	33.4	0.040	42.16111342	-72.50407018
202	0.621	0.039	34.9	0.040	42.16111758	-72.50407715
203	0.618	0.038	36.2	0.040	42.16112181	-72.50408397
204	0.614	0.038	37.1	0.040	42.16112612	-72.50409065

Azimuth	Field	ERP	HAAT	Contour	Latitude	Longitude
205	0.611	0.037	37.8	0.040	42.16113050	-72.50409718
206	0.608	0.037	38.5	0.039	42.16113495	-72.50410357
207	0.604	0.037	39.3	0.039	42.16113947	-72.50410981
208	0.601	0.036	40.2	0.039	42.16114405	-72.50411590
209	0.597	0.036	40.9	0.039	42.16114869	-72.50412184
210	0.594	0.035	41.4	0.038	42.16115339	-72.50412763
211	0.592	0.035	41.8	0.038	42.16115761	-72.50413370
212	0.589	0.035	42.3	0.038	42.16116190	-72.50413965
213	0.587	0.034	42.9	0.038	42.16116624	-72.50414547
214	0.585	0.034	43.5	0.038	42.16117065	-72.50415116
215	0.583	0.034	43.8	0.038	42.16117512	-72.50415672
216	0.580	0.034	44.0	0.038	42.16117958	-72.50416222
217	0.578	0.033	44.0	0.037	42.16118416	-72.50416752
218	0.576	0.033	44.1	0.037	42.16118880	-72.50417268
219	0.573	0.033	44.2	0.037	42.16119348	-72.50417771
220	0.571	0.033	44.4	0.037	42.16119822	-72.50418260
221	0.570	0.032	44.2	0.037	42.16120253	-72.50418791
222	0.568	0.032	43.9	0.037	42.16120697	-72.50419303
223	0.567	0.032	43.4	0.037	42.16121139	-72.50419811
224	0.566	0.032	43.1	0.037	42.16121594	-72.50420299
225	0.565	0.032	42.9	0.037	42.16122048	-72.50420783
226	0.563	0.032	42.5	0.036	42.16122507	-72.50421255
227	0.562	0.032	41.9	0.036	42.16122977	-72.50421707
228	0.561	0.031	41.2	0.036	42.16123446	-72.50422155
229	0.559	0.031	40.5	0.036	42.16123925	-72.50422581
230	0.558	0.031	40.0	0.036	42.16124404	-72.50423005
231	0.558	0.031	39.4	0.036	42.16124858	-72.50423463
232	0.557	0.031	38.9	0.036	42.16125323	-72.50423900
233	0.557	0.031	38.2	0.036	42.16125788	-72.50424336
234	0.556	0.031	37.5	0.036	42.16126258	-72.50424760
235	0.556	0.031	36.9	0.036	42.16126734	-72.50425172
236	0.555	0.031	36.6	0.036	42.16127214	-72.50425573
237	0.555	0.031	36.8	0.036	42.16127704	-72.50425952
238	0.554	0.031	37.4	0.036	42.16128193	-72.50426330
239	0.554	0.031	37.9	0.036	42.16128686	-72.50426695
240	0.553	0.031	37.9	0.036	42.16129184	-72.50427049
241	0.554	0.031	36.8	0.036	42.16129660	-72.50427454
242	0.554	0.031	35.4	0.036	42.16130142	-72.50427848
243	0.555	0.031	34.2	0.036	42.16130629	-72.50428231
244	0.555	0.031	33.8	0.036	42.16131117	-72.50428613
245	0.556	0.031	33.5	0.036	42.16131614	-72.50428974

Azimuth	Field	ERP	HAAT	Contour	Latitude	Longitude
246	0.556	0.031	32.9	0.036	42.16132117	-72.50429323
247	0.557	0.031	32.3	0.036	42.16132624	-72.50429660
248	0.557	0.031	31.9	0.036	42.16133136	-72.50429986
249	0.558	0.031	31.7	0.036	42.16133650	-72.50430311
250	0.558	0.031	31.5	0.036	42.16134171	-72.50430612
251	0.559	0.031	31.4	0.036	42.16134682	-72.50430959
252	0.561	0.031	31.1	0.036	42.16135195	-72.50431306
253	0.562	0.032	30.7	0.036	42.16135717	-72.50431630
254	0.563	0.032	30.1	0.036	42.16136242	-72.50431954
255	0.565	0.032	29.3	0.037	42.16136775	-72.50432254
256	0.566	0.032	28.4	0.037	42.16137313	-72.50432542
257	0.567	0.032	27.7	0.037	42.16137853	-72.50432829
258	0.568	0.032	26.9	0.037	42.16138401	-72.50433092
259	0.570	0.032	26.6	0.037	42.16138951	-72.50433355
260	0.571	0.033	26.4	0.037	42.16139507	-72.50433592
261	0.573	0.033	26.1	0.037	42.16140058	-72.50433901
262	0.576	0.033	25.5	0.037	42.16140615	-72.50434198
263	0.578	0.033	24.2	0.037	42.16141179	-72.50434481
264	0.580	0.034	22.7	0.038	42.16141748	-72.50434752
265	0.583	0.034	21.1	0.038	42.16142324	-72.50434997
266	0.585	0.034	19.7	0.038	42.16142904	-72.50435242
267	0.587	0.034	18.3	0.038	42.16143490	-72.50435472
268	0.589	0.035	16.9	0.038	42.16144081	-72.50435689
269	0.592	0.035	16.0	0.038	42.16144677	-72.50435892
270	0.594	0.035	15.7	0.038	42.16145278	-72.50436081
271	0.597	0.036	15.4	0.039	42.16145884	-72.50436341
272	0.601	0.036	15.2	0.039	42.16146498	-72.50436586
273	0.604	0.037	14.7	0.039	42.16147118	-72.50436817
274	0.608	0.037	13.7	0.039	42.16147744	-72.50437033
275	0.611	0.037	12.7	0.040	42.16148377	-72.50437233
276	0.614	0.038	11.9	0.040	42.16149015	-72.50437419
277	0.618	0.038	11.4	0.040	42.16149659	-72.50437588
278	0.621	0.039	11.0	0.040	42.16150309	-72.50437742
279	0.625	0.039	10.6	0.040	42.16150964	-72.50437880
280	0.628	0.039	10.2	0.041	42.16151624	-72.50438001
281	0.633	0.040	10.4	0.041	42.16152311	-72.50438261
282	0.639	0.041	10.7	0.041	42.16153007	-72.50438504
283	0.644	0.041	10.6	0.042	42.16153712	-72.50438728
284	0.650	0.042	10.3	0.042	42.16154424	-72.50438934
285	0.655	0.043	10.0	0.042	42.16155144	-72.50439121
286	0.660	0.044	9.6	0.043	42.16155872	-72.50439290

Azimuth	Field	ERP	HAAT	Contour	Latitude	Longitude
287	0.666	0.044	9.4	0.043	42.16156608	-72.50439439
288	0.671	0.045	9.1	0.043	42.16157347	-72.50439557
289	0.677	0.046	8.3	0.044	42.16158096	-72.50439666
290	0.682	0.047	7.3	0.044	42.16158851	-72.50439756
291	0.688	0.047	5.7	0.045	42.16159619	-72.50439848
292	0.693	0.048	3.8	0.045	42.16160391	-72.50439907
293	0.699	0.049	2.5	0.045	42.16161168	-72.50439946
294	0.704	0.050	1.7	0.046	42.16161950	-72.50439963
295	0.710	0.050	1.6	0.046	42.16162742	-72.50439970
296	0.716	0.051	2.4	0.046	42.16163535	-72.50439943
297	0.721	0.052	2.8	0.047	42.16164332	-72.50439895
298	0.727	0.053	3.5	0.047	42.16165134	-72.50439824
299	0.732	0.054	4.4	0.047	42.16165940	-72.50439731
300	0.738	0.054	6.3	0.048	42.16166753	-72.50439626
301	0.746	0.056	8.6	0.048	42.16167631	-72.50439632
302	0.753	0.057	10.9	0.049	42.16168510	-72.50439603
303	0.761	0.058	13.2	0.049	42.16169401	-72.50439557
304	0.769	0.059	15.5	0.050	42.16170297	-72.50439484
305	0.777	0.060	16.8	0.050	42.16171198	-72.50439384
306	0.784	0.061	16.6	0.051	42.16172104	-72.50439257
307	0.792	0.063	16.5	0.051	42.16173015	-72.50439103
308	0.800	0.064	16.8	0.052	42.16173925	-72.50438910
309	0.807	0.065	15.8	0.052	42.16174843	-72.50438700
310	0.815	0.066	13.4	0.053	42.16175765	-72.50438461
311	0.823	0.068	10.6	0.053	42.16176707	-72.50438221
312	0.831	0.069	9.1	0.054	42.16177653	-72.50437951
313	0.840	0.070	7.6	0.054	42.16178600	-72.50437652
314	0.848	0.072	6.9	0.055	42.16179550	-72.50437323
315	0.856	0.073	7.8	0.055	42.16180501	-72.50436963
316	0.864	0.075	10.8	0.056	42.16181453	-72.50436573
317	0.872	0.076	14.1	0.056	42.16182406	-72.50436153
318	0.881	0.078	15.8	0.057	42.16183366	-72.50435710
319	0.889	0.079	16.3	0.058	42.16184318	-72.50435228
320	0.897	0.080	16.7	0.058	42.16185269	-72.50434715
321	0.903	0.081	17.7	0.058	42.16186101	-72.50434042
322	0.908	0.082	19.3	0.059	42.16186926	-72.50433343
323	0.914	0.084	21.7	0.059	42.16187747	-72.50432618
324	0.919	0.085	23.7	0.060	42.16188568	-72.50431876
325	0.925	0.086	25.3	0.060	42.16189375	-72.50431100
326	0.931	0.087	26.8	0.060	42.16190176	-72.50430300
327	0.936	0.088	27.5	0.061	42.16190969	-72.50429475

Azimuth	Field	ERP	HAAT	Contour	Latitude	Longitude
328	0.942	0.089	26.9	0.061	42.16191762	-72.50428631
329	0.947	0.090	25.1	0.061	42.16192540	-72.50427755
330	0.953	0.091	22.7	0.062	42.16193308	-72.50426855
331	0.955	0.091	20.3	0.062	42.16193887	-72.50425795
332	0.957	0.092	18.0	0.062	42.16194453	-72.50424719
333	0.959	0.092	15.7	0.062	42.16195006	-72.50423627
334	0.961	0.092	13.2	0.062	42.16195546	-72.50422520
335	0.963	0.093	10.1	0.062	42.16196072	-72.50421398
336	0.965	0.093	7.0	0.062	42.16196585	-72.50420262
337	0.967	0.094	4.2	0.063	42.16197083	-72.50419111
338	0.969	0.094	2.5	0.063	42.16197568	-72.50417946
339	0.971	0.094	2.0	0.063	42.16198037	-72.50416767
340	0.973	0.095	2.4	0.063	42.16198484	-72.50415570
341	0.974	0.095	2.8	0.063	42.16198874	-72.50414341
342	0.975	0.095	2.0	0.063	42.16199239	-72.50413098
343	0.976	0.095	0.7	0.063	42.16199597	-72.50411849
344	0.977	0.095	-1.0	0.063	42.16199930	-72.50410586
345	0.978	0.096	-2.7	0.063	42.16200256	-72.50409318
346	0.979	0.096	-4.3	0.063	42.16200557	-72.50408038
347	0.980	0.096	-5.2	0.063	42.16200851	-72.50406753
348	0.981	0.096	-5.4	0.063	42.16201119	-72.50405457
349	0.982	0.096	-6.1	0.064	42.16201380	-72.50404156
350	0.983	0.097	-7.7	0.064	42.16201614	-72.50402846
351	0.985	0.097	-9.5	0.064	42.16201877	-72.50401538
352	0.986	0.097	-10.8	0.064	42.16202123	-72.50400222
353	0.988	0.098	-11.9	0.064	42.16202352	-72.50398898
354	0.990	0.098	-12.0	0.064	42.16202564	-72.50397567
355	0.992	0.098	-12.0	0.064	42.16202759	-72.50396229
356	0.993	0.099	-12.0	0.064	42.16202936	-72.50394884
357	0.995	0.099	-13.7	0.064	42.16203097	-72.50393532
358	0.997	0.099	-15.5	0.064	42.16203240	-72.50392175
359	0.998	0.100	-17.4	0.065	42.16203365	-72.50390812