



FCC ELS Application Data for the HAARP IRI
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Exhibit: Antenna Registration
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The IRI (Ionospheric Research Instrument) uses an electronically controlled phased array antenna system that has highly flexible phasing, beam forming and beam steering capabilities.
The beam width and orientation can be set nearly arbitrarily within a cone above about 20 degrees from the horizon. The radiated beam characteristics are:

Frequency, ERP, HPBW	ERP in Watts
2.850 MHz ERP: 86.6 dBW HPBW: 14.4 deg	457.088 MW
3.400 MHz ERP: 88.1 dBW HPBW: 12.1 deg	645.654 MW
4.650 MHz ERP: 90.3 dBW HPBW: 8.9 deg	1.071 GW
4.995 MHz ERP: 90.8 dBW HPBW: 8.3 deg	1.202 GW
5.450 MHz ERP: 91.7 dBW HPBW: 7.6 deg	1.479 GW
5.950 MHz ERP: 92.6 dBW HPBW: 7.0 deg	1.819 GW
7.000 MHz ERP: 93.9 dBW HPBW: 5.9 deg	2.454 GW
8.100 MHz ERP: 94.5 dBW HPBW: 5.1 deg	2.818 GW
9.995 MHz ERP: 95.6 dBW HPBW: 4.2 deg	3.630 GW