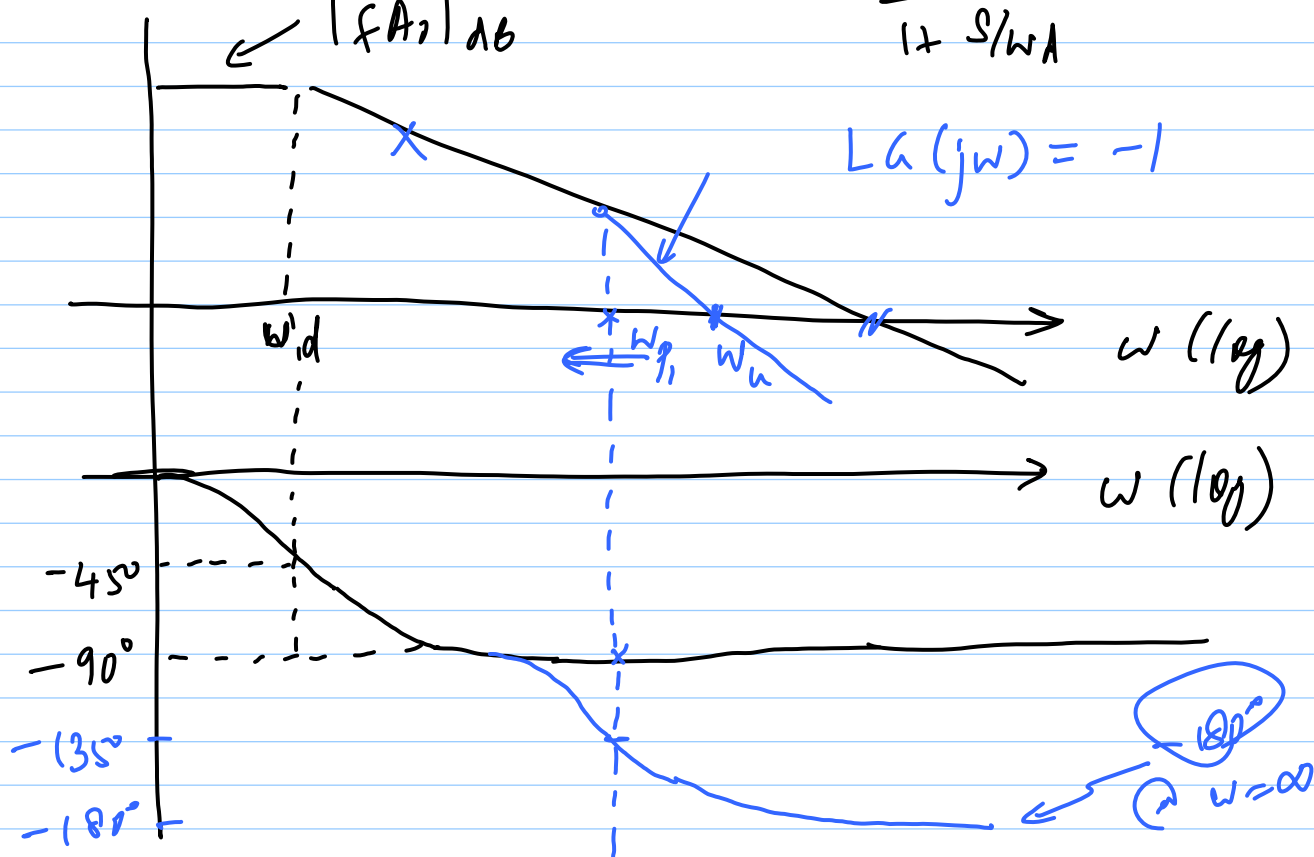


8-11-12

Lec 43

$$\frac{A_0}{1 + s/\omega_A}$$

$|L_A|$

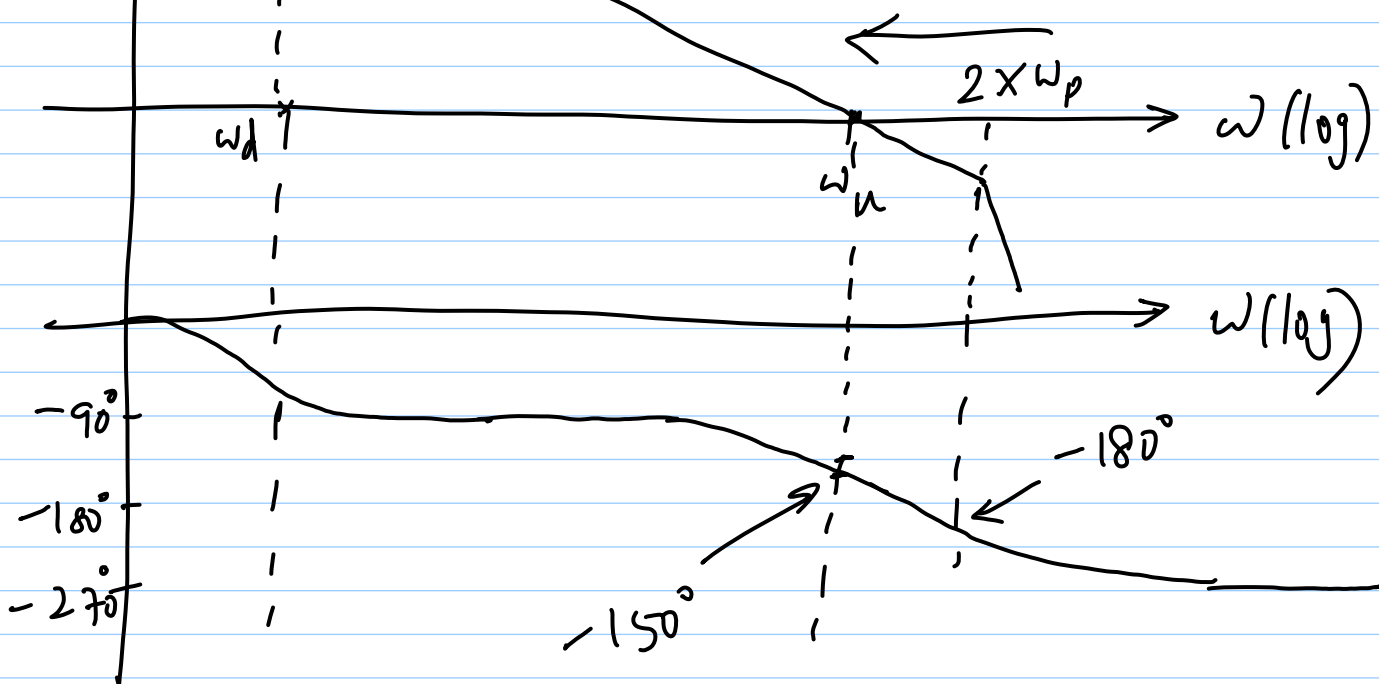


dB

$20 \log |A_0 f|$

$$\left(\omega_A = \frac{\omega_p}{1000} \right) \rightarrow \text{each } \omega_p \text{ gives } -30^\circ$$

A_{Lh}



Measures of Stability

$$\begin{aligned} 1) \text{ Phase Margin } &= \angle L_G(j\omega) \Big|_{|L_G|=0\text{dB}} - (-180^\circ) \\ &= 180^\circ + \angle L_G(j\omega) \Big|_{|L_G|=0\text{dB}} \end{aligned}$$

$$2) \text{ Gain Margin } = 0\text{dB} - |L_G(j\omega)| \Big|_{\angle L_G = -180^\circ}$$