Exhibit Ba Analysis of Non-Ionizing Radiation

Antenna Diameter, (*D*) =	*D* := 2.4 meters	$D \cdot 3.281 =$	7.874	Feet
Antenna Surface Area, (*Sa*) =	$Sa := \pi \cdot \frac{D \cdot D}{4}$	*Sa* =	4.524	sq meters
Subreflector Diameter, (*Ds*) =	*Ds* := 0 cm	$Ds \cdot .3937 =$	0.000	Inches
Area of Subreflector, (*As*) =	$As := \pi \cdot \frac{Ds \cdot Ds}{4}$	*As* =	0.000	sq cm
Center Frequency, (*Cf*) =	*Cf* := 14.250 GHz			
Wavelength at (*Cf*), (*Lambda*) =	*Lambda* := 0.0211 meters C-Band = .049 Ku-Band = .0211			
Transmit Power at HPA or VPC Flange, (P1) =	P1 := 554.63 watts	$P2 := \log(P1) \cdot 10$	P2 = 27.440	dB
Path Loss from HPA or VPC to OMT, (IL) =	Loss := 0.62 dB			
Power at OMT, (*P*)=	P3 := P2 - Loss	P3 =	26.820	OMT Pwr in dB
	$P := 10^{\frac{P3}{10}}$	*P* =	480.84	OMT Pwr in watts
Antenna Gain at (*Cf*), (Gain)=	Gain := 49.20 dBi			
Antenna Gain Converted to Power Ratio, (*Ges*)=	$Ges := 10^{\frac{Gain}{10}}$	Ges =	8.318E+04	Ratio
Antenna Aperture Efficiency, (*n*)=	n := 0.6982			

Far Field (*Rf*)=	$Rf := \frac{.60 \cdot (D \cdot D)}{Lambda}$	*Rf* =	163.791	meters
		$Rf \cdot 3.281 =$	537.40	feet
Far Field Power Density (*Wf*)=	$Wf := \frac{Ges \cdot P}{4 \cdot \pi \cdot (Rf \cdot Rf)} \cdot .1$	*Wf* =	11.863	mw sq cm
Near Field (*Rn*) =	$Rn := \frac{(D \cdot D)}{4 \cdot Lambda}$	*Rn* =	68.246	meters
		$Rf \cdot 3.281 =$	223.917	feet
Near Field Power Density (*Wn*)=	$Wn := \frac{16 \cdot n \cdot P}{\pi \cdot (D \cdot D)} \cdot .1$	*Wn* =	29.685	mw sq cm
Transition Region (*Rt*)=	$Rt := Wn \cdot 1$	*Rt* =	29.685	mw sq cm (Equal to or less than)
Pwr Density at Sub Reflector (*Ws*)=	$Ws := \frac{2 \cdot P}{As} \cdot 1000$		N/A	
Main Reflector Region Pwr Density (*Wm*)=	$Wm := \frac{2 \cdot P}{Sa} \cdot .1$	*Wm* =	21.258	mw sq cm
Pwr Density between main reflector and ground (*Wg*)=	$Wg := \frac{P}{Sa} \cdot .1$	*Wg* =	10.629	mw sq cm
Far Field Off Axis (*WF*)=	$WF := Wf \cdot .01$	*WF* =	0.119	mw sq cm
Near Field Off Axis (*WN*)=	$WN := Wn \cdot .01$	*WN* =	0.297	mw sq cm