

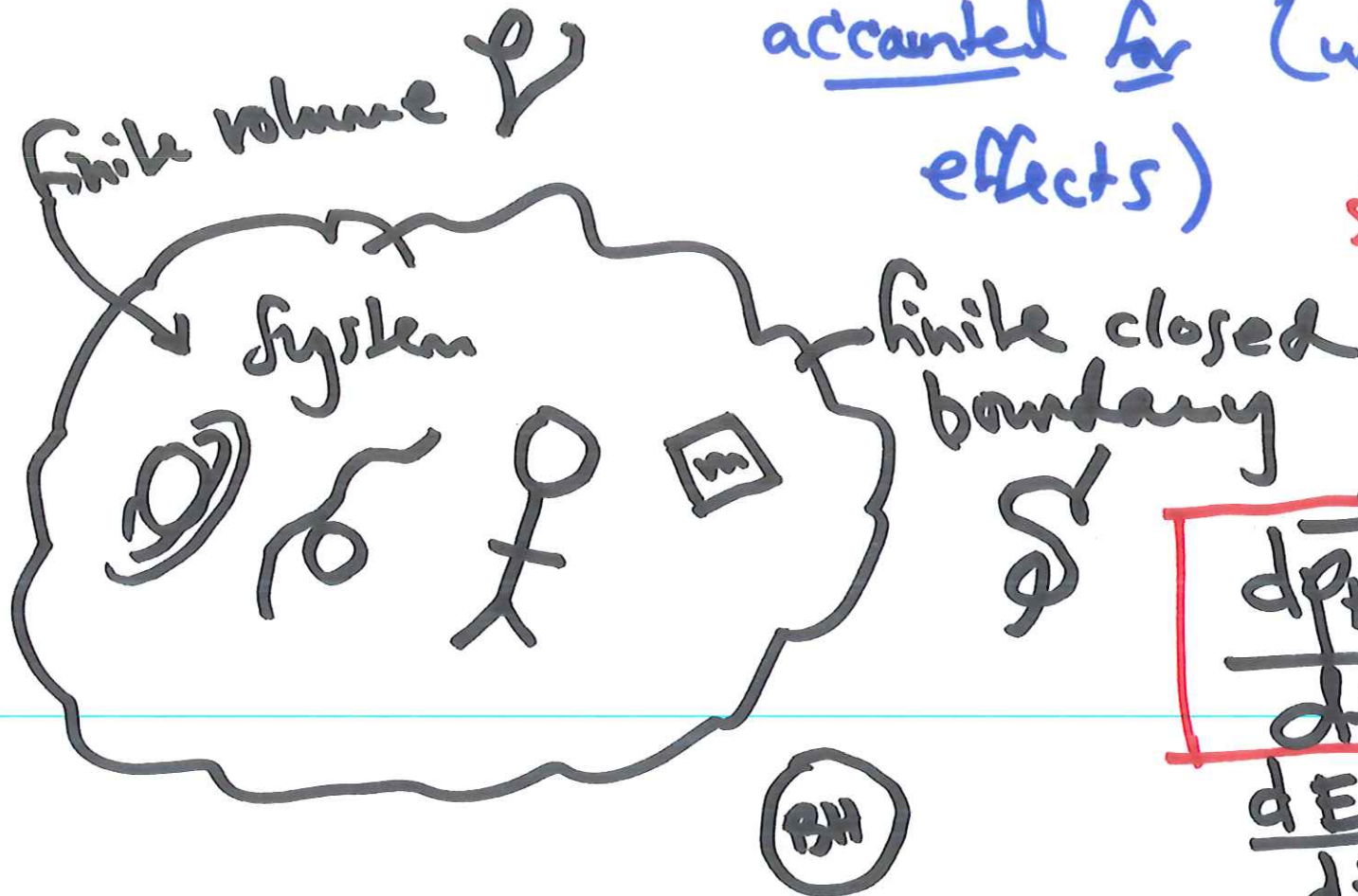
NYU Physics I - 2016-10-06

- Agenda:
- Reading:
 - Energy, Momentum
 - Conservation laws
 - Center of mass (of a system)
 - Zero momentum
 - Qs.
 - Dropped textbook
 - Exam 2.
 - (gasoline comment)
 - MIXER- 333 tomorrow @ 13:00

"invariant": does not change with time.

↳ problem-specific!

"conservation law": all changes can be accounted for (with boundary effects)



stress tensor.
 $\rightarrow \frac{d\vec{F}}{dA} \cdot d\vec{A}$
 $= \oint \dots$

$$\frac{d\vec{p}_{\text{total}}}{dt} = \vec{F}_{\text{ext}}$$
$$\frac{dE_{\text{total}}}{dt} = \oint \dots ?$$

$$\frac{dE_{\text{total}}}{dt} \Big|_{\text{System}} = \left(\text{heat flow into} + \text{work done ~~by~~ on} \right) \text{ the system}$$

