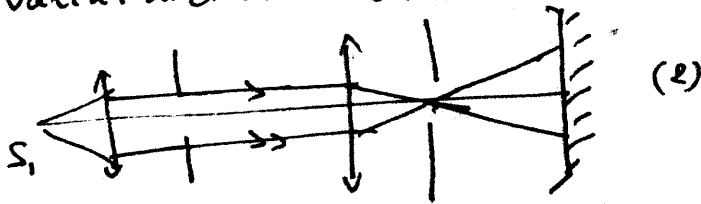


1.1: au foyer objet (o, r)

1.2: variation d'éclairement et/ou conditions de Gauss (o, r)

1.3.1:

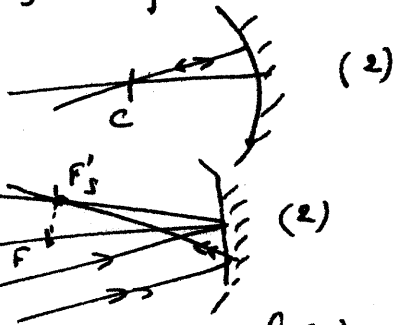


1.3.2: $\frac{D}{O_2 O_E} = \frac{D_1}{O_E S_1}$ $\frac{D_1}{D} = \frac{O_2 S_1}{f'_2}$ (2)

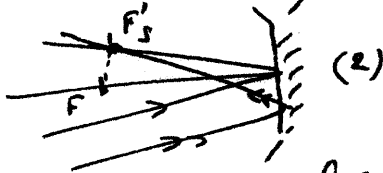
1.4: Visible [400 nm, 800 nm] $IR > 800 \text{ nm}$ (1)

1.5.1: $CS = 2CF$ (1)

1.5.1.2: le rayon réfléchi: revient sur le rayon incident.



1.5.2:



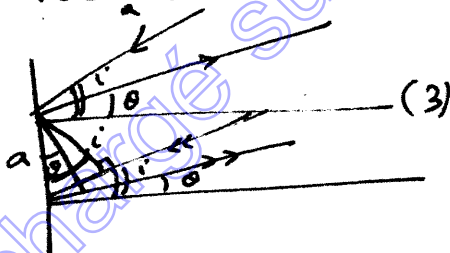
2.1: foyer ou plan focal (1)

2.2.1: Dispersion ~~de~~ spectrales ou séparation des longueurs d'onde (2)

2.2.2: sélection des longueurs d'onde (filtre) (2)

2.3.1: $N = \frac{1}{\lambda}$ (1)

2.3.2:



$$\delta = \delta_1 + \delta_2 \quad \begin{matrix} \delta_1 = a \sin i \\ \delta_2 = a \sin \theta \end{matrix}$$

(1)

2.3.3:

$$\delta = p \lambda \quad a \sin i + a \sin \theta_p = p \lambda \quad \boxed{\sin \theta_p = \frac{p \lambda - a \sin i}{a}} \quad (3)$$

2.3.4.1:

$$\lambda = \frac{\sin \theta_p + \sin i}{N} \quad 285 \text{ nm} \leq \lambda \leq 1257 \text{ nm} \quad (4)$$

2.3.4.2:

$$N = 1200$$

$$N' = \frac{N}{2} = 600$$

$$N'' = \frac{N}{4} = 300$$

~~En~~ $\lambda \in [285 \text{ nm}, 1257 \text{ nm}]$ NON

$\lambda \in [570 \text{ nm}, 2514 \text{ nm}]$ OUI

$\lambda \in [1140 \text{ nm}, 5028 \text{ nm}]$ OUI

on prend $N' = 600 \text{ traits/mm}$ car le pouvoir dispersif est meilleur. (2)

(3)