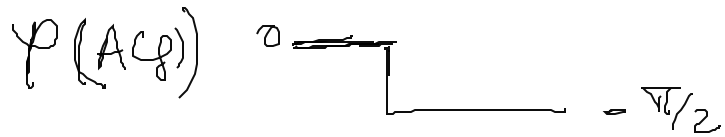


$\Sigma$  stable

Marge Phase :  $\Delta\varphi = \pi - \text{Arg } T(p)$

$T(p) = \text{gain de boucle} = A(p) \cdot H$

$A(p) = \frac{A_0}{1 + p/\rho_c} \rightarrow$  P les du 1<sup>er</sup> ordre



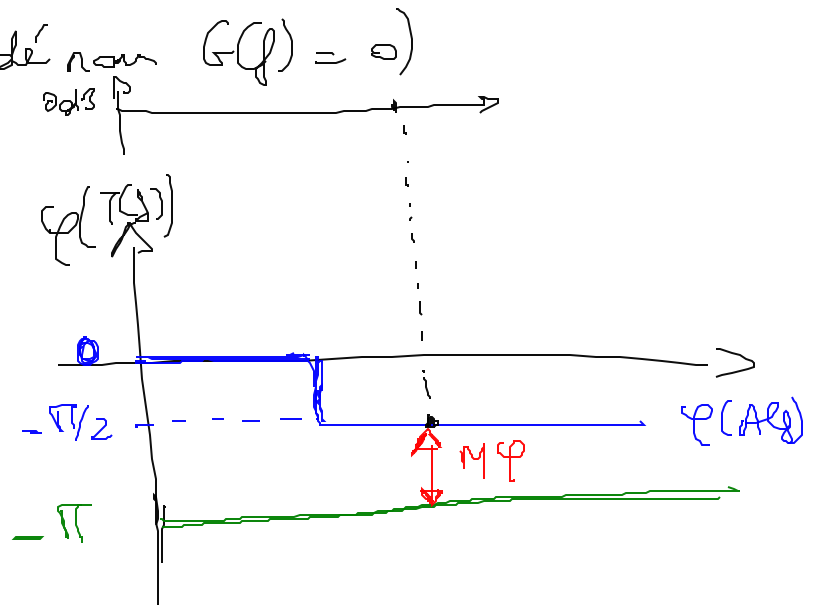
$H = \frac{R_1}{R_1 + R_2} = \text{cte} \rightarrow \varphi = 0.$

$\text{Arg } A(p) \cdot H \equiv \text{Arg } A(p)$

si  $T(p) = -1 \Rightarrow$  instable (de nom  $G(p) = 0$ )

$\hookrightarrow |T(p)| = 1$

$\hookrightarrow \varphi(T(p)) = \pi$



$\Sigma$  stable si  $M\varphi > \pi/4$

H