Physics 421 / PCSE 503

Lecture 8

Experiment Design

→ how much data do we need

→ how do we collect the data to answer the research question.

Test

THEORY → assume theory is correct "null hypothesis"

$g = 9.795\ m/s^2$

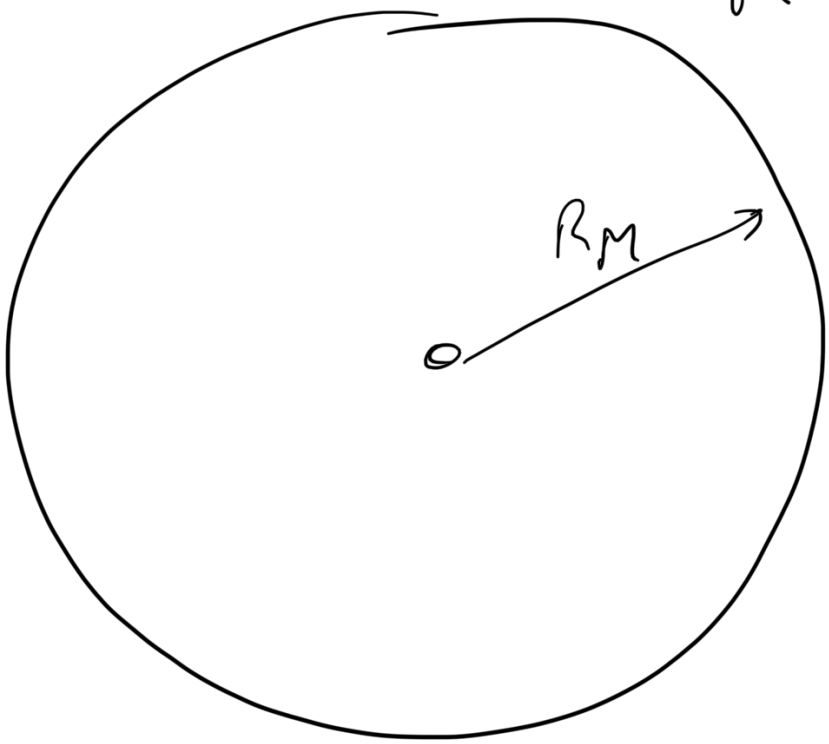
PREDICT

→ simulation

$$I_{axis} = I_{cm} + M_{sys} x^2$$

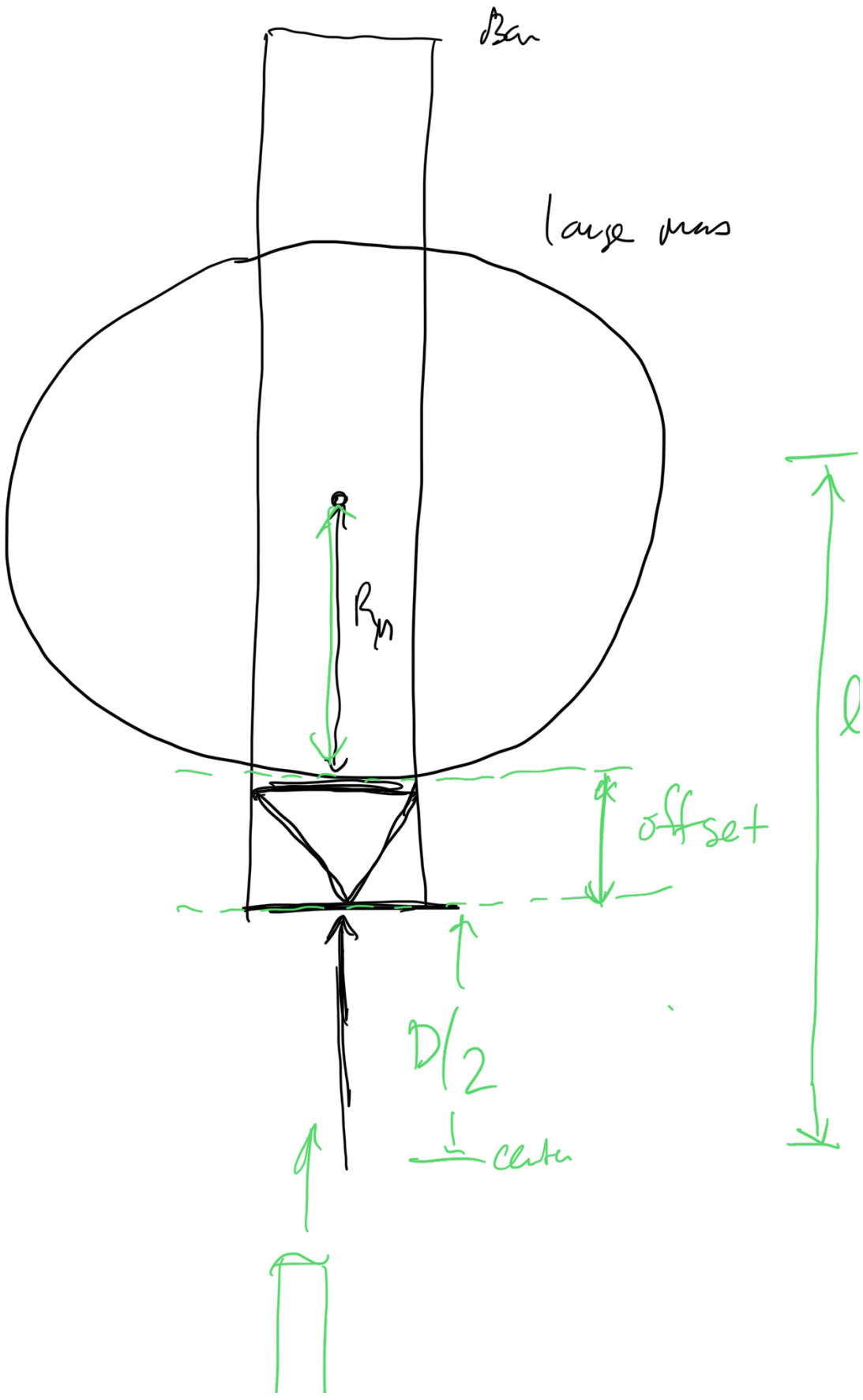
$M_T R^2$

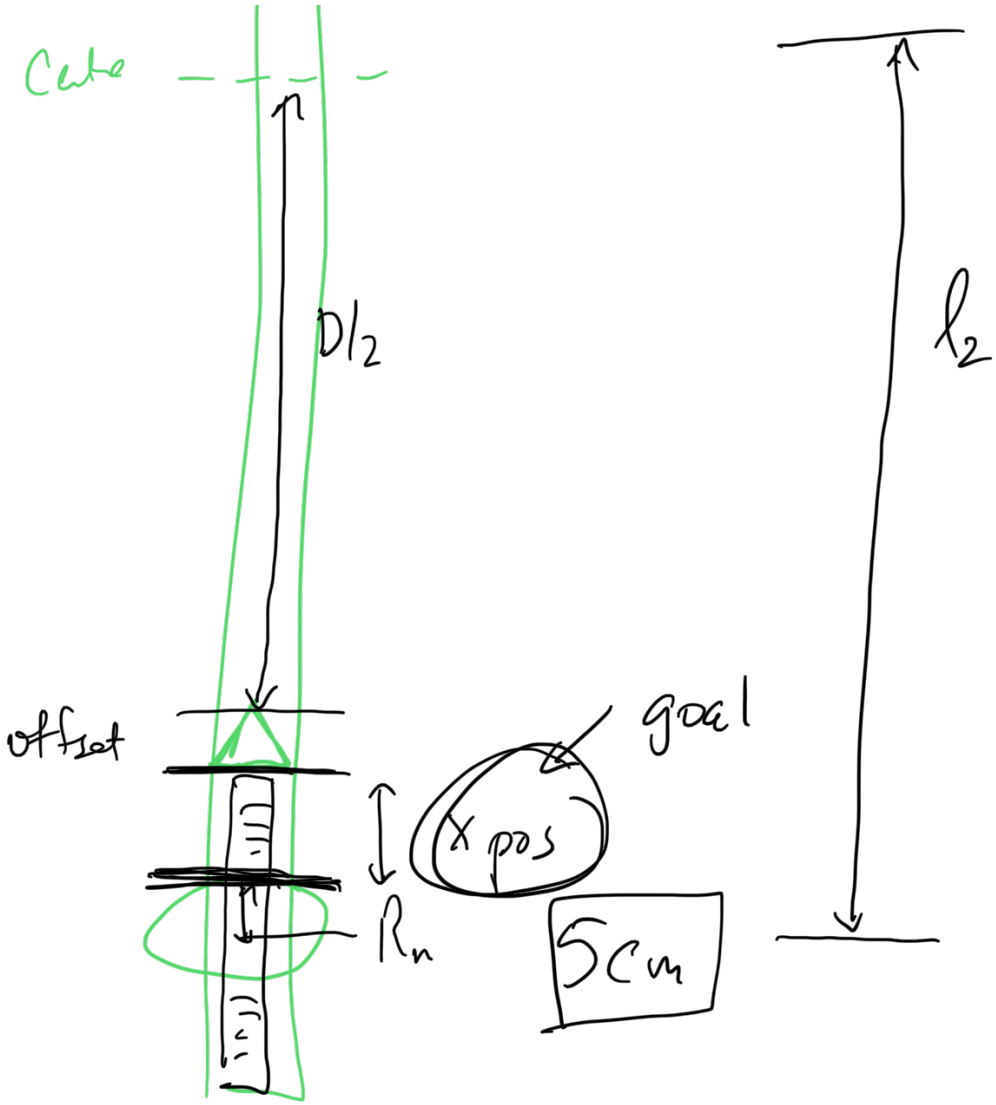
cm. to the pivot pt.



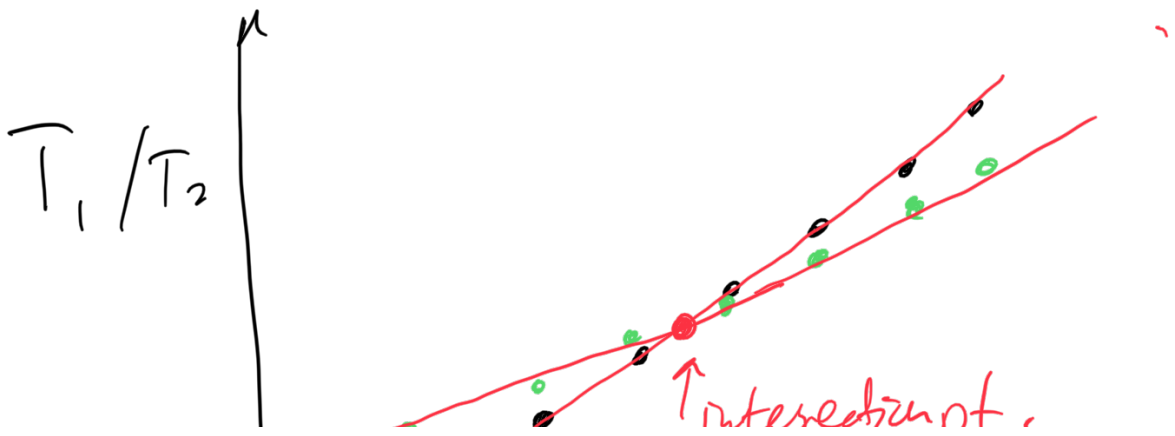
$\frac{1}{2} M R_M^2$

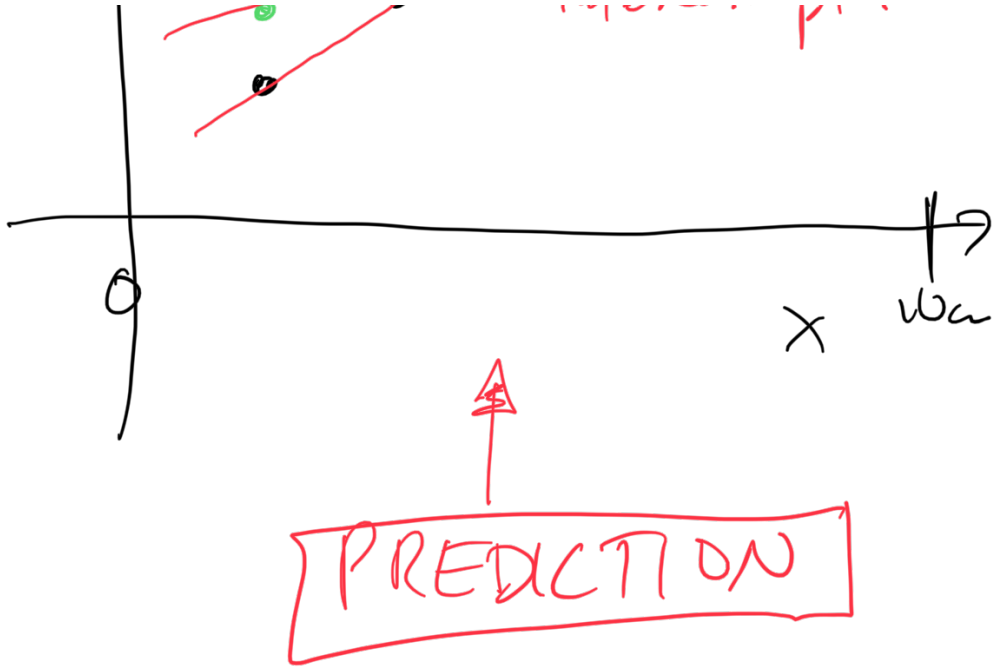
I_{center} of M


Bar
large mass
R_m
offset
l
D/2
center



Don't measure a single value.




0
X
PREDICTION