

**Goldman Engineering Management
Auburn, CA**

NARRATIVE DESCRIPTION OF REQUEST FOR BOOSTER

By this application, WLEY Licensing, Inc. (“WLEY”), licensee of WLEY-FM Channel 300B, Aurora, IL respectfully requests an on-channel booster pursuant to FCC 47C.F.R. §74.1232 to better serve the Chicago coverage area within WLEY-FM’s 54dBu contour. This application is one of four applications for boosters filed concurrently.

FACILITIES REQUESTED

The requested facility will operate within the 54dBu contour of WLEY-FM. It is requested that the call letters for this facility be assigned as WLEY-FM4. A map showing the coverage of this booster in relationship to the WLEY-FM signal is shown in Exhibit A. The proposed boosters will meet contour overlap and distance requirements to other stations, (terrain from FCC 30 second terrain database). The antenna being used is a Jampro 1-1-(2) dual element, single level log-periodic antenna. The two antennas are rotated 30 degrees from vertical to achieve slant H+V polarization and pointed 45 degrees from each other to achieve a wider beam width. The Azimuth Pattern is attached as Exhibit D and the vertical elevation pattern is attached as Exhibit E.

Booster Location:	“Santa Fe” (WLEY-FM4)
ASR	N/A
Geographic Coordinates (NAD27):	41°50-32” N, 87° 40’ 32.9” W
Channel:	300 (107.9 MHz)
Effective Radiated Power:	99 W (H+V)
Antenna Type, Pattern:	Jampro JAVA 1-1-(2), log-periodic
Antenna Orientation:	108° True
Site Height AMSL	180.0m
Tower OAGL	29.3m
Antenna Height :	
Above ground:	27.4m
Above mean sea level:	207.4m
Above average terrain:	25.0m

ALLOCATION

As shown in the allocation chart below, WLEY-FM4 (Santa Fe), is fully compliant with all rules:

ComStudy 2.2 search of channel 300 (107.9 MHz Class D) at 41-50-32.0 N, 87-40-32.9 W.

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
WGCI-FM	CHICAGO	IL 298 B	5.27	0.00	39.3	-50.18 dB 2 nd ADJ
WLEY-FM	AURORA	IL 300 B	34.50	0.00	287.3	-32.10 dB PRIMARY
WDRV	CHICAGO	IL 246 B	6.54	15.00	43.3	-8.5 IF-SHORT
WVCY-FM	MILWAUKEE	WI 299 B	128.85	0.00	345.5	11.83 dB
WMUS	MUSKEGON	MI 300 B1	193.75	0.00	34.1	15.07 dB
WNTR	INDIANAPOLIS	IN 300 B	249.40	0.00	149.7	19.02 dB
WIBL	FAIRBURY	IL 299 B1	163.43	0.00	214.8	22.37 dB
WCDD	CANTON	IL 300 B1	243.87	0.00	234.4	23.14 dB
WRKR	PORTAGE	MI 299 B	196.22	0.00	79.8	23.21 dB
WIBL	FAIRBURY	IL 299 B1	163.43	0.00	214.8	23.91 dB
WKIO	ARCOLA	IL 300 A	222.45	0.00	191.5	26.44 dB
WSJY	FORT ATKINSON	WI 297 B	155.72	0.00	313.7	28.14 dB
WJFX	NEW HAVEN	IN 300 A	236.46	0.00	111.8	28.56 dB
WMRS	MONTICELLO	IN 299 A	154.04	0.00	147.5	29.20 dB
WRSW-FM	WARSAW	IN 297 B	168.11	0.00	113.6	29.52 dB
WLLT	POLO	IL 299 A	160.32	0.00	272.9	29.81 dB
WWQC	CLIFTON	IL 297 A	107.56	0.00	203.2	34.51 dB
WBBL-FM	GREENVILLE	MI 297 B	231.84	0.00	54.8	39.69 dB

As shown in Exhibit A the 54dBu contour of the booster will fall inside the 54dBu contour of WLEY-FM, Channel 300B. The proposed booster is less than 15km from WDRV, 246B. for IF protection, accordingly, the ERP of this booster is limited to 99 watts. As shown in exhibit B, both the f50/10 34dBu and f50/10 40dBu interfering contours of the booster will be well contained within the f50/10 34dBu and f50/10 40dBu contours of WLEY-FM.

ENVIRONMENTAL CONSIDERATIONS

The Booster will be attached at the 27.4m height on an existing 29.3m registered tower. Since the tower is under 200ft and passes glide slope calculations it does not require registration. Because there will be no modifications to this tower it is exempt from environmental processing under CFR Section 1.1306.

The booster is proposed to operate at 99 watts at 27.4m AGL. Using the FCC program “FM Model for Windows” for a worst case dipole antenna, the predicted RF power density at 2m AGL with a 27.4m center of radiation is $6.2\mu\text{W}/\text{cm}^2$ which is 3.1% of the maximum allowable public exposure (MPE) of $200\mu\text{W}/\text{cm}^2$. The vertical elevation pattern is shown as Exhibit E.

There are no other non-excluded RF sources on the tower.

The permittee agrees to reduce power or cease operations when it becomes necessary for workers or the general public to be on the roof in order to ensure that they will not be exposed to levels of radio frequency electromagnetic radiation that exceed FCC guidelines.

CERTIFICATION

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direct supervision, and that they are true and correct to the best of his knowledge and belief.



Bertram S. Goldman
Goldman Engineering Management

EXHIBIT A

Santa Fe Site Booster, 300D, 27.4m AGL, 99W ERP

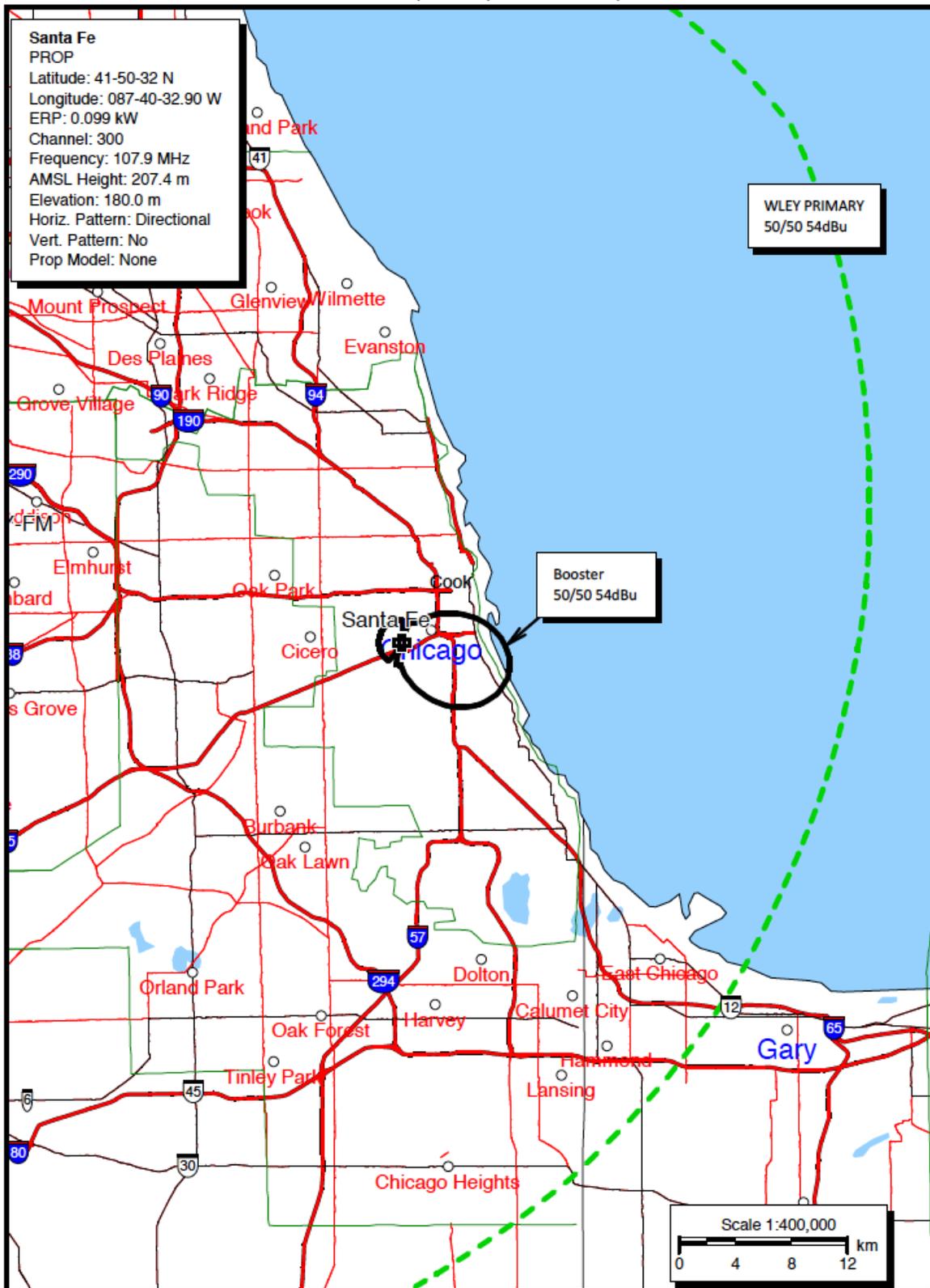


EXHIBIT B

Low Power Booster Contours Compared with Main WLEY Contours

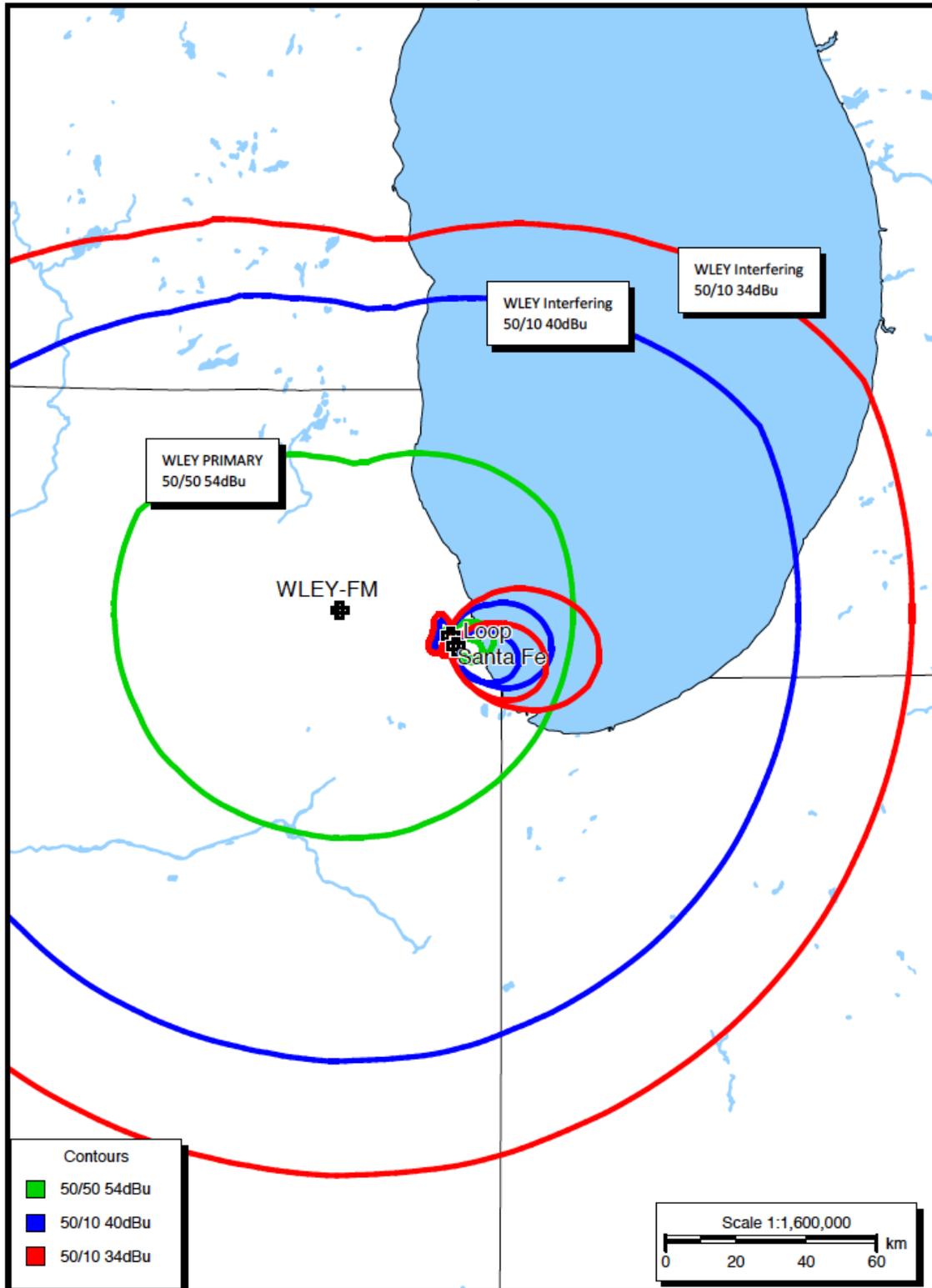


EXHIBIT D

Santa Fe Antenna Pattern
Pre-Rotation Antenna Pattern...

Azimuth (deg)	Relative Field
0.0	1.0
10.0	0.947
20.0	0.805
30.0	0.612
40.0	0.412
50.0	0.243
60.0	0.124
70.0	0.054
80.0	0.019
90.0	0.005
100.0	0.004
110.0	0.015
120.0	0.027
130.0	0.034
140.0	0.035
150.0	0.03
160.0	0.023
170.0	0.02
180.0	0.02
190.0	0.02
200.0	0.023
210.0	0.03
220.0	0.035
230.0	0.034
240.0	0.027
250.0	0.015
260.0	0.004
270.0	0.005
280.0	0.019
290.0	0.054
300.0	0.124
310.0	0.243
320.0	0.412
330.0	0.612
340.0	0.805
350.0	0.947

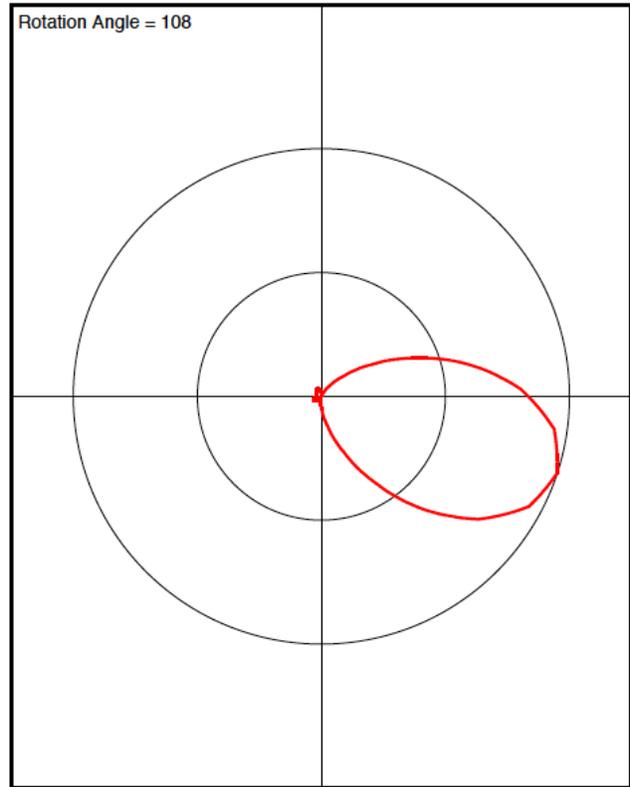
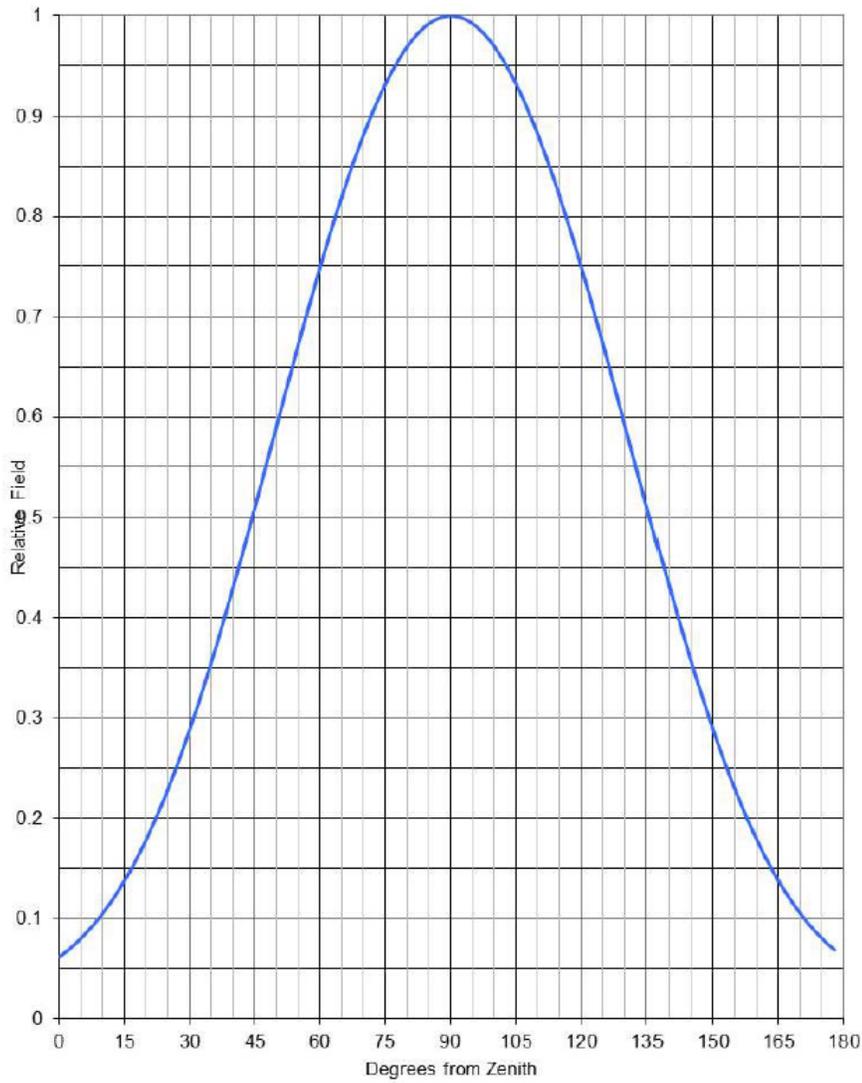


EXHIBIT E



Elevation Pattern



Model: JAVA-1-1(2)
Description: Dual Log Periodic Antenna
30° Roll



Elevation Pattern Tabulation

COMPUTED ELEVATION PATTERN

<u>Elevation</u> <u>Angle</u>	<u>Relative</u> <u>Field</u>	<u>Relative</u> <u>Field, dB</u>	<u>Elevation</u> <u>Angle</u>	<u>Relative</u> <u>Field</u>	<u>Relative</u> <u>Field, dB</u>
90	0.062	-24.16	0	1.000	0.00
88	0.069	-23.28	-2	0.999	-0.01
86	0.076	-22.36	-4	0.995	-0.04
84	0.085	-21.43	-6	0.989	-0.10
82	0.095	-20.49	-8	0.980	-0.17
80	0.105	-19.54	-10	0.969	-0.27
78	0.117	-18.60	-12	0.956	-0.39
76	0.131	-17.67	-14	0.941	-0.53
74	0.146	-16.74	-16	0.923	-0.69
72	0.162	-15.83	-18	0.903	-0.88
70	0.179	-14.94	-20	0.882	-1.09
68	0.198	-14.06	-22	0.859	-1.32
66	0.219	-13.21	-24	0.834	-1.58
64	0.240	-12.38	-26	0.807	-1.86
62	0.264	-11.57	-28	0.779	-2.17
60	0.289	-10.79	-30	0.750	-2.50
58	0.315	-10.04	-32	0.720	-2.86
56	0.342	-9.32	-34	0.689	-3.24
54	0.371	-8.62	-36	0.657	-3.65
52	0.400	-7.95	-38	0.625	-4.09
50	0.431	-7.31	-40	0.592	-4.55
48	0.462	-6.70	-42	0.559	-5.05
46	0.494	-6.12	-44	0.527	-5.57
44	0.527	-5.57	-46	0.494	-6.12
42	0.559	-5.05	-48	0.462	-6.70
40	0.592	-4.55	-50	0.431	-7.31
38	0.625	-4.09	-52	0.400	-7.95
36	0.657	-3.65	-54	0.371	-8.62
34	0.689	-3.24	-56	0.342	-9.32
32	0.720	-2.86	-58	0.315	-10.04
30	0.750	-2.50	-60	0.289	-10.79
28	0.779	-2.17	-62	0.264	-11.57
26	0.807	-1.86	-64	0.240	-12.38
24	0.834	-1.58	-66	0.219	-13.21
22	0.859	-1.32	-68	0.198	-14.06
20	0.882	-1.09	-70	0.179	-14.94
18	0.903	-0.88	-72	0.162	-15.83
16	0.923	-0.70	-74	0.146	-16.74
14	0.941	-0.53	-76	0.131	-17.66
12	0.956	-0.39	-78	0.117	-18.60
10	0.969	-0.27	-80	0.105	-19.54
8	0.980	-0.17	-82	0.095	-20.49
6	0.989	-0.10	-84	0.085	-21.43
4	0.995	-0.04	-86	0.076	-22.37
2	0.999	-0.01	-88	0.069	-23.28

Model: JAVA-1-1(2)
Description: Dual Log Periodic Antenna
30° Roll