Chap 6 - Electronic Structure of Atoms

#e⁻ in an atom = #p
neutral

Where → outside nucleus, in e⁻ clouds
energy levels.

Calc amt energy at each level
E in J

Oct 24-8:34 AM

- e⁻ move closer to nucleus on own
- IF Add E, can get an e⁻ to move further away from nucleus. = excited e⁻
Stay away until E runs out
Then fall back to ground state
giving off energy as light of a certain Color

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Measure Color ≈ amt of E released

excited → ground

lambda Wavelength, (meters)

nM = nano meters.
↳ 1×10^{-9} M

frequency (Hz = Hertz)

/ time

$\frac{1}{sec} = Sec^{-1} = s^{-1}$

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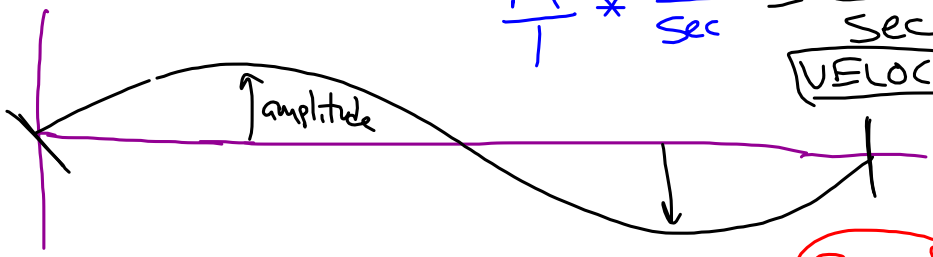
Wave

$\lambda * f = C$ (constant) ← speed of light.

$\frac{M}{1} * \frac{1}{sec} = \frac{M}{sec}$

VELOCITY



3×10^8 m/sec

1 wavelength. (m)

freq = # waves / sec

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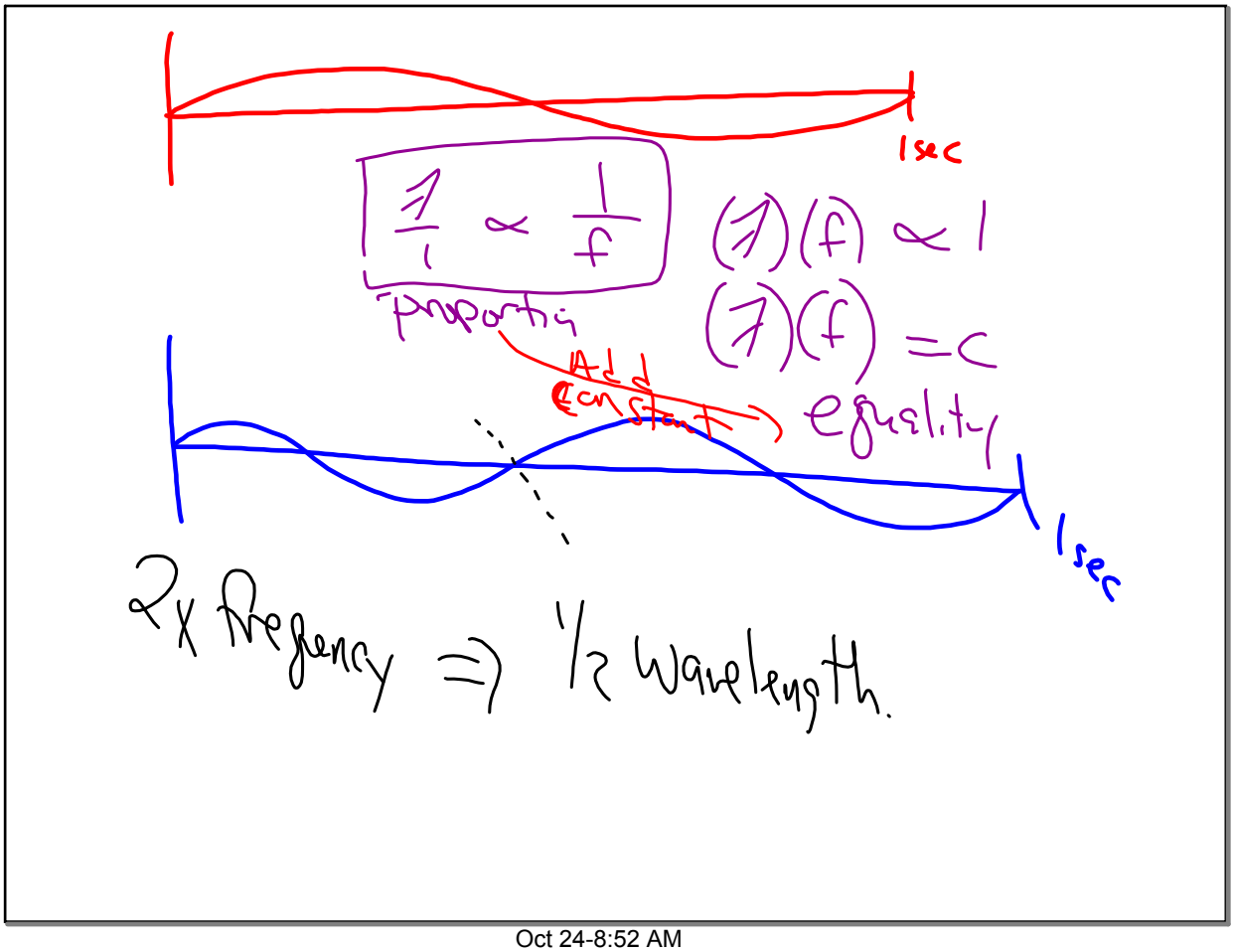

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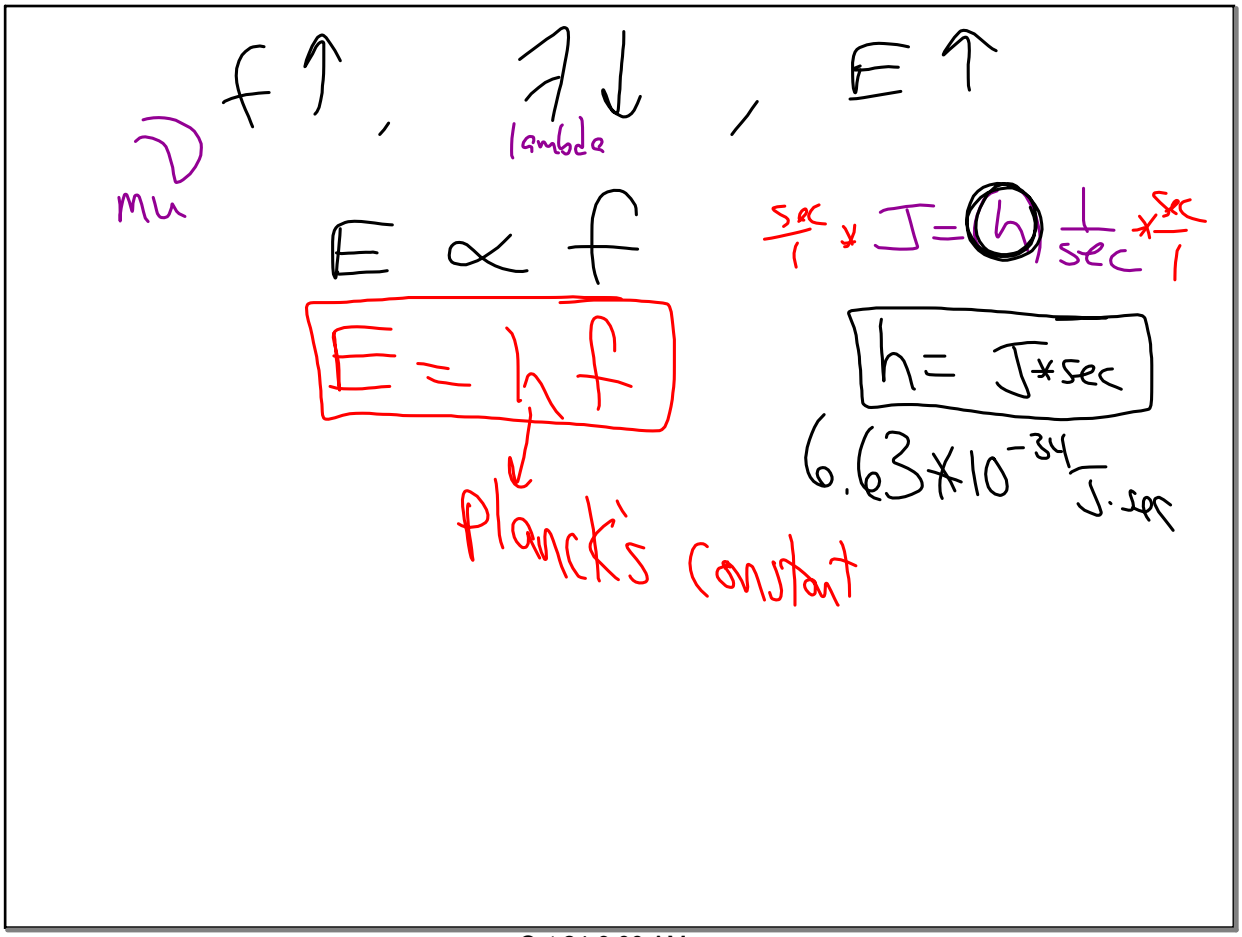

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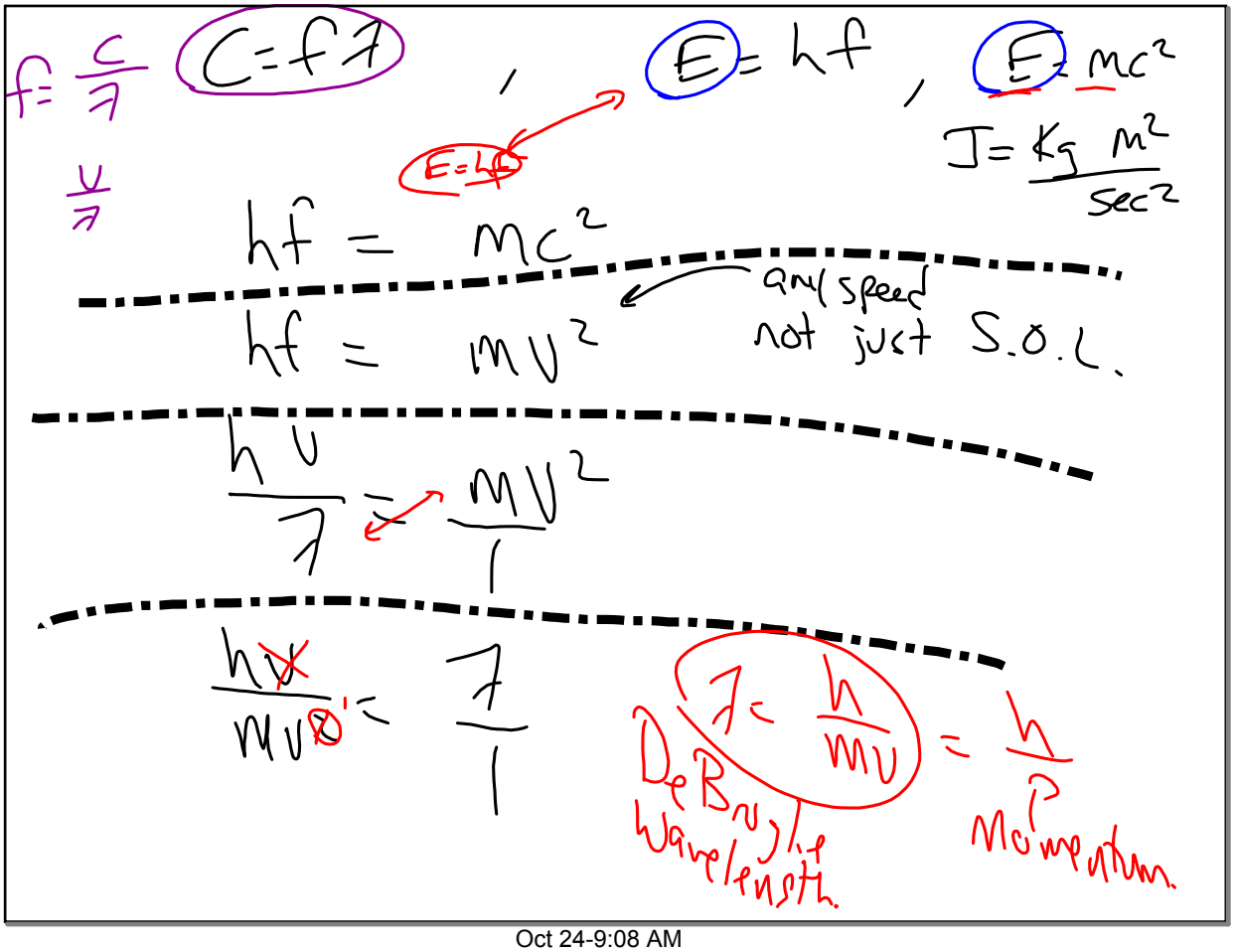

Oct 24-9:08 AM

6/ 15 + 17

Oct 24-9:16 AM