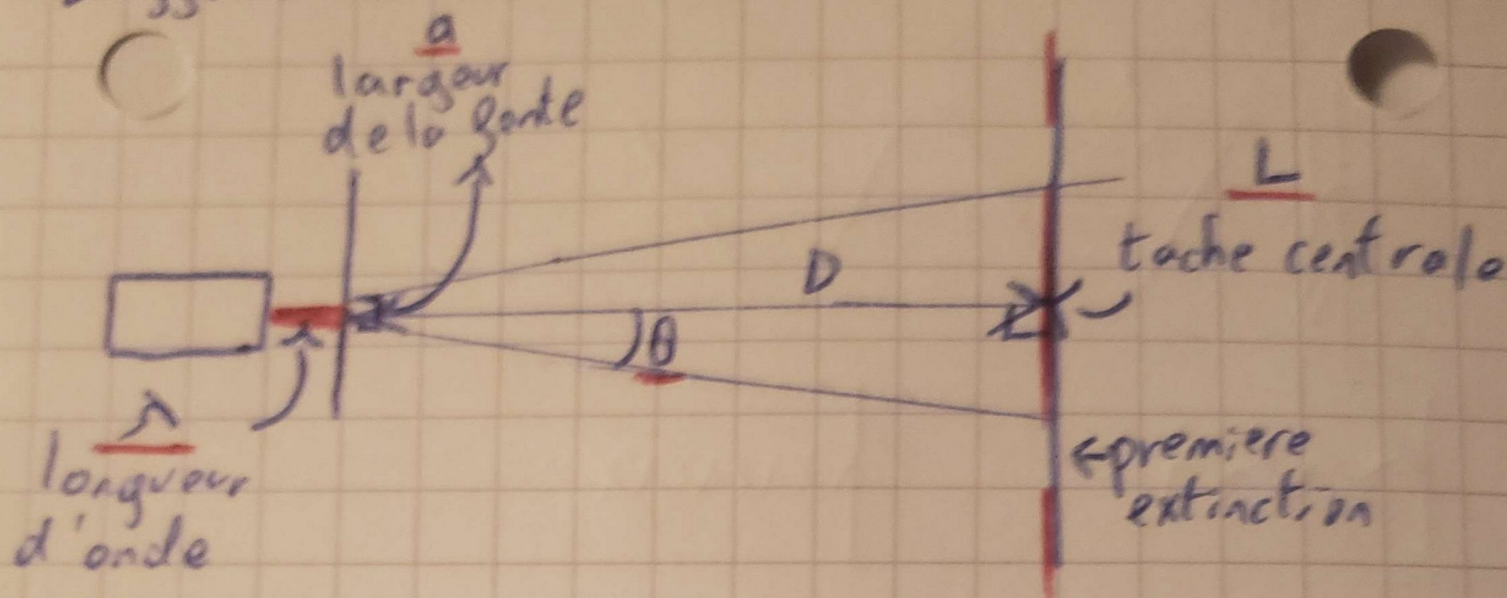


Diffraction



$$\theta = \frac{\lambda}{a}$$

θ : angle caractéristique de diffraction en rad

λ : longueur d'onde en m

a : dimension de l'ouverture en m

$$\tan \theta = \frac{L}{2D}$$

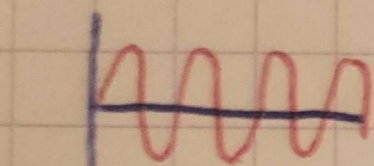
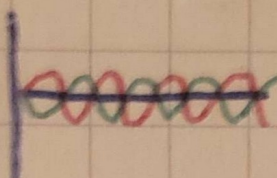
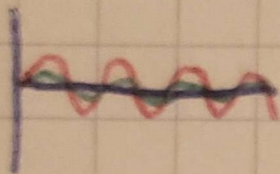
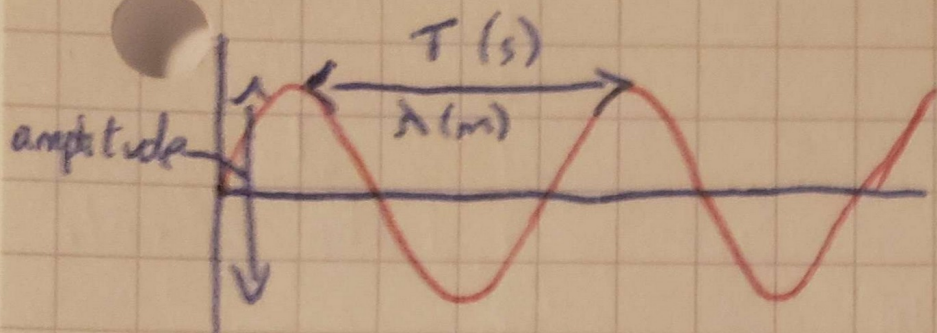
L : largeur de la tache centrale en m

D : distance fente écran

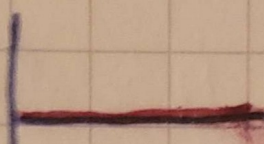
Avec l'approximation des petits angles:

$$\tan \theta \approx \theta$$

Interference

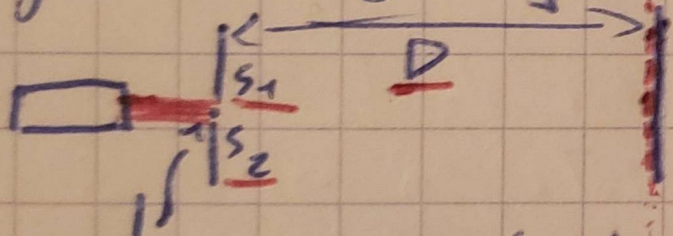


interference
constructive



interference
destructive

Fonte d'Young



plus petit que sans les fentes

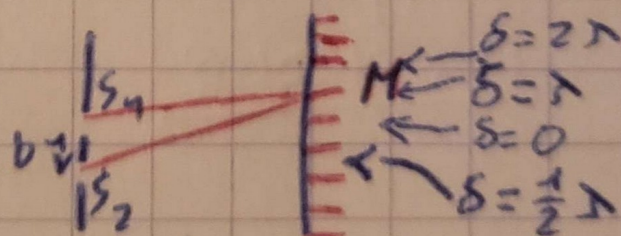
b : distance entre les 2 fentes S_1 et S_2

avec $D \gg b$

$$\delta = S_2M - S_1M$$

$$\delta = \frac{bx}{D}$$

$$i = \frac{\lambda D}{b}$$



δ : difference de chemin optique (m)

b : distance entre les fentes (m)

x : abscisse du point M

i : interférence en m