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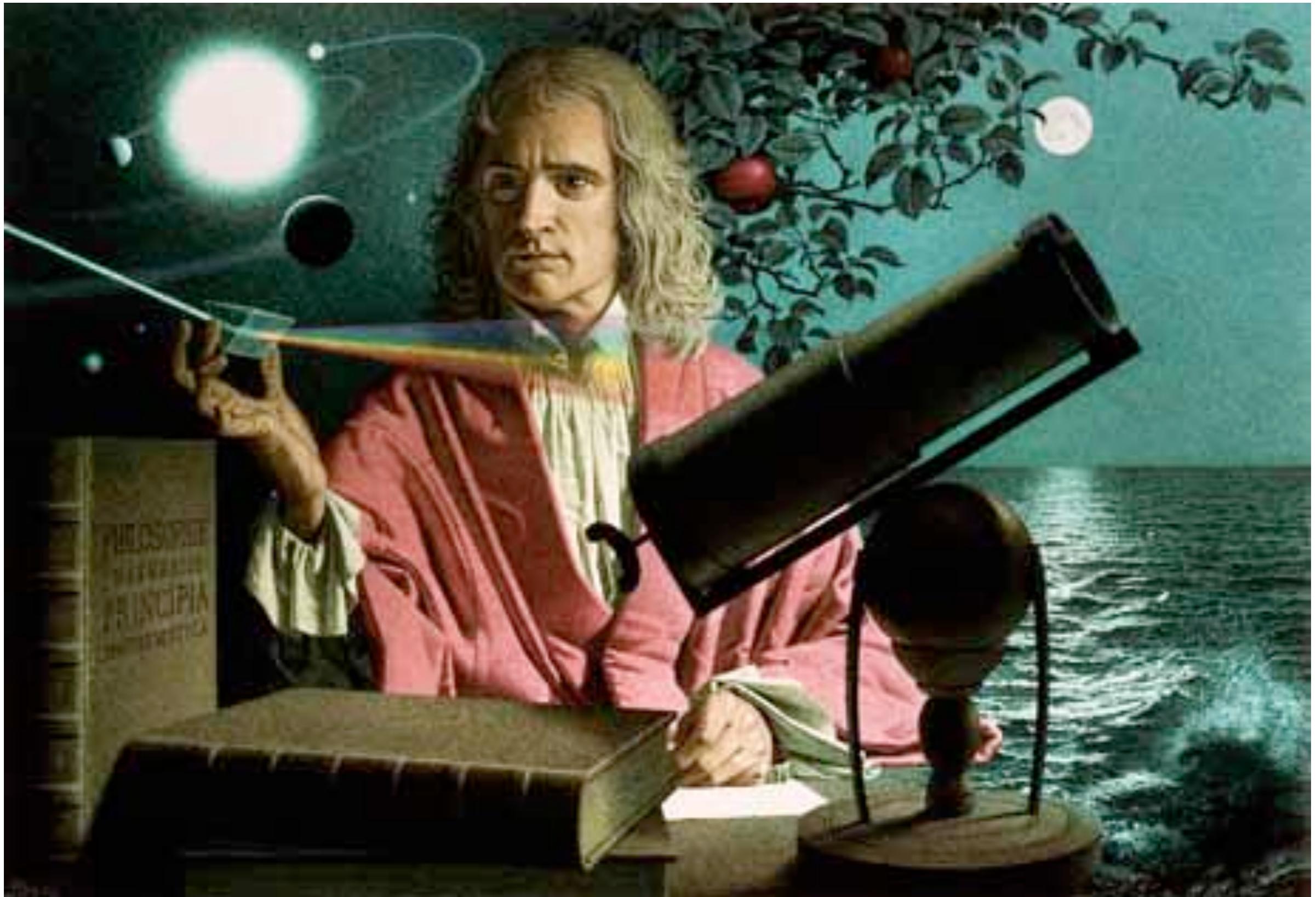
Special Topics in Cosmology

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Lecture 2, 9/12/16

Basics of Newton's Mechanics

Isaac Newton 1643-1727



Isaac Newton: alchemist



Newton's 1st Law

- Objects in “uniform motion” will remain in uniform motion,
- Objects at rest will remain at rest,
- Unless acted upon by an external force
- A.K.A.: Law of inertia.

Newton's 2nd Law

- Force on an object is proportional to its mass times its acceleration.
- $F = m \times a$

Newton's 3rd Law

- For every action there is an equal and opposite reaction.
- $F_{12} = -F_{21}$