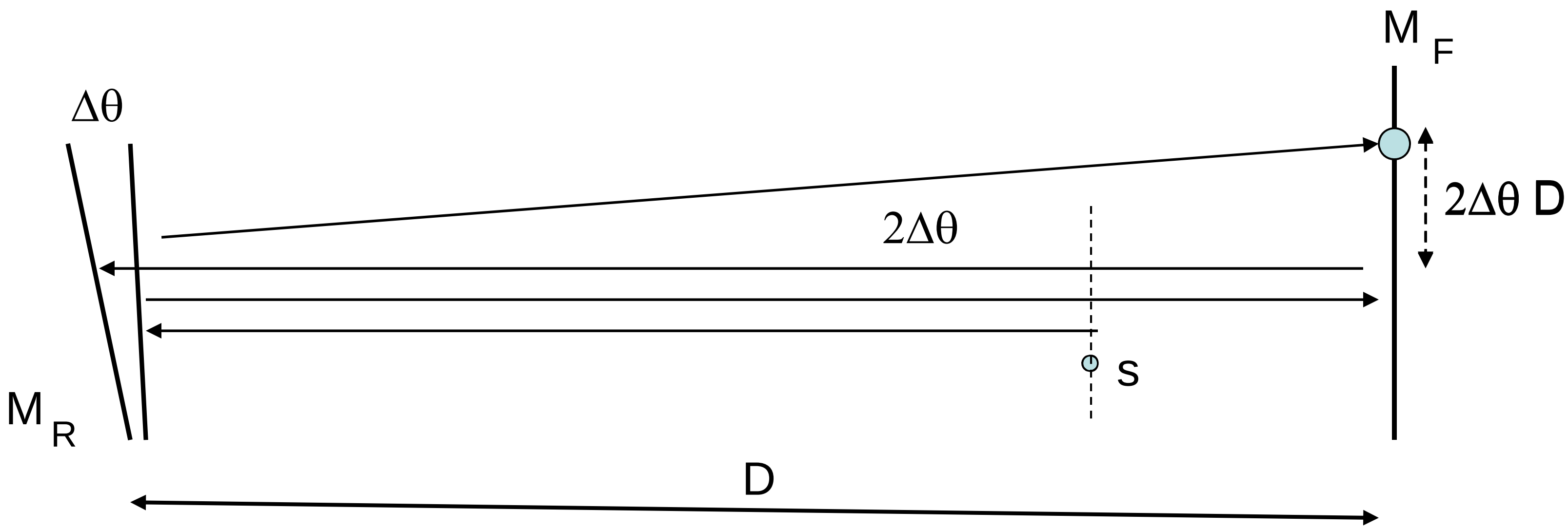
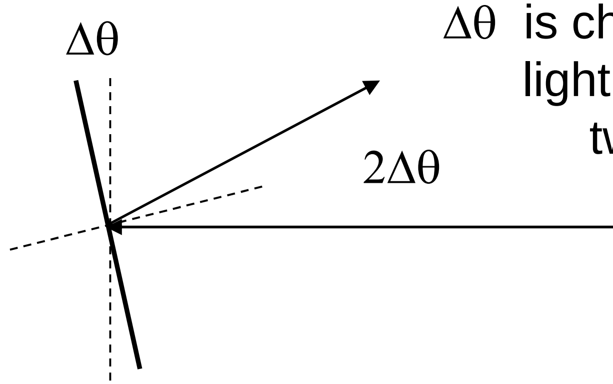
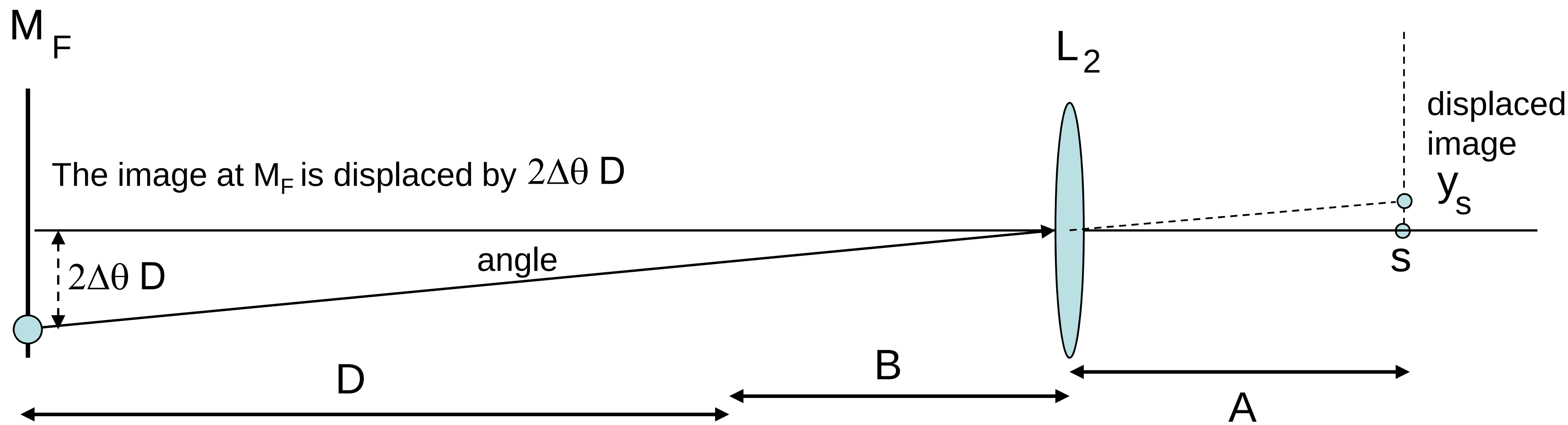


$\Delta t = 2D/c$

$\Delta\theta = \omega\,\Delta t = \omega\,2D/c = 2D\omega/c$



$\Delta\theta$ is change of angle of mirror
light is deflected by
twice that angle



$$\text{Angle} = \frac{2\Delta\theta\, D}{D+B} = \frac{y_s}{A} = 4D^2\,\omega/c(D+B)$$

$\Delta\theta = \omega\,\Delta t = \omega\, 2D/c = 2D\omega/c$

$2\,\Delta\theta\, D = 4D^2\,\omega/c$

$$c = 4AD^2/(D+B)\,(\omega/y_s)$$

Define $P = 4AD^2/(D+B)$

$c = P\,\omega/y_s$

Measure s' for a set of values of ω

$y_s = s' + y_0$ the offset y_0 is not known

$c\, y_s = \omega P$ where $P = 4AD^2/(D+B)$

$c\, y_0 + c\, s' = \omega P$

Plot s' against ω

the slope $ds'/d\omega$ is P/c