



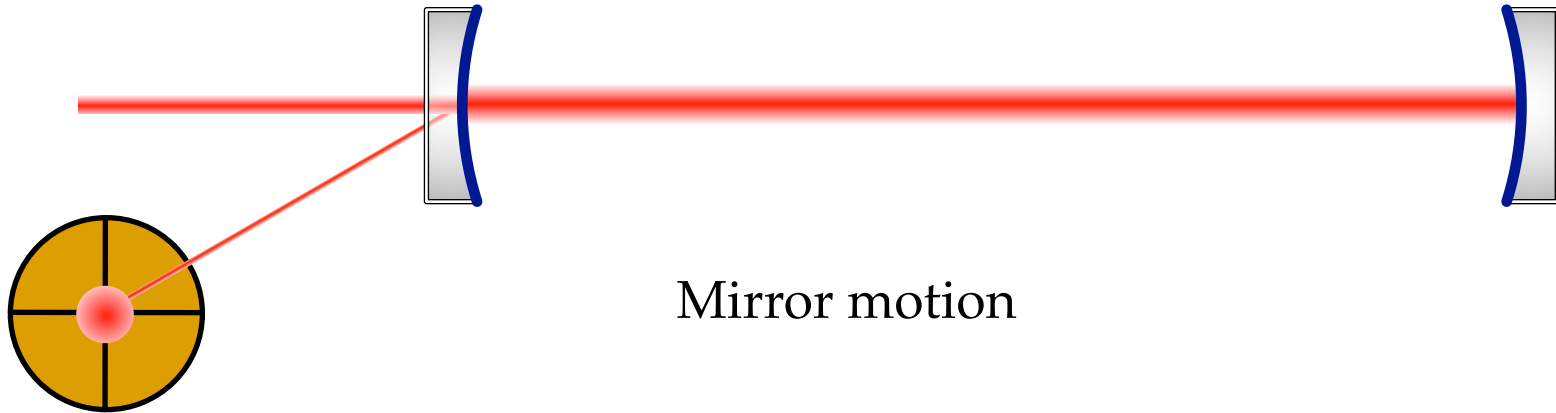
Angular Controls Considerations

Jenne Driggers

LIGO Hanford Observatory

California Institute of Technology

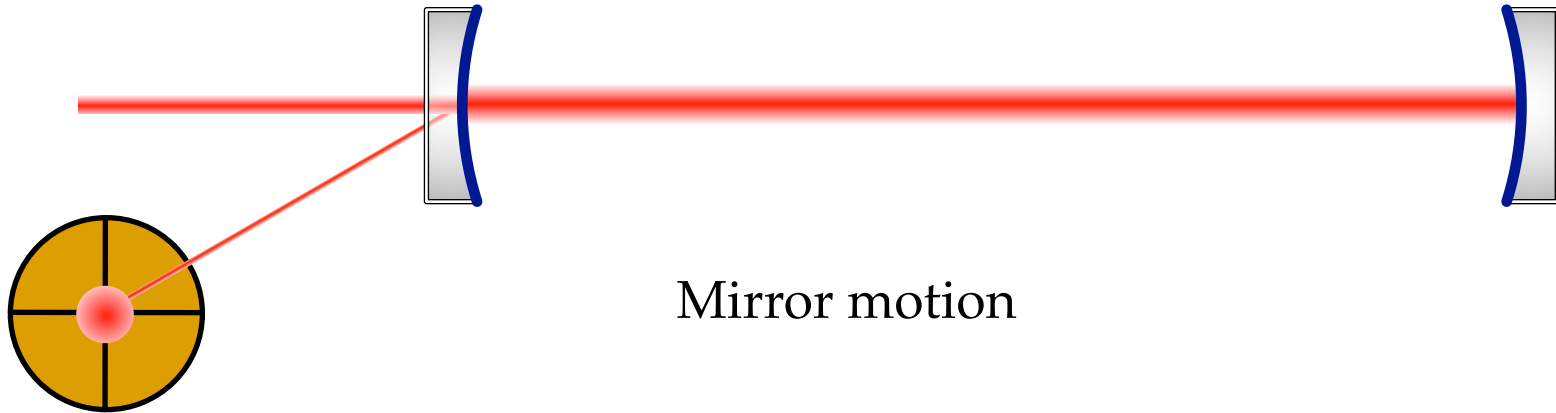
GWADW, Elba, 25 May 2016



Mirror motion

Input beam pointing

Centering on sensors



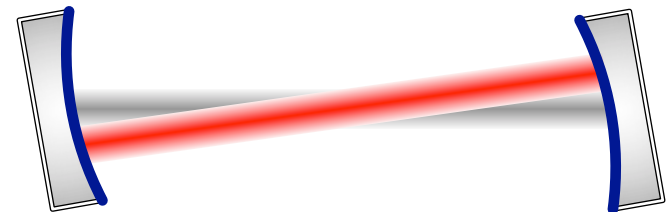
Mirror motion

Input beam pointing

Centering on sensors

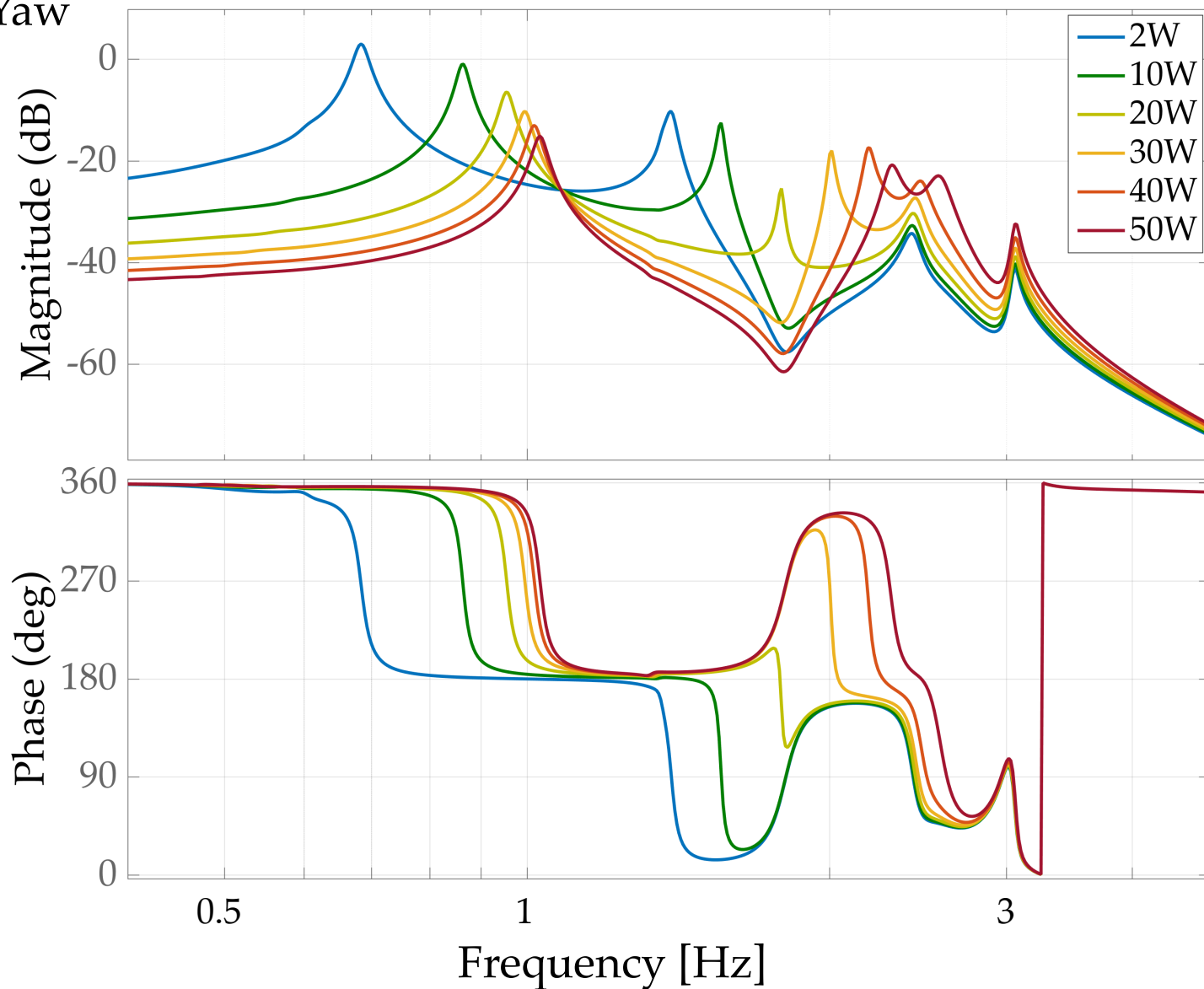


SOFT mode

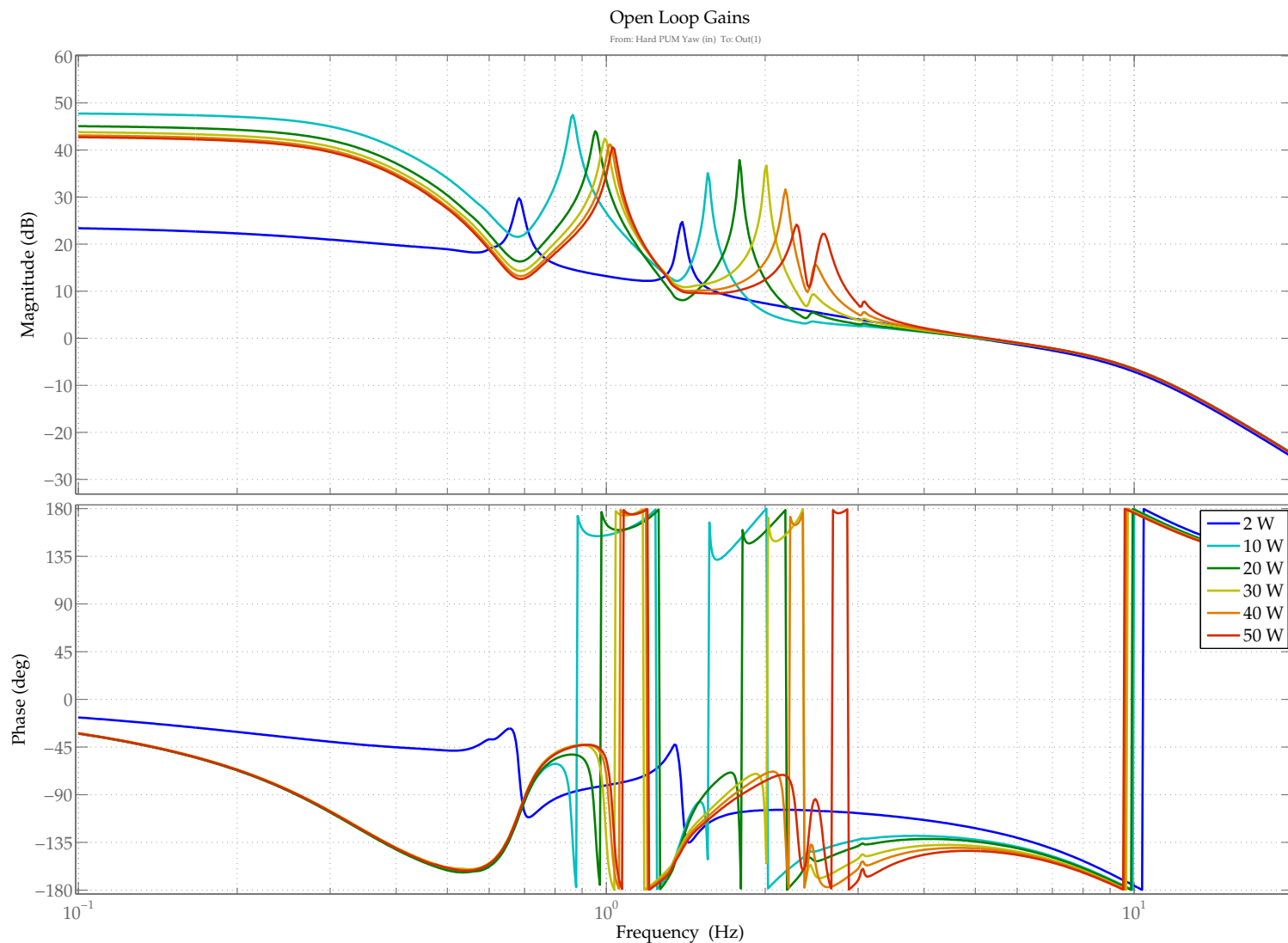


HARD mode

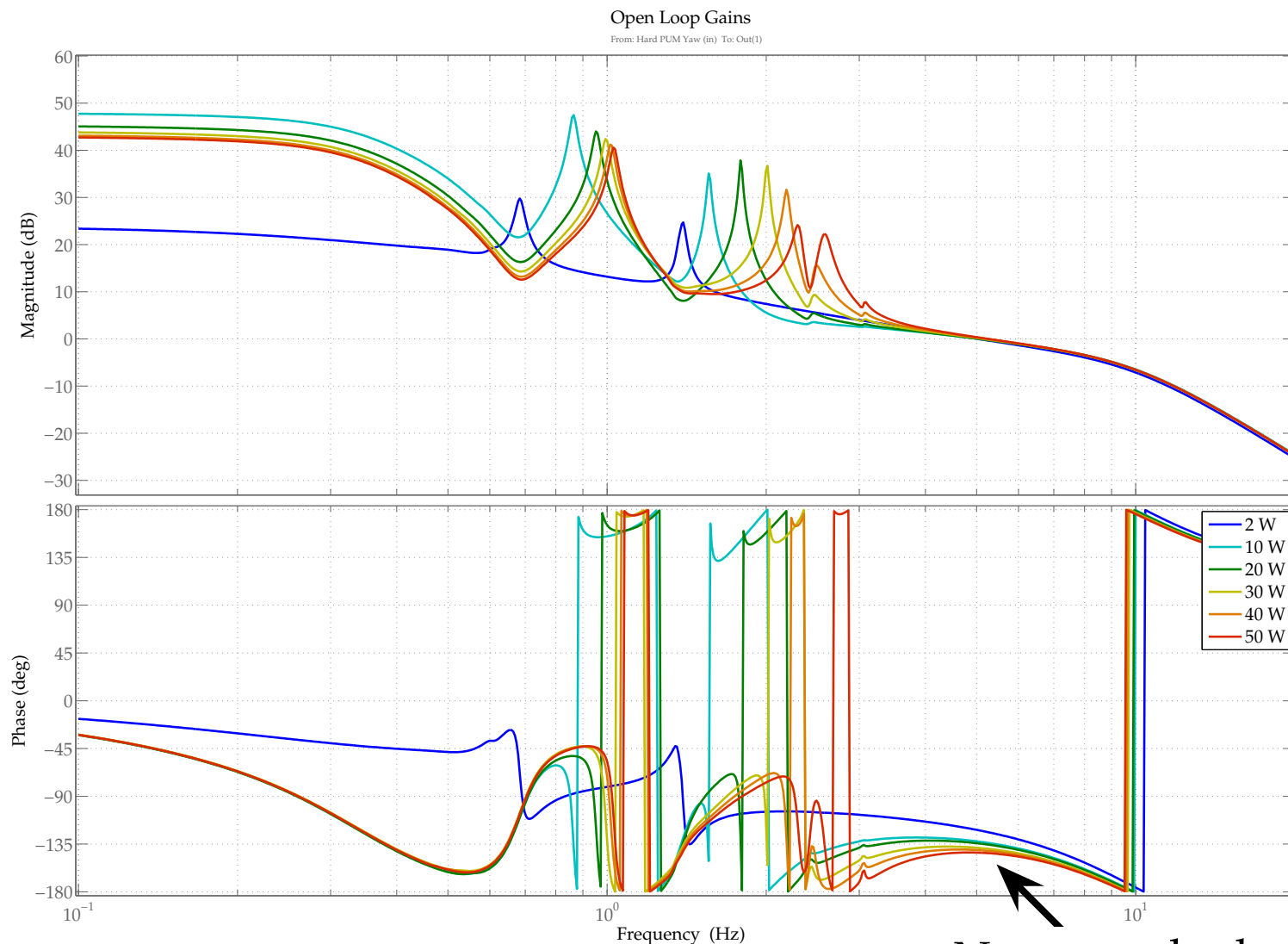
HARD Yaw



HARD Yaw

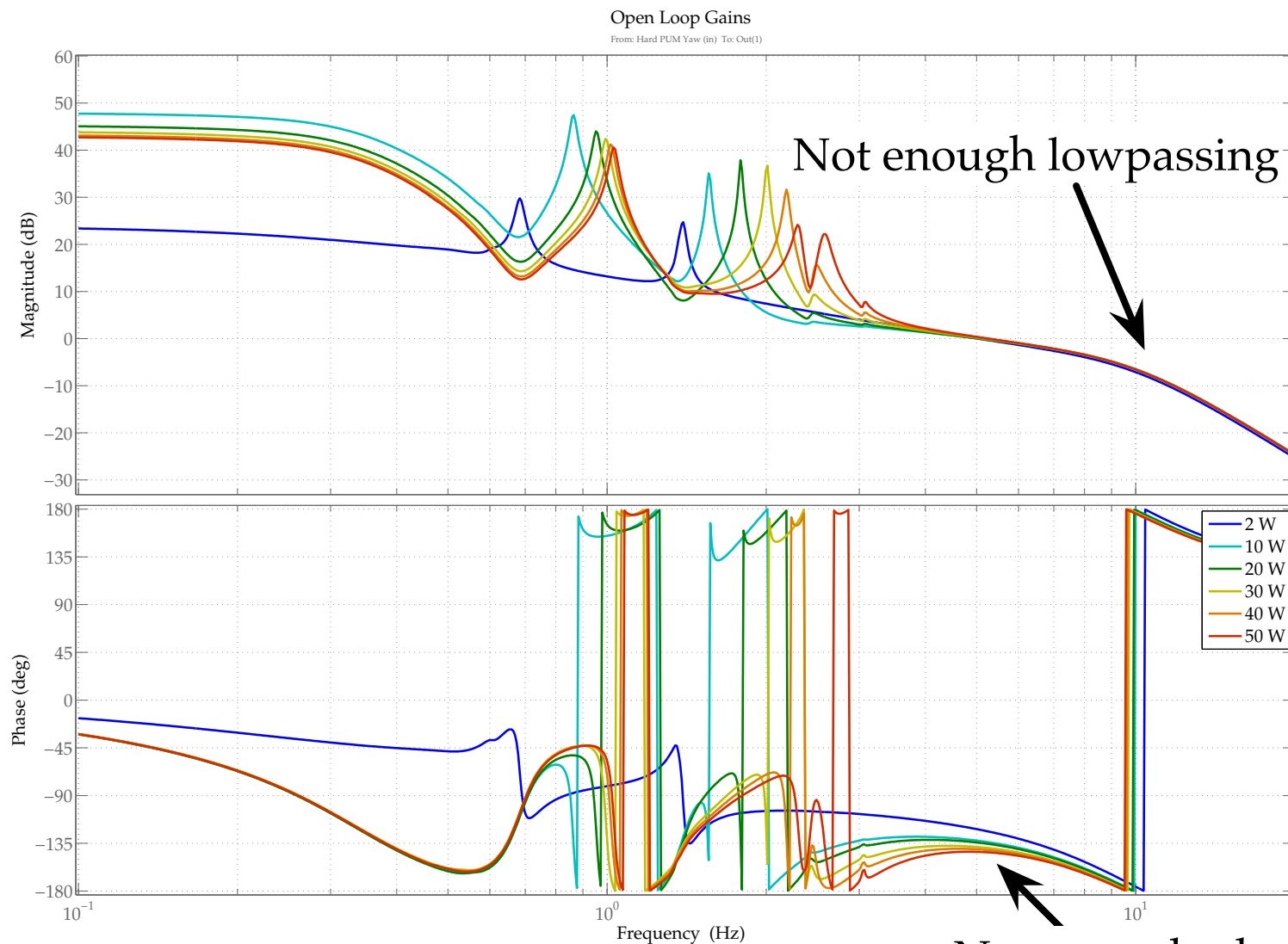


HARD Yaw

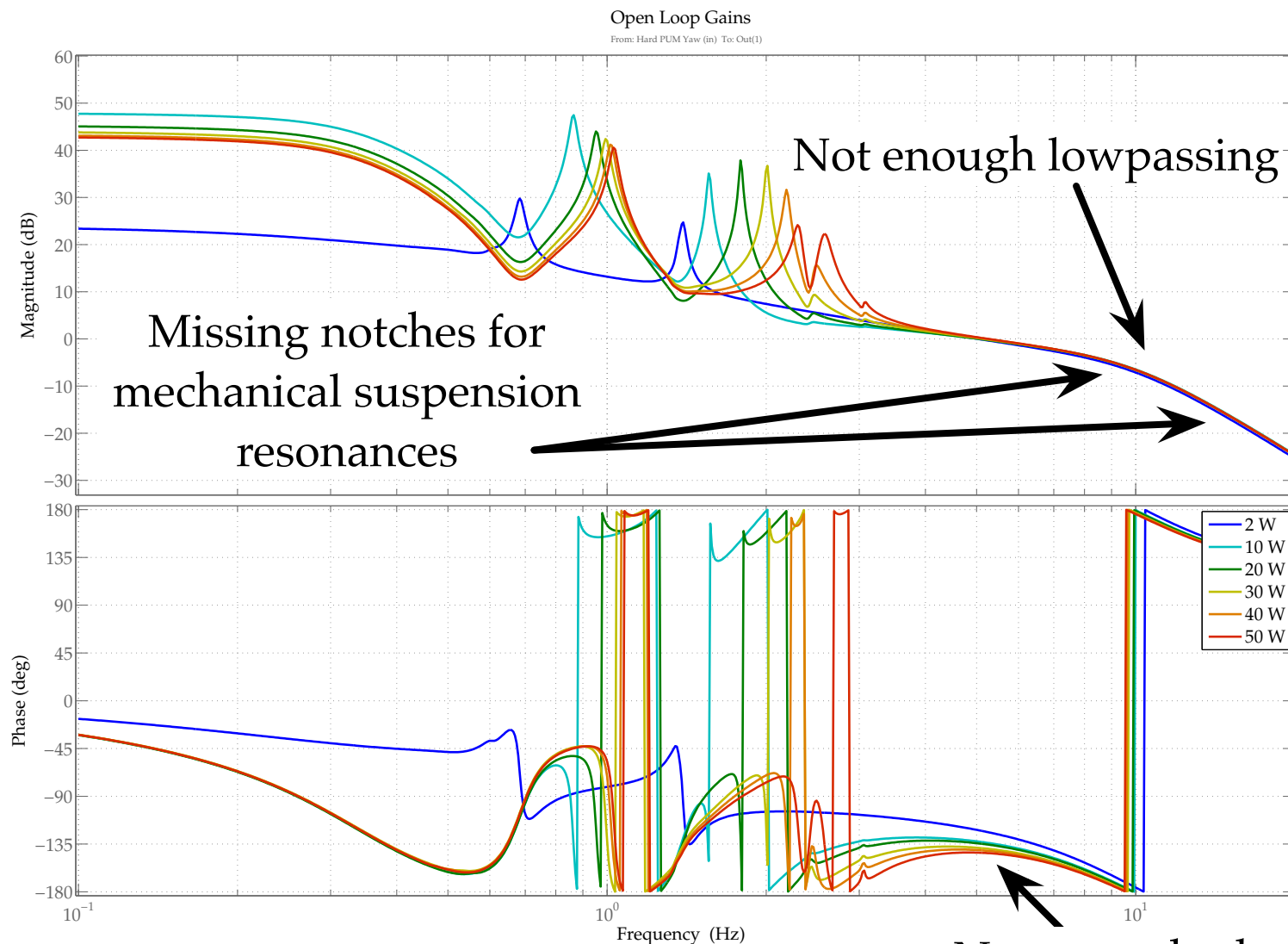


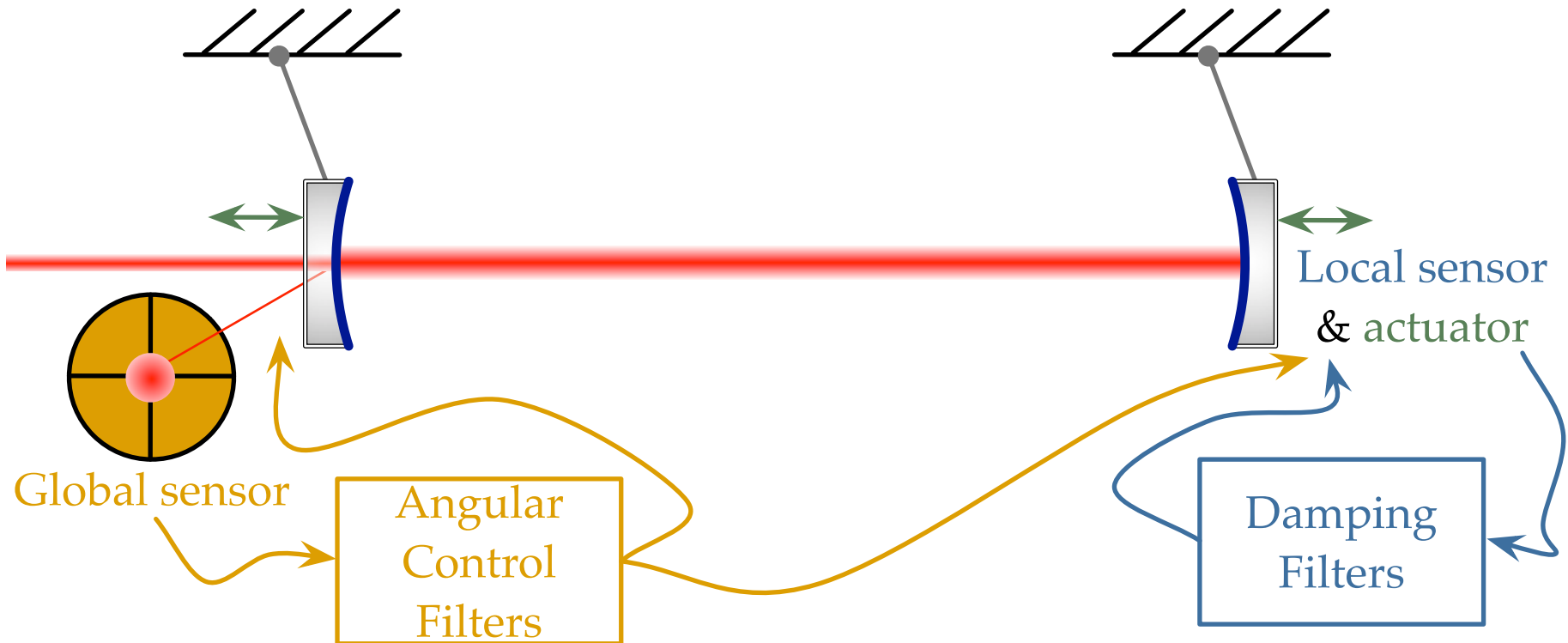
Not enough phase margin!

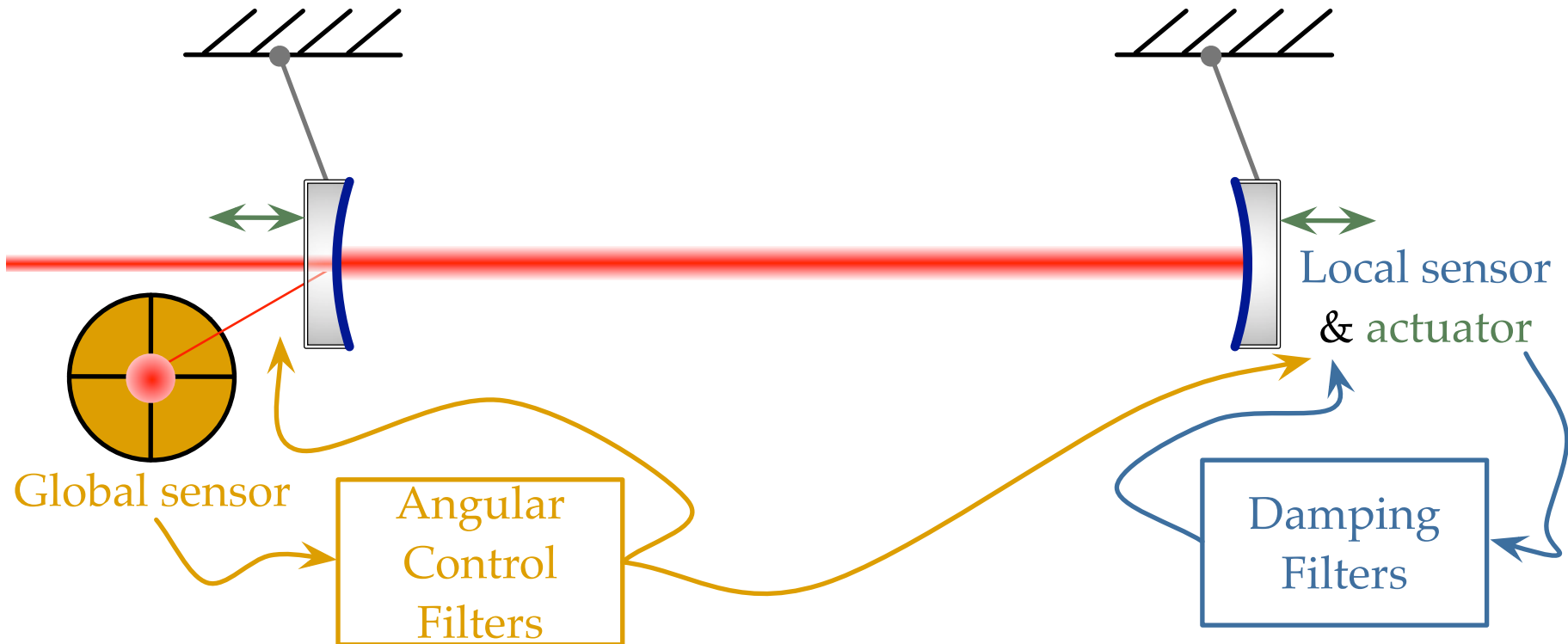
HARD Yaw



HARD Yaw







Can we use the **local damping** to smooth the Sigg-Sidles resonances so that we don't need to change **global control filters** as a function of **laser power**?