$$B = \frac{L}{4\pi d^2}$$

1 parsec = 206265 AU = 3.26 light-years = 3.09×10^{16} m

206265 arcsec = 1 radian

$$p\,[\text{arcsec}] = \frac{1}{d\,[\text{parsec}]}$$

1 AU = 1.5×10^{11} m

1 kiloparsec = 1000 parsec

1 megaparsec = 10^6 parsec

$$\alpha = \frac{l}{d} \qquad E = mc^2$$

1 light-year = 9.46×10^{15} m

$$m_1 - m_2 = -2.5 \log\left(\frac{F_1}{F_2}\right)$$

$\pi = 3.14159...$

$$M_1 - M_2 = -2.5 \log\left(\frac{L_1}{L_2}\right)$$

$M_\odot = 2 \times 10^{30}$ kg

$$m - M = 5 \log d - 5$$

$R_\odot = 6.96 \times 10^8$ m

$L_\odot = 3.839 \times 10^{26}$ W

$$v = H_0 d \qquad E = h\upsilon = \frac{hc}{\lambda}$$

$G = 6.67 \times 10^{-11}$ $m^3/kg \times s^2$

$c = 3 \times 10^8$ m/s

$h = 6.626 \times 10^{-34} m^2\ kg/s$

$$\cos^2(i) = \frac{\left(\frac{b}{a}\right)^2 - q^2}{1 - q^2}$$

$$F(\nu) = F_0(\nu) e^{-\tau}$$

$$n(R,z) = n_0 \left(e^{-|z|/h_{thin}} + 0.02 e^{-|z|/h_{thick}}\right) e^{-R/h_R}$$

Solar Data

M_U	5.62
M_B	5.48
M_V	4.83
M_R	4.47
M_I	4.11

$$I(r) = I_e\ 10^{-3.33\left[(r/r_e)^{1/4} - 1\right]}$$

$$\mu_s(r) = \mu_e + 8.325\left[(r/r_e)^{1/4} - 1\right]$$

$$I(r) = I(0)\ e^{-r/r_d}$$

$$\mu_d(r) = \mu_0 + 1.086(r/r_d)$$