RADIATION HAZARD CALCULATIONS FOF		10.0 meter EARTH STATION	
Nomenclature	Formula	Value	Unit
INPUT PARAMETERS			
D = Antenna Diameter		10.00	meters
d = Diameter of Feed Mouth		0.029	meters
P = Max Power into Antenna		200	Watts
n = Apperture Effeciency		49%	
k = Wavelength @ 29.1GHz		0.0103	meters
CALCULATED VALUES			
A = Area of Reflector	PI*DA2J4	78.540	metersA2
l = Length of Near Field	DA2J4k	2425	meters
L = Beginning of Far Field	O.6DA2Jk	5820	meters
G = Antenna Gain @ 28.6 GHz	n(PI*D/k)A2	4,550,899	66.6 dBi
a = Area of Feed Mouth	PI*dA2J4	0.0007	metersA2

POWER DENSITY CALCULATIONS

Region	Maximum Power Density in Region		Hazard Assessment
	Formula	Value (mW/cmA2)	(FCC MPE Limit= 5 mW/cmA2)
1 Near Field	4nP/A	0.50	< FCC MPE Limit
2 Far Field	GP/(4(PI)LA2)	0.21	< FCC MPE Limit
3 Transition	<= Nr Fld Region	0.50	< FCC MPE Limit
4 Near Reflector Surface	4P/A	1.02	< FCC MPE Limit
5 Between Reflector & Ground	PIA	0.25	< FCC MPE Limit
6 Between Subreflector and Feed	4P/a	121116.7	>FCC MPE Limit

RADIATION HAZARD CALCULATIONS FOR		10.0 meter EARtH STATION	
Nomenclature	Formula	Value	Unit
INPUT PARAMETERS			
O ☛ Antenna Diameter		10.00	meters
d ☛ Diameter of Feed Mouth		0.029	meters
P ,. Max Power into Antenna		200	Watts
n = Apperture Effeciency		49%	
k ,. Wavelength @ 51.4 GHz		0.0058	meters
CALCULATED VALUES			
A ☛ Area of Reflector	PI*D"2/4	78.540	meters"2
I ☛ Length of Near Field	D"214k	4284	meters
L ,. Beginning of Far Field	0.6D"2/k	10281	meters
G ☛ Antenna Gain @ 51.4 GHz	n(PI*D/k)"2	14,198,336	71.5 dBi
a ☛ Area of Feed Mouth	PI*d"214	0.0007	meters"2

POWER DENSITY CALCULATIONS

Region	Maximum Power Density in Region		Hazard Assessment
	Formula	Value (mW/cm"2)	(FCC MPE Limit ☛ 5 mW/cm"2)
1 Near Field	4nP/A	0.50	< FCC MPE Limit
2 Far Field	GP/(4(PI)L"2)	0.21	< FCC MPE Limit
3 Transition	<= Nr Fld Region	0.50	< FCC MPE Limit
4 Near Reflector Surface	4P/A	1.02	< FCC MPE Limit
5 Between Reflector & Ground	PIA	0.25	< FCC MPE Limit
6 Between Subreflector and Feed	4P/a	121116.7	> FCC MPE Limit