SPACING

REFERENCE DISPLAY DATES
29 10 37.70 N. CLASS = L1 DATA 10-16-23
82 08 40.70 W. Current Spacings to 2nd Adj. SEARCH 12-09-23

---------- Channel 236 - 95.1 MHz ----------

Call	Channel	Location		Azi	Dist	FCC	Margin
WYND-FM	LIC 238A	Silver Springs	FL	31.5	11.87	28.5	-16.6
WAPE-FM	LIC 236C	Jacksonville	FL	20.7	135.98	129.5	6.5
WXCV	LIC 237A	Homosassa Springs	FL	232.8	62.90	55.5	7.4
W236DN	LIC 236D	Leesburg	FL	150.7	50.31	31.5	18.8
WRLE-LP	LIC 235L1	Dunnellon	FL	265.1	35.35	13.5	21.9
WPYO	LIC-Z 237C3	Maitland	FL	135.1	94.28	66.5	27.8
WWRM	LIC 235C	Tampa	FL	184.3	150.85	119.5	31.4
W237EJ	LIC 237D	Gainesville	FL	337.9	63.80	27.5	36.3
WSVB-LP	LIC 236L1	Chiefland	FL	296.2	77.07	23.5	53.6
W235CW	LIC 235D	Bunnell	FL	64.8	94.31	27.5	66.8
W235CR	LIC-D 235D	Orlando	FL	131.7	95.05	27.5	67.6

All separation margins include rounding

SECOND ADJACENT WAIVER REQUEST

Applicant respectfully requests a "second adjacent channel waiver" with regards to Section 47 C.F.R. Section 73.807 of the FCC rules based upon the "Living Way" precedent(Living Way Ministries, Inc., Memorandum Opinion and Order, 17 FCC Red 17054, 17056, ¶ 5 (2002), recon. denied 23 FCC Red 15070 (2008)). This will be accomplished by using Free Space methodology of calculation.

The second adjacent channels are (with signal strength at the proposed site):

WYND-FM LIC 238A 75.5 dBu

Using U/D methodology, interference will occur when KUDL's signal strength's interfering signal exceeds the desired signal by 40 dBu. So the area of predicted interference would then be bounded by the 115.5 dBu contour.

The distance to this contour, using free space method:
$D = (7.01*P^{1/2})/E$,

where P is power (watts), E is field strength (v/m), and D is distance to contour (meters):
P = 50 w, E = 115.5 dBu D = 82.9 meters

However, the field strength of the proposed LPFM's antenna system falls quickly at depression angles below the horizon. Using elevation pattern data provided by Shively for a 6812 antenna setup (2 bay ½ wave spaced) the distance to the 115.5 dBu contour at various depression angles is tabulated below. The data shows that the lowest point at which the signal strength rises to 115.5 dBu is 25.6 meters below the center of radiation of the antenna system, or 14.4 meters above the ground. Therefore, this is sufficient clearance of the nearby one-story office park structures, and the interference area encompasses zero population. The table below shows that the lowest elevation point of the 115.5 F(50,10) interfering contour is 14,4 meters above ground.

Due to zero population within this radiation radius, this meets the "Living Way" Criteria to qualify for a Waiver of 47 C.F.R. Section 73.807.

Thus, the applicant requests a second adjacent waiver based upon evidence no interference is proposed.

MAX ERP	DEPRESSION ANGLE	RELATIVE FIELD	dB FROM RELATIVE	ERP	ANGULAR DISTANCE TO 115.5 dBu CONTOUR	VERTICAL DISTANCE (below antenna)	HORIZONTAL DISTANCE TO 115.5 dBu CONTOUR	CLEARANCE OF CONTOUR ABOVE GROUND
50	-90	0.00	-100.000	0.00	0	0	0	40
50	-89	0.00	-100.000	0.00	0	0	0	40
50	-88	0.00	-100.000	0.00	0	0	0	40
50	-87	0.00	-100.000	0.00	0	0	0	40
50	-86	0.001	-60.000	0.00	0	0	0	40
50	-85	0.001	-60.000	0.00	0	0	0	40
50	-84	0.001	-60.000	0.00	0	0	0	40
50	-83	0.002	-53.979	0.00	0.1	0	0	40
50	-82	0.003	-50.458	0.00	0.2	0.1	0	39.9
50	-81	0.004	-47.959	0.00	0.3	0.2	0	39.8
50	-80	0.005	-46.021	0.00	0.4	0.3	0	39.7

50	-79	0.007	-43.098	0.00	0.5	0.4	0	39.6
50	-78	0.008	-41.938	0.00	0.6	0.5	0.1	39.5
50	-77	0.011	-39.172	0.01	0.9	0.8	0.2	39.2
50	-76	0.013	-37.721	0.01	1	0.9	0.2	39.1
50	-75	0.016	-35.918	0.01	1.3	1.2	0.3	38.8
50	-74	0.019	-34.425	0.02	1.5	1.4	0.4	38.6
50	-73	0.022	-33.152	0.02	1.8	1.7	0.5	38.3
50	-72	0.026	-31.701	0.03	2.1	1.9	0.6	38.1
50	-71	0.03	-30.458	0.05	2.4	2.2	0.7	37.8
50	-70	0.035	-29.119	0.06	2.9	2.7	0.9	37.3
50	-69	0.04	-27.959	0.08	3.3	3	1.1	37
50	-68	0.046	-26.745	0.11	3.8	3.5	1.4	36.5
50	-67	0.052	-25.680	0.14	4.3	3.9	1.6	36.1
50	-66	0.059	-24.583	0.17	4.9	4.4	1.9	35.6
50	-65	0.066	-23.609	0.22	5.4	4.8	2.2	35.2
50	-64	0.073	-22.734	0.27	6	5.3	2.6	34.7
50	-63	0.082	-21.724	0.34	6.8	6	3	34
50	-62	0.09	-20.915	0.41	7.4	6.5	3.4	33.5
50	-61	0.099	-20.087	0.49	8.2	7.1	3.9	32.9
50	-60	0.109	-19.251	0.59	9	7.7	4.5	32.3
50	-59	0.119	-18.489	0.71	9.9	8.4	5.1	31.6
50	-58	0.13	-17.721	0.85	10.8	9.1	5.7	30.9
50	-57	0.142	-16.954	1.01	11.8	9.8	6.4	30.2
50	-56	0.154	-16.250	1.19	12.8	10.6	7.1	29.4
50	-55	0.166	-15.598	1.38	13.8	11.3	7.9	28.7
50	-54	0.179	-14.943	1.60	14.8	11.9	8.7	28.1
50	-53	0.193	-14.289	1.86	16	12.7	9.6	27.3
50	-52	0.207	-13.681	2.14	17.2	13.5	10.5	26.5
50	-51	0.222	-13.073	2.46	18.4	14.2	11.5	25.8
50	-50	0.237	-12.505	2.81	19.7	15	12.6	25
50	-49	0.253	-11.938	3.20	21	15.8	13.7	24.2
50	-48	0.269	-11.405	3.62	22.3	16.5	14.9	23.5
50	-47	0.286	-10.873	4.09	23.7	17.3	16.1	22.7
50	-46	0.303	-10.371	4.59	25.2	18.1	17.5	21.9
50	-45	0.32	-9.897	5.12	26.6	18.8	18.8	21.2

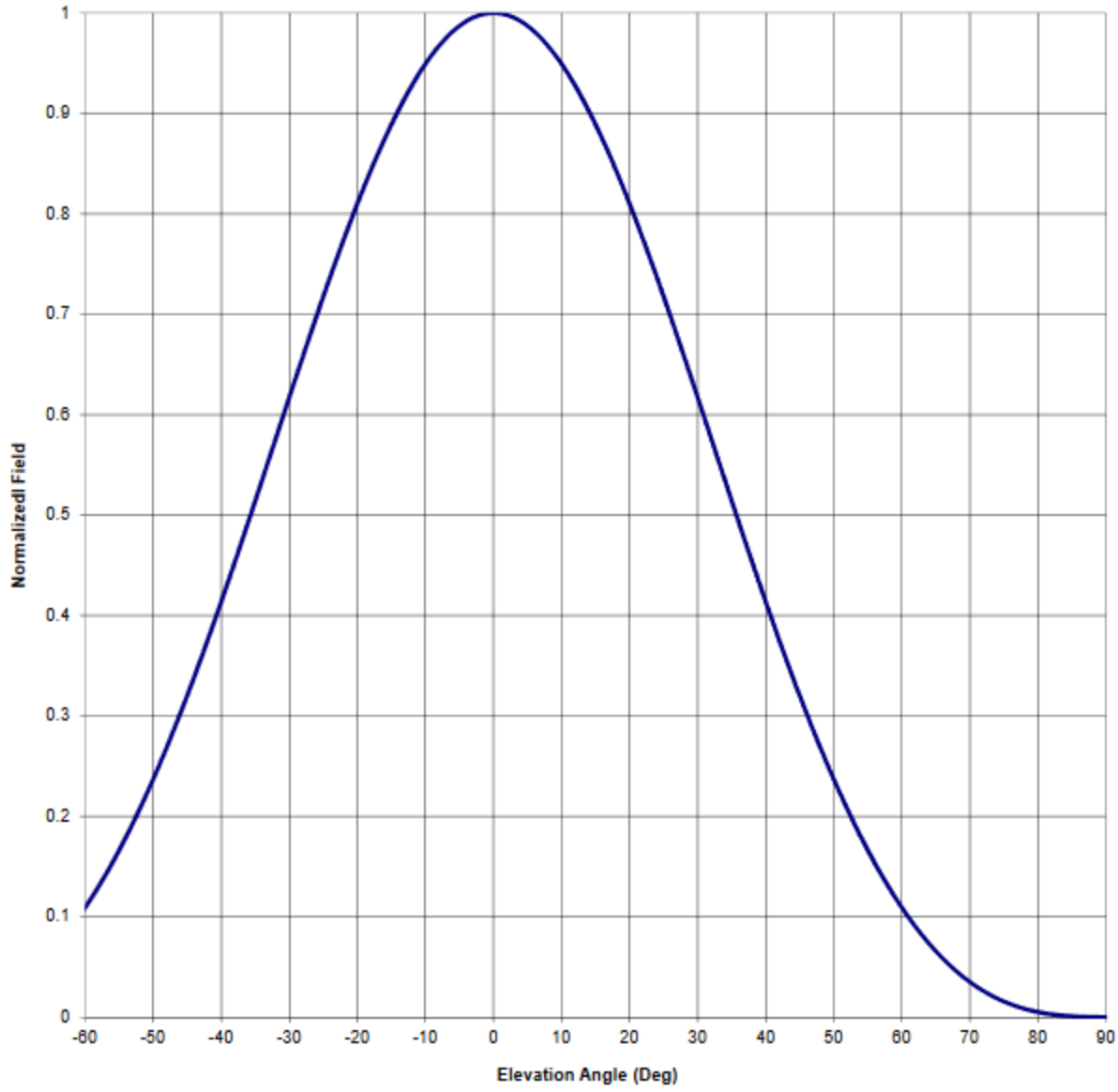
50	-44	0.338	-9.422	5.71	28.1	19.5	20.2	20.5
50	-43	0.357	-8.947	6.37	29.7	20.2	21.7	19.8
50	-42	0.375	-8.519	7.03	31.2	20.8	23.1	19.2
50	-41	0.394	-8.090	7.76	32.7	21.4	24.6	18.6
50	-40	0.414	-7.660	8.57	34.4	22.1	26.3	17.9
50	-39	0.433	-7.270	9.37	36	22.6	27.9	17.4
50	-38	0.453	-6.878	10.26	37.6	23.1	29.6	16.9
50	-37	0.473	-6.503	11.19	39.3	23.6	31.3	16.4
50	-36	0.494	-6.125	12.20	41.1	24.1	33.2	15.9
50	-35	0.514	-5.781	13.21	42.7	24.4	34.9	15.6
50	-34	0.535	-5.433	14.31	44.5	24.8	36.8	15.2
50	-33	0.555	-5.114	15.40	46.1	25	38.6	15
50	-32	0.576	-4.792	16.59	47.9	25.3	40.6	14.7
50	-31	0.597	-4.481	17.82	49.6	25.5	42.5	14.5
50	-30	0.617	-4.194	19.03	51.3	25.6	44.4	14.4
50	-29	0.638	-3.904	20.35	53	25.6	46.3	14.4
50	-28	0.658	-3.635	21.65	54.7	25.6	48.3	14.4
50	-27	0.678	-3.375	22.98	56.4	25.5	50.2	14.5
50	-26	0.698	-3.123	24.36	58	25.4	52.1	14.6
50	-25	0.718	-2.878	25.78	59.7	25.2	54.1	14.8
50	-24	0.737	-2.651	27.16	61.3	24.9	56	15.1
50	-23	0.756	-2.430	28.58	62.9	24.5	57.9	15.5
50	-22	0.774	-2.225	29.95	64.4	24.1	59.7	15.9
50	-21	0.792	-2.025	31.36	65.9	23.6	61.5	16.4
50	-20	0.81	-1.830	32.81	67.4	23	63.3	17
50	-19	0.827	-1.650	34.20	68.8	22.3	65	17.7
50	-18	0.843	-1.483	35.53	70.1	21.6	66.6	18.4
50	-17	0.859	-1.320	36.89	71.4	20.8	68.2	19.2
50	-16	0.874	-1.170	38.19	72.7	20	69.8	20
50	-15	0.889	-1.022	39.52	73.9	19.1	71.3	20.9
50	-14	0.903	-0.886	40.77	75.1	18.1	72.8	21.9
50	-13	0.915	-0.772	41.86	76.1	17.1	74.1	22.9
50	-12	0.928	-0.649	43.06	77.2	16	75.5	24
50	-11	0.939	-0.547	44.09	78.1	14.8	76.6	25.2
50	-10	0.949	-0.455	45.03	78.9	13.6	77.7	26.4

50	-9	0.959	-0.364	45.98	79.8	12.4	78.8	27.6
50	-8	0.967	-0.291	46.75	80.4	11.1	79.6	28.9
50	-7	0.975	-0.220	47.53	81.1	9.8	80.4	30.2
50	-6	0.981	-0.167	48.12	81.6	8.5	81.1	31.5
50	-5	0.987	-0.114	48.71	82.1	7.1	81.7	32.9
50	-4	0.992	-0.070	49.20	82.5	5.7	82.2	34.3
50	-3	0.995	-0.044	49.50	82.7	4.3	82.5	35.7
50	-2	0.998	-0.017	49.80	83	2.8	82.9	37.2
50	-1	0.999	-0.009	49.90	83.1	1.4	83	38.6
50	0	1	0.000	50.00	83.2	0	83.2	40
50	1	0.999	-0.009	49.90	83.1	1.4	83	38.6
50	2	0.998	-0.017	49.80	83	2.8	82.9	37.2
50	3	0.995	-0.044	49.50	82.7	4.3	82.5	35.7
50	4	0.992	-0.070	49.20	82.5	5.7	82.2	34.3
50	5	0.987	-0.114	48.71	82.1	7.1	81.7	32.9
50	6	0.981	-0.167	48.12	81.6	8.5	81.1	31.5
50	7	0.975	-0.220	47.53	81.1	9.8	80.4	30.2
50	8	0.967	-0.291	46.75	80.4	11.1	79.6	28.9
50	9	0.959	-0.364	45.98	79.8	12.4	78.8	27.6
50	10	0.949	-0.455	45.03	78.9	13.6	77.7	26.4
50	11	0.939	-0.547	44.09	78.1	14.8	76.6	25.2
50	12	0.928	-0.649	43.06	77.2	16	75.5	24
50	13	0.915	-0.772	41.86	76.1	17.1	74.1	22.9
50	14	0.903	-0.886	40.77	75.1	18.1	72.8	21.9
50	15	0.889	-1.022	39.52	73.9	19.1	71.3	20.9
50	16	0.874	-1.170	38.19	72.7	20	69.8	20
50	17	0.859	-1.320	36.89	71.4	20.8	68.2	19.2
50	18	0.843	-1.483	35.53	70.1	21.6	66.6	18.4
50	19	0.827	-1.650	34.20	68.8	22.3	65	17.7
50	20	0.81	-1.830	32.81	67.4	23	63.3	17
50	21	0.792	-2.025	31.36	65.9	23.6	61.5	16.4
50	22	0.774	-2.225	29.95	64.4	24.1	59.7	15.9
50	23	0.756	-2.430	28.58	62.9	24.5	57.9	15.5
50	24	0.737	-2.651	27.16	61.3	24.9	56	15.1
50	25	0.718	-2.878	25.78	59.7	25.2	54.1	14.8

50	26	0.698	-3.123	24.36	58	25.4	52.1	14.6
50	27	0.678	-3.375	22.98	56.4	25.5	50.2	14.5
50	28	0.658	-3.635	21.65	54.7	25.6	48.3	14.4
50	29	0.638	-3.904	20.35	53	25.6	46.3	14.4
50	30	0.617	-4.194	19.03	51.3	25.6	44.4	14.4
50	31	0.597	-4.481	17.82	49.6	25.5	42.5	14.5
50	32	0.576	-4.792	16.59	47.9	25.3	40.6	14.7
50	33	0.555	-5.114	15.40	46.1	25	38.6	15
50	34	0.535	-5.433	14.31	44.5	24.8	36.8	15.2
50	35	0.514	-5.781	13.21	42.7	24.4	34.9	15.6
50	36	0.494	-6.125	12.20	41.1	24.1	33.2	15.9
50	37	0.473	-6.503	11.19	39.3	23.6	31.3	16.4
50	38	0.453	-6.878	10.26	37.6	23.1	29.6	16.9
50	39	0.433	-7.270	9.37	36	22.6	27.9	17.4
50	40	0.414	-7.660	8.57	34.4	22.1	26.3	17.9
50	41	0.394	-8.090	7.76	32.7	21.4	24.6	18.6
50	42	0.375	-8.519	7.03	31.2	20.8	23.1	19.2
50	43	0.357	-8.947	6.37	29.7	20.2	21.7	19.8
50	44	0.338	-9.422	5.71	28.1	19.5	20.2	20.5
50	45	0.32	-9.897	5.12	26.6	18.8	18.8	21.2
50	46	0.303	-10.371	4.59	25.2	18.1	17.5	21.9
50	47	0.286	-10.873	4.09	23.7	17.3	16.1	22.7
50	48	0.269	-11.405	3.62	22.3	16.5	14.9	23.5
50	49	0.253	-11.938	3.20	21	15.8	13.7	24.2
50	50	0.237	-12.505	2.81	19.7	15	12.6	25
50	51	0.222	-13.073	2.46	18.4	14.2	11.5	25.8
50	52	0.207	-13.681	2.14	17.2	13.5	10.5	26.5
50	53	0.193	-14.289	1.86	16	12.7	9.6	27.3
50	54	0.179	-14.943	1.60	14.8	11.9	8.7	28.1
50	55	0.166	-15.598	1.38	13.8	11.3	7.9	28.7
50	56	0.154	-16.250	1.19	12.8	10.6	7.1	29.4
50	57	0.142	-16.954	1.01	11.8	9.8	6.4	30.2
50	58	0.13	-17.721	0.85	10.8	9.1	5.7	30.9
50	59	0.119	-18.489	0.71	9.9	8.4	5.1	31.6
50	60	0.109	-19.251	0.59	9	7.7	4.5	32.3

50	61	0.099	-20.087	0.49	8.2	7.1	3.9	32.9
50	62	0.09	-20.915	0.41	7.4	6.5	3.4	33.5
50	63	0.082	-21.724	0.34	6.8	6	3	34
50	64	0.073	-22.734	0.27	6	5.3	2.6	34.7
50	65	0.066	-23.609	0.22	5.4	4.8	2.2	35.2
50	66	0.059	-24.583	0.17	4.9	4.4	1.9	35.6
50	67	0.052	-25.680	0.14	4.3	3.9	1.6	36.1
50	68	0.046	-26.745	0.11	3.8	3.5	1.4	36.5
50	69	0.04	-27.959	0.08	3.3	3	1.1	37
50	70	0.035	-29.119	0.06	2.9	2.7	0.9	37.3
50	71	0.03	-30.458	0.05	2.4	2.2	0.7	37.8
50	72	0.026	-31.701	0.03	2.1	1.9	0.6	38.1
50	73	0.022	-33.152	0.02	1.8	1.7	0.5	38.3
50	74	0.019	-34.425	0.02	1.5	1.4	0.4	38.6
50	75	0.016	-35.918	0.01	1.3	1.2	0.3	38.8
50	76	0.013	-37.721	0.01	1	0.9	0.2	39.1
50	77	0.011	-39.172	0.01	0.9	0.8	0.2	39.2
50	78	0.008	-41.938	0.00	0.6	0.5	0.1	39.5
50	79	0.007	-43.098	0.00	0.5	0.4	0	39.6
50	80	0.005	-46.021	0.00	0.4	0.3	0	39.7
50	81	0.004	-47.959	0.00	0.3	0.2	0	39.8
50	82	0.003	-50.458	0.00	0.2	0.1	0	39.9
50	83	0.002	-53.979	0.00	0.1	0	0	40
50	84	0.001	-60.000	0.00	0	0	0	40
50	85	0.001	-60.000	0.00	0	0	0	40
50	86	0.001	-60.000	0.00	0	0	0	40
50	87	0.00	-100.000	0.00	0	0	0	40
50	88	0.00	-100.000	0.00	0	0	0	40
50	89	0.00	-100.000	0.00	0	0	0	40
50	90	0.00	-100.000	0.00	0	0	0	40

Antenna Mfg.:	Shively Labs			Date: 11/3/2020
Antenna Type:	6812B-HW-2			
Station:	0	Beam Tilt	0	
Frequency:	98.1	Gain (Max)	0.707	-1.507 dB
Channel #:	251	Gain (Horizon)	0.707	-1.507 dB
Figure:	Figure 3			



Antenna Mfg.: Shively Labs
Antenna Type: 6812B-HW-2
Station: 0
Frequency: 98.1
Channel #: 251
Figure: Figure 3

Date: 11/3/2020

Beam Tilt	**0**	
Gain (Max)	**0.707**	**-1.507 dB**
Gain (Horizon)	**0.707**	**-1.507 dB**

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	0.338	0	1.000	46	0.303
-89	0.000	-43	0.357	1	0.999	47	0.286
-88	0.000	-42	0.375	2	0.998	48	0.269
-87	0.000	-41	0.394	3	0.995	49	0.253
-86	0.001	-40	0.414	4	0.992	50	0.237
-85	0.001	-39	0.433	5	0.987	51	0.222
-84	0.001	-38	0.453	6	0.981	52	0.207
-83	0.002	-37	0.473	7	0.975	53	0.193
-82	0.003	-36	0.494	8	0.967	54	0.179
-81	0.004	-35	0.514	9	0.959	55	0.166
-80	0.005	-34	0.535	10	0.949	56	0.154
-79	0.007	-33	0.555	11	0.939	57	0.142
-78	0.008	-32	0.576	12	0.928	58	0.130
-77	0.011	-31	0.597	13	0.915	59	0.119
-76	0.013	-30	0.617	14	0.903	60	0.109
-75	0.016	-29	0.638	15	0.889	61	0.099
-74	0.019	-28	0.658	16	0.874	62	0.090
-73	0.022	-27	0.678	17	0.859	63	0.082
-72	0.026	-26	0.698	18	0.843	64	0.073
-71	0.030	-25	0.718	19	0.827	65	0.066
-70	0.035	-24	0.737	20	0.810	66	0.059
-69	0.040	-23	0.756	21	0.792	67	0.052
-68	0.046	-22	0.774	22	0.774	68	0.046
-67	0.052	-21	0.792	23	0.756	69	0.040
-66	0.059	-20	0.810	24	0.737	70	0.035
-65	0.066	-19	0.827	25	0.718	71	0.030
-64	0.073	-18	0.843	26	0.698	72	0.026
-63	0.082	-17	0.859	27	0.678	73	0.022
-62	0.090	-16	0.874	28	0.658	74	0.019
-61	0.099	-15	0.889	29	0.638	75	0.016
-60	0.109	-14	0.903	30	0.617	76	0.013
-59	0.119	-13	0.915	31	0.597	77	0.011
-58	0.130	-12	0.928	32	0.576	78	0.008
-57	0.142	-11	0.939	33	0.555	79	0.007
-56	0.154	-10	0.949	34	0.535	80	0.005
-55	0.166	-9	0.959	35	0.514	81	0.004
-54	0.179	-8	0.967	36	0.494	82	0.003
-53	0.193	-7	0.975	37	0.473	83	0.002
-52	0.207	-6	0.981	38	0.453	84	0.001
-51	0.222	-5	0.987	39	0.433	85	0.001
-50	0.237	-4	0.992	40	0.414	86	0.001
-49	0.253	-3	0.995	41	0.394	87	0.000
-48	0.269	-2	0.998	42	0.375	88	0.000
-47	0.286	-1	0.999	43	0.357	89	0.000
-46	0.303	0	1.000	44	0.338	90	0.000
-45	0.320			45	0.320		