SOLENSIM Model summary

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Abstract

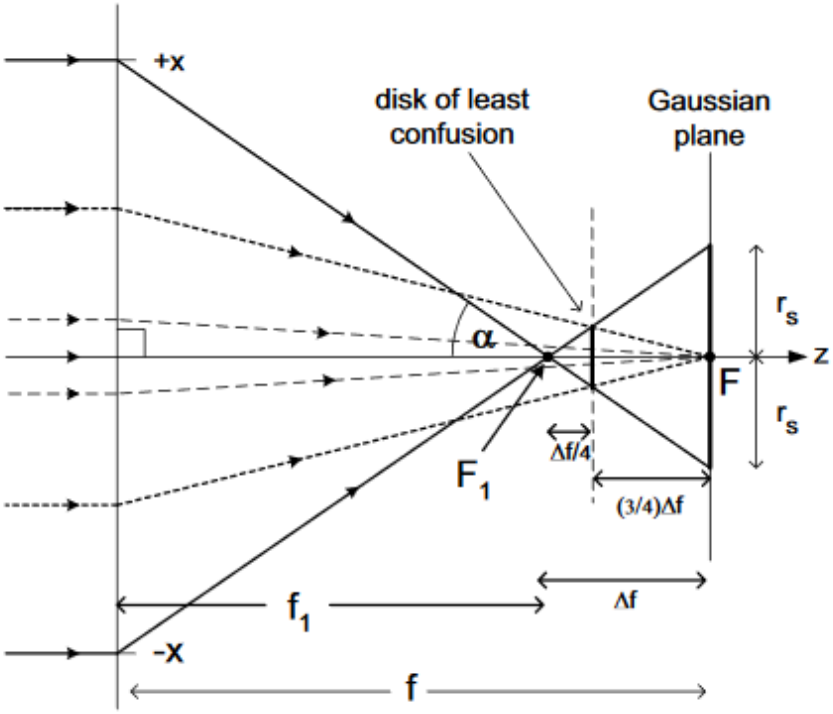

Figure 1: title

1 Chromatic aberrations and focal spot size

$$1/f = const.\cdot F2$$

$$\triangle f \simeq c\cdot x^2$$

$$x = f_1 tan\left(\alpha\right) \simeq f\cdot tan\left(\alpha\right)$$

$$r_s = \triangle f\cdot tan\left(\alpha\right) \simeq \triangle f\cdot \alpha \approx \left(c\left(f\cdot tan\left(\alpha\right)\right)^2\right)\cdot tan\left(\alpha\right) = C_s tan\left(\alpha\right)^3 = C_s\cdot\left(\frac{max\left\{x\right\}}{f-\triangle f}\right)^3$$

$$\underset{f\approx f_1}{=} C_s\cdot\left(\frac{max\left\{x\right\}}{f}\right)^3 \quad (1)$$

If $f \not\approx f_1$ then replace f in (1) with $f - max\left\{x\right\}^2\cdot\frac{C_s}{f^2}$