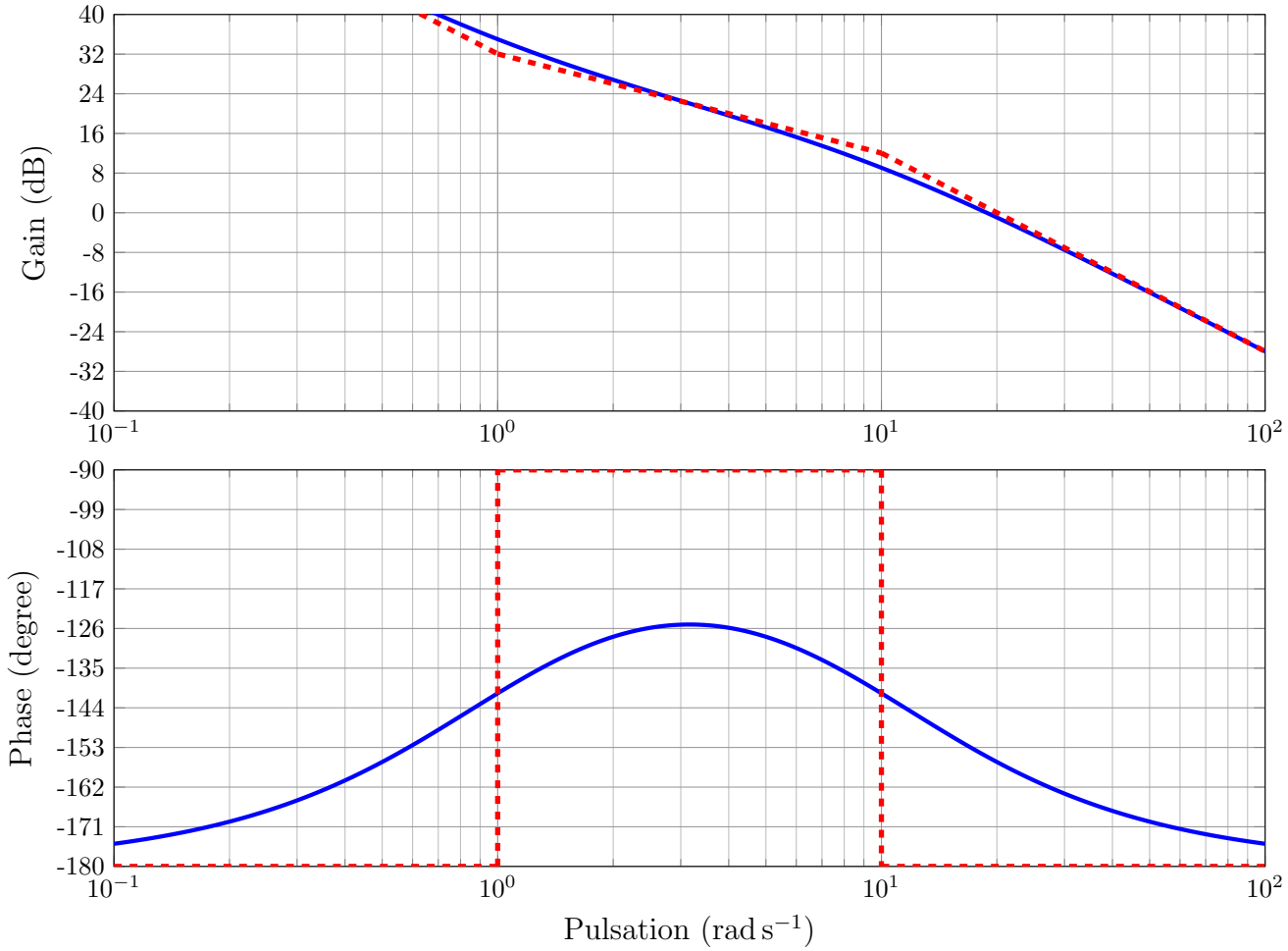
$$\boldsymbol{H(p) = 40\frac{(p+1)}{(p+0)\,(p+0)\,(p+10)}}$$



Fonctions réelles du gain et du déphasage

$$G(\omega) = |H(j\omega)| = \frac{400\left(\sqrt{1+\left(\frac{\omega}{\omega_1}\right)^2}\right)}{\omega^2\sqrt{1+\left(\frac{\omega}{\omega_2}\right)^2}}$$

$$G_{dB}(\omega) = 52 + 10\log\left(1+\left(\frac{\omega}{\omega_1}\right)^2\right) + 40\log\omega - 10\log\left(1+\left(\frac{\omega}{\omega_2}\right)^2\right)$$

$$\phi(\omega) = \arg H(j\omega) = -180 + \arctan\left(\frac{\omega}{\omega_1}\right) - \arctan\left(\frac{\omega}{\omega_2}\right)$$

Quelques valeurs particulières calculées

ω (rad s^{-1})	Gain (dB)	Phase (°)
0.10000	72.08398	-174.86235
0.19953	60.20903	-169.85923
0.39811	48.67325	-160.57193
0.79433	38.13831	-146.08053
1.00000	**35.00829**	**-140.71059**
1.58489	29.38886	-131.25604
3.16228	22.04120	-125.09680
6.30957	14.69354	-131.25604
10.00000	**9.07411**	**-140.71059**
12.58925	5.94409	-146.08052
25.11886	-4.59084	-160.57193
50.11872	-16.12661	-169.85922
100.00000	-28.00158	-174.86235