

**TABLE II**

**COMPUTATION OF SIGNAL**  
**AT GROUND LEVEL**  
**PROPOSED W293AU**  
**DERBY, CONNECTICUT**

**JUNE, 2013**

Depression Angle, Degrees	Relative Field	ERP Watts	dBk	Distance to the Ground in Kilometers	Free Space Signal
90	0.001	0.0001	-70.7	0.1030	56.0
85	0.001	0.0001	-70.7	0.1034	55.9
80	0.006	0.0031	-55.1	0.1046	71.4
75	0.024	0.0490	-43.1	0.1066	83.3
70	0.051	0.2211	-36.6	0.1096	89.6
65	0.078	0.5171	-32.9	0.1136	92.9
60	0.092	0.7194	-31.4	0.1189	94.0
55	0.076	0.4910	-33.1	0.1257	91.8
50	0.025	0.0531	-42.7	0.1345	81.6
45	0.044	0.1646	-37.8	0.1457	85.8
40	0.086	0.6287	-32.0	0.1602	90.8
35	0.057	0.2762	-35.6	0.1796	86.2
30	0.045	0.1721	-37.6	0.2060	83.0
25	0.153	1.9898	-27.0	0.2437	92.2
20	0.145	1.7871	-27.5	0.3012	89.9
15	0.071	0.4285	-33.7	0.3980	81.2
10	0.459	17.9079	-17.5	0.5932	94.0
5	0.841	60.1189	-12.2	1.1818	93.3
4	0.896	68.2394	-11.7	1.4766	91.9
3	0.941	75.2659	-11.2	1.9681	89.8
2	0.973	80.4720	-10.9	2.9513	86.6
1	0.993	83.8142	-10.8	5.9018	80.7

**Notes:**

Antenna radiation center above ground (meters): 103  
Maximum ERP (watts) at 0° Depression angle: 85  
Free Space Signal =  $106.92 - 20 \cdot \log(\text{distance in km}) + \text{dBk}$   
Antenna elevation pattern from Shively 6812 5 bay 0.785 wave spaced binomial feed