Maximum power density calculations for **remote dish** using FCC prediction methods (Pages 26-29)

by Jay McCandless 12/28/99

Model	Frequency (f) (GHz)	Wavelength (λ) (cm) is 30/f	Specified Gain (dB)	Gain (G) is 10^dB gain/10	Aperture Diameter (D) (cm)	Aperture Area (A) (cm sq.)	Efficiency (η) is $G*(\lambda/(\pi D)^2$	Maximum Specified Transmit Power (4 QAM) (dBm)	Transmit Power (P) (mW)	Worst Case Power Density on Surface (Ssurface) (mW/cm^2) is 4P/A	R-near field (cm) is $D^2/4\lambda$
PTM 1000	38	0.789473684	38	6309.573445	26.67	558.6463021	0.560179883	13	19.95262315	**0.142864085**	225.241485
PTM 1000	31	0.967741935	35	3162.27766	26.67	558.6463021	0.421862881	16	39.81071706	**0.285051324**	183.7496325
PTM 1000	28	1.071428571	34.4	2754.228703	26.67	558.6463021	0.450379525	16	39.81071706	**0.285051324**	165.96741

Worst Case Power Density in the Near Field (Snf) (mW/cm^2)	Maximum Power Density Allowed (mW/cm^2)	Designation
is $16\eta P/\pi D^2$		
0.052143299	**1**	**Safe anywhere**
0.048330239	**1**	**Safe anywhere**
0.051597216	**1**	**Safe anywhere**