

$$R = \frac{a}{b} \equiv \text{axial ratio}$$

$$1 \leq R \leq \infty$$

$$R_{\text{dB}} = 20 \log_{10} \left( \frac{a}{b} \right)$$

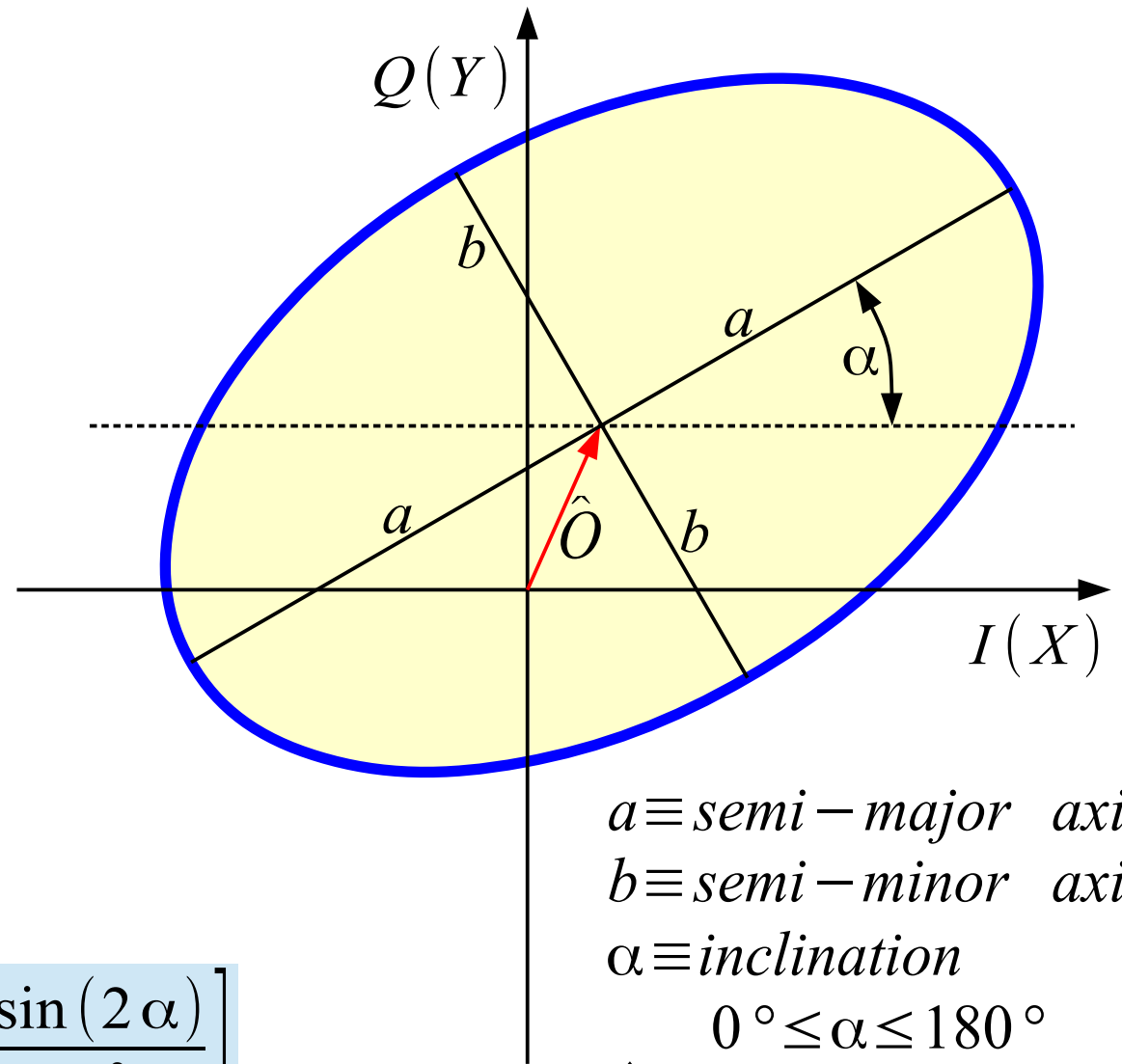
*Image rejection*

$$A = \frac{R-1}{R+1} = \frac{a-b}{a+b}$$

$$A_{\text{dB}} = 20 \log_{10} \left( \frac{a-b}{a+b} \right)$$

$$\text{Phase error} \equiv \Delta \phi = \arctan \left[ \frac{2 A \sin(2 \alpha)}{1 - A^2} \right]$$

$$\text{Gain error} \equiv \Delta G_{\text{dB}} = 10 \log_{10} \left[ \frac{1 + A^2 - 2 A \cos(2 \alpha)}{1 + A^2 + 2 A \cos(2 \alpha)} \right]$$



$a \equiv$  semi-major axis

$b \equiv$  semi-minor axis

$\alpha \equiv$  inclination

$$0^\circ \leq \alpha \leq 180^\circ$$

$\hat{O} \equiv$  center offset