Physics I 2017-10-05

Agenda — OMG Static friction.

$F_{static} \neq \mu N$

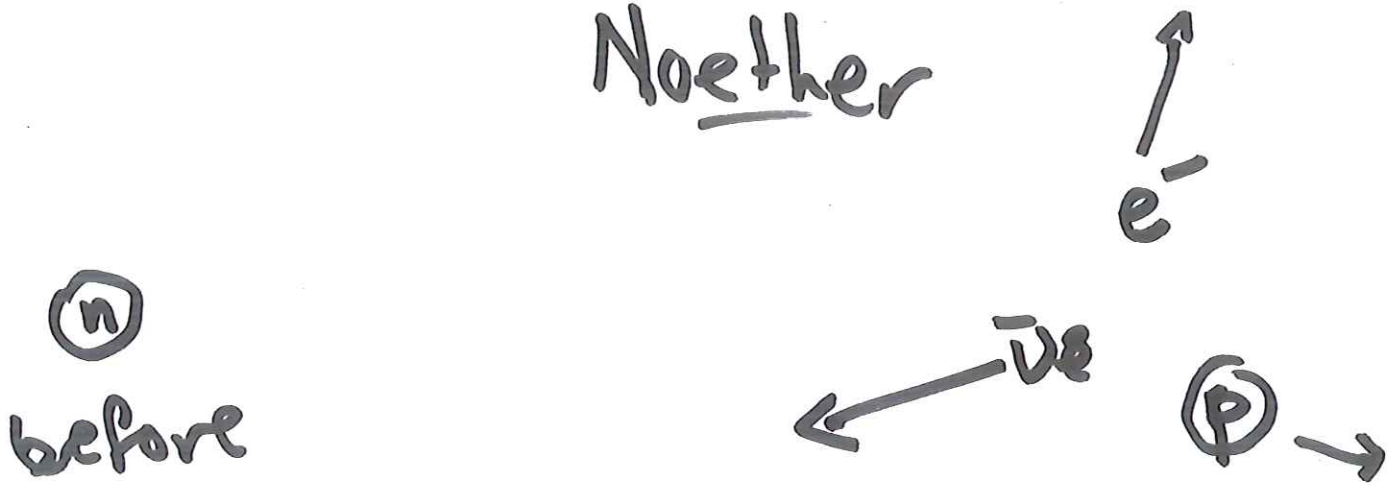
- Questions.
- Conservation laws?
- Term Exam 2
- $C \equiv C$ 8.7 eV!

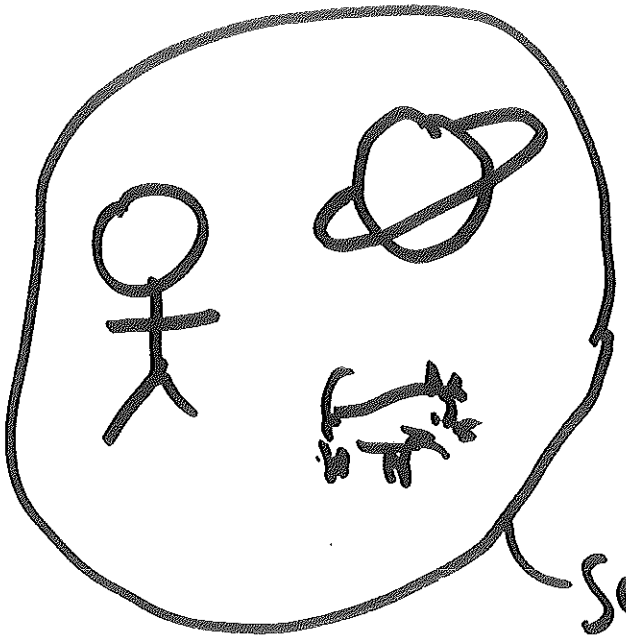
Energy — scalar — time translation — $\vec{F} \cdot \vec{x}$ work

momentum — vector — Spatial translation — $\vec{F} \cdot t$ Force, impulse

angular momentum — pseudo-vector — rotation — $\vec{F} \times \vec{r} \cdot t$ torque, angular impulse.

Noether





$$\left.\frac{dE}{dt}\right|_{inside} + \left.\frac{dE}{dt}\right|_{through} = 0$$