Table II

Computation of Signal Level on the Ground from Proposed CH 225 FM Translator Oklahoma City, OK

March, 2013

Depression Angle, Degrees	Relative Field	ERP Watts	dBk	Distance to the Ground in Kilometers	Free Space Signal
90	0.001	0.0001	-71.2	0.1430	52.6
85	0.085	0.5419	-32.7	0.1435	91.1
80	0.162	1.9683	-27.1	0.1452	96.6
75	0.231	4.0021	-24.0	0.1480	99.5
70	0.288	6.2208	-22.1	0.1522	101.2
65	0.328	8.0688	-20.9	0.1578	102.0
60	0.347	9.0307	-20.4	0.1651	102.1
55	0.339	8.6191	-20.6	0.1746	101.4
50	0.299	6.7051	-21.7	0.1867	99.8
45	0.224	3.7632	-24.2	0.2022	96.6
40	0.112	0.9408	-30.3	0.2225	89.7
35	0.032	0.0768	-41.1	0.2493	77.8
30	0.203	3.0907	-25.1	0.2860	92.7
25	0.389	11.3491	-19.5	0.3384	96.9
20	0.576	24.8832	-16.0	0.4181	98.5
15	0.745	41.6269	-13.8	0.5525	98.3
10	0.881	58.2121	-12.3	0.8235	96.3
5	0.969	70.4221	-11.5	1.6407	91.1

Notes:

Antenna radiation center above ground (meters): 143

Maximum ERP (watts) at 0° Depression angle: 75

Free Space Signal = 106.92 -20*log(distance in km) + dBk

Relative field based on 2 bay full wavelength interbay spacing antenna.