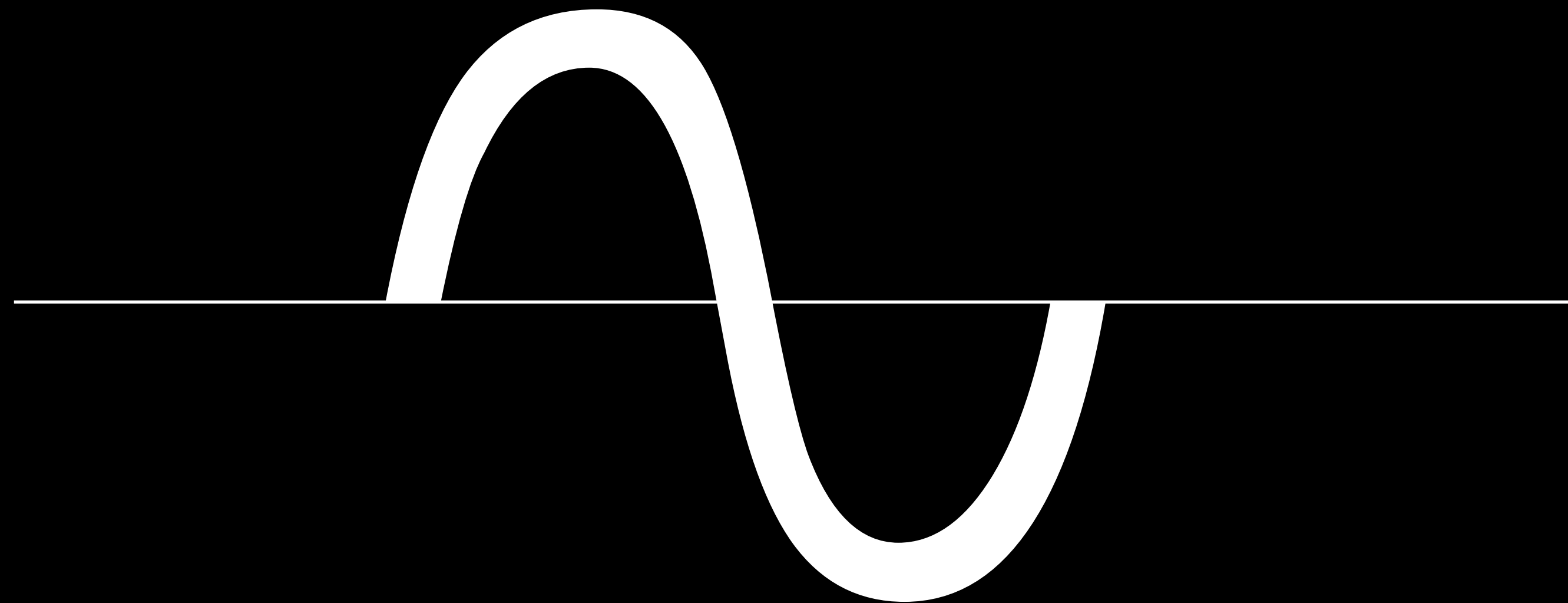


Physics 3306

Provides an introduction to a wide variety of topics in classical (pre-quantum) physics as a bridge to prepare students for subsequent upper-level courses in physics. The topics covered include thermodynamics, fluid mechanics, mechanical waves, optics, radiation, electromagnetic phenomena, atoms, and laboratory techniques. Prerequisites: C- or better in PHYS 1106; and in PHYS 1304 or PHYS 1308.

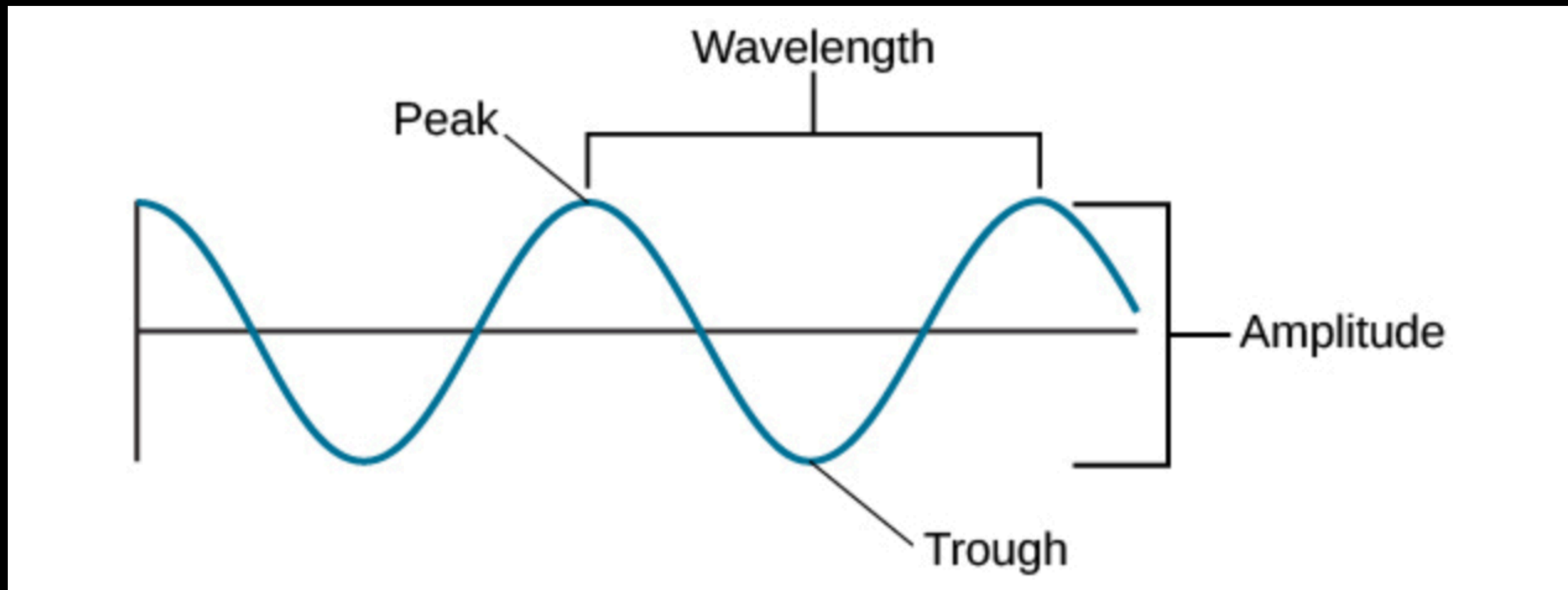
Waves



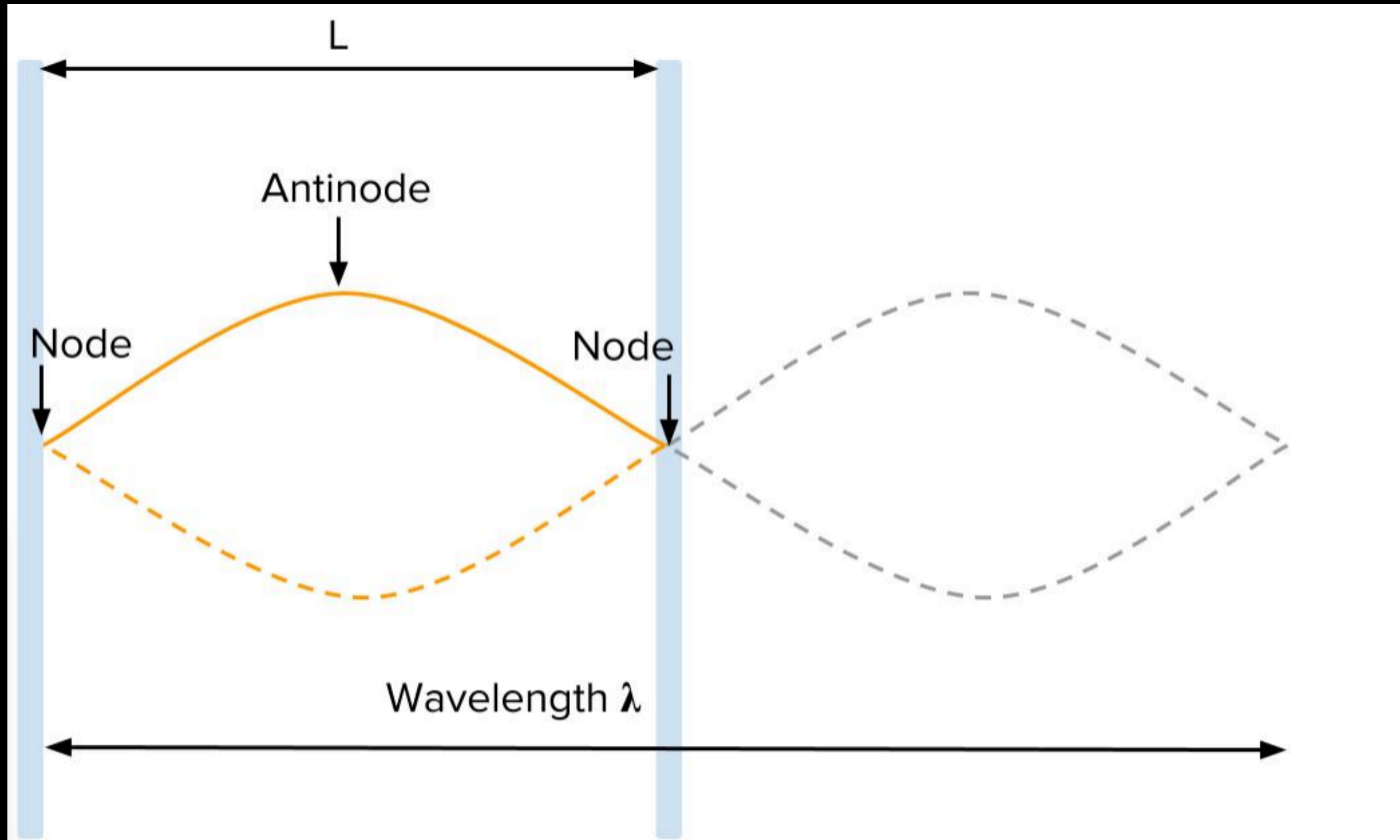
Waves

- Any motion that repeats itself is periodic motion
- For wave motion, displacement of a particle x of the particle from the origin as a function of time is given by:
 - $x(t) = x_m \cos(\omega t + \phi)$
 - x_m , ω and ϕ are constants
 - ω is the angular frequency, $\omega = \frac{2\pi}{T} = 2\pi f$ (angular frequency)
 - ϕ is a phase

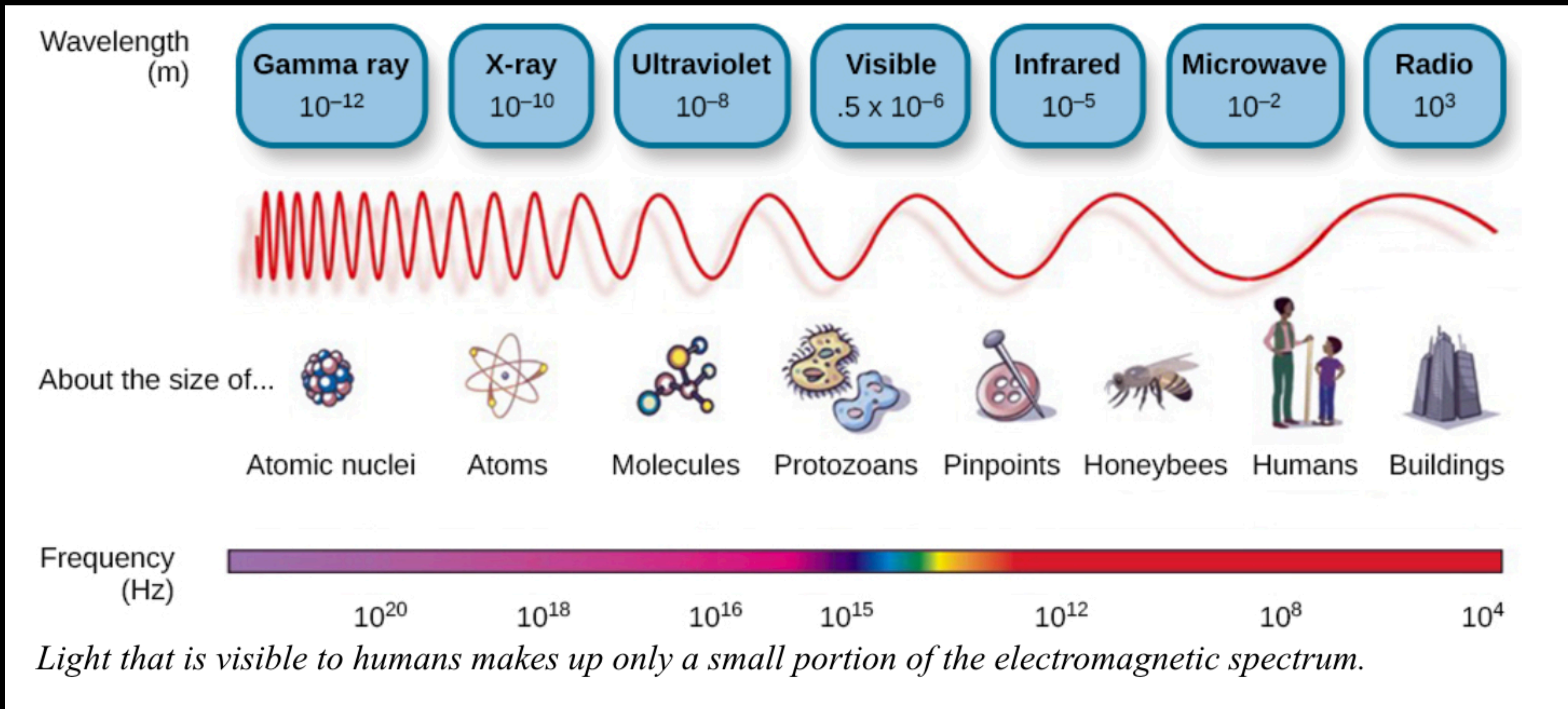
Waves - II

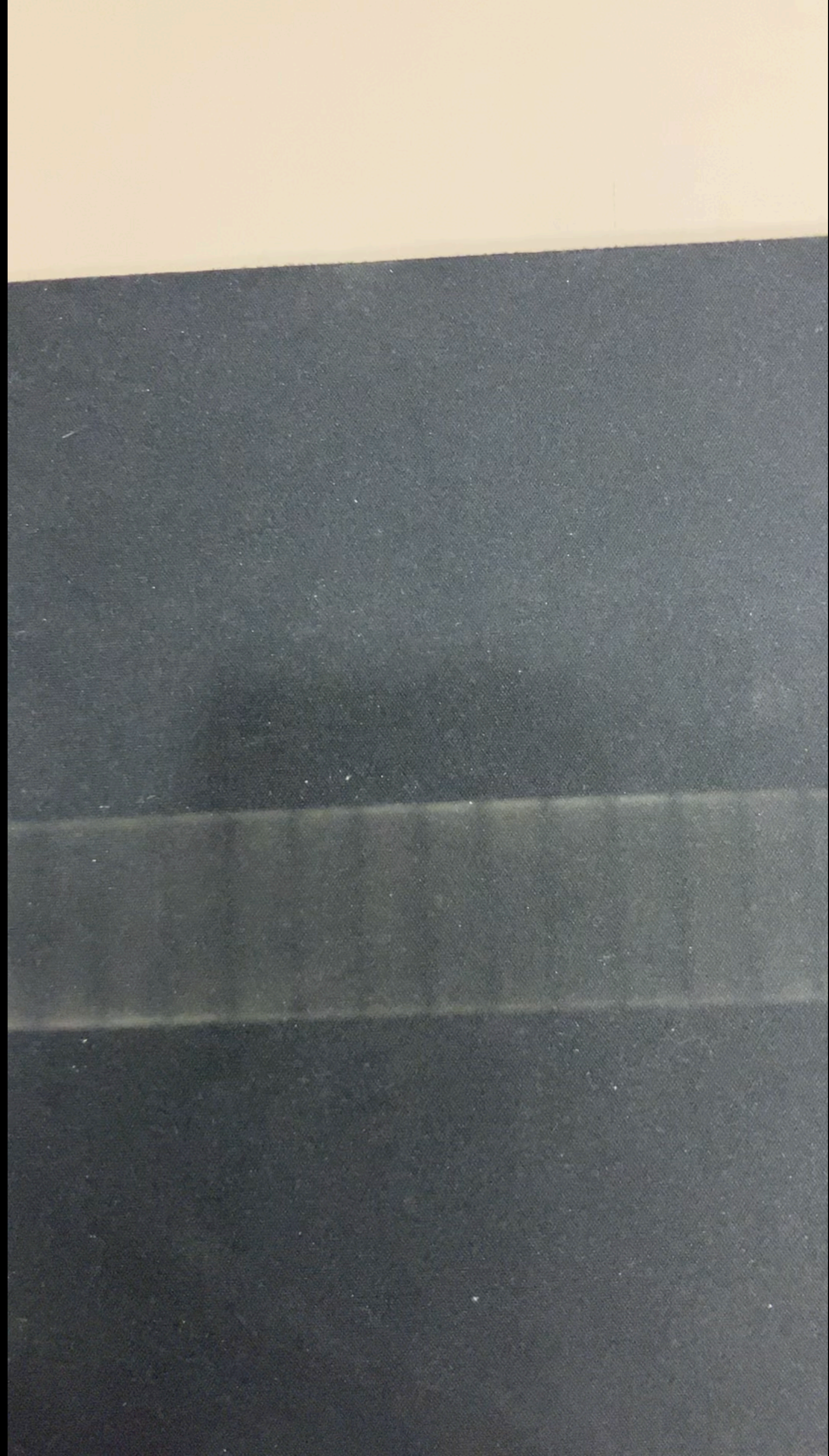


Waves - III



Waves - IV







Place weights here

Solution

- $f = \frac{2n}{L} \sqrt{\frac{mg}{\mu}}$

- $\mu = m_s/L$