

HW #4

① Goldstein 4.14

② Goldstein 4.22

③ Goldstein 4.23 [Foucault pendulum]

Hints: no air resistance, assume that ω (angular freq. of Earth rotation) is small (i.e., work in $\theta(\omega)$ approximation). Write down EoM for x & y of the pendulum & solve for $\mathbf{z} = x + iy$. Assume small oscillations for the pendulum.