- $\lambda = c/f$
- $P_R = EIRP + G_R + \left(\frac{\lambda}{4\pi \text{ range}}\right)^2_{dB}$ without loss
- $L_p = \left(\frac{\lambda}{4\pi \text{ range}}\right)^2$
- $N0 = T_s + k_{dB}$
- $G_T = 10 \log\left(\varepsilon \cdot \left(\frac{\pi D}{\lambda}\right)^2\right)$
- $D = \frac{\lambda}{\pi}\sqrt{\frac{(G_T)_{lin}}{0{,}55}}$
- $T_s = G_R - G/T \longleftrightarrow$
- $\frac{G}{T} = G_R - T_s =$ figure of merit
- $EIRP = P_T + G_T$
- $\frac{C}{N} = P_T + G_T + G_R + L_p - (\text{losses} + k_{dB} + T_s + B_{dB})$
- $\frac{C}{N0} = P_R - N0 = EIRP + G_R + \left(\frac{\lambda}{4\pi \text{ range}}\right)^2_{dB} - T_s - k_{dB}$
- $\frac{C}{T} = \frac{C}{N0} + k_{dB}$
- $OFD = EIRP + L_p - \text{losses} + \left(\frac{1}{A_{eff}}\right)_{dB}$
- with $\left(\frac{1}{A_{eff}}\right)_{dB} = G_{1m^2} = \left(\frac{\lambda^2}{4\pi}\right)_{dB}$
- $IBO = SFD - OFD$
- $OBO = \text{Graph}(IBO)$ with single carrier
- Flux density $= P_R$ (with losses?) $- (A_{eff})_{dB}$
- Beamwidth_3dB $= \left(\frac{\lambda}{D \cdot \sqrt{\varepsilon}}\right)$ radians
- $D = \frac{\lambda}{\text{Beamwidth} \cdot \sqrt{\varepsilon}}$
- Margin Left $= \frac{C}{N0} - \frac{Eb}{N0}$ - losses - op_margin - dataRate
- $N_d = \text{ceil}\left(\frac{D}{d}\right)$
- $N_e = \frac{3 N_d^2 + 1}{4}$
- $d = \frac{\lambda}{\text{FOV\_rad} \cdot \sqrt{\varepsilon}}$

$G_d = G_T - (N_e)_{dB}$