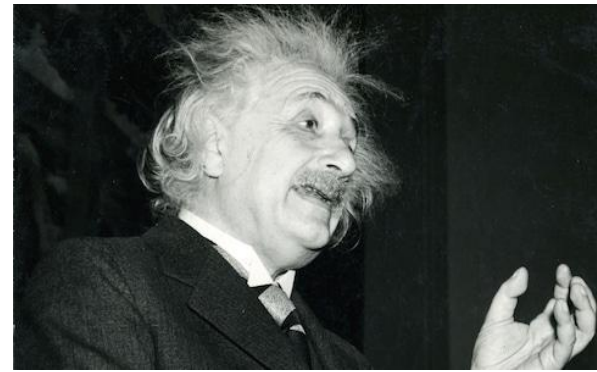


5 Scientists

Emma Dove

Albert Einstein

- ❑ Element 99 named after him
- ❑ Formulated the particle theory of light to explain the photoelectric effect
- ❑ Bose-Einstein Condensate (5th state of matter)
- ❑ General (gravity)/special relativity
- ❑ Explained Brownian motion
- ❑ “Field Equations”, $E=mc^2$



Isaac Newton

- ❑ Formulated laws of motion
 - ❑ 1st- law of inertia
 - ❑ 2nd- $\text{Force} = \text{mass}(\text{acceleration})$
 - ❑ (SI unit of force)
 - ❑ 3rd- equal and opposite reaction
 - ❑ Newton's Cradle
- ❑ *Principia Mathematica* (gravitational constant)
- ❑ *Optics*
- ❑ Discovered Calculus independent of Leibniz



Ludwig Boltzmann

- ❑ Names a constant (=gas constant/Avogadro's number)
- ❑ Described entropy as his constant times the log of the number of microstates
- ❑ Law with Stefan describes energy released from a black hole



Niels Bohr

- ❑ Modeled the atom as a positive center with electrons traveling in orbits around it (only works for hydrogen atom)
- ❑ Radius (0.53 Angstroms) shows expected value of distance from the e^- to the nucleus



Ernest Rutherford

- — —
- ❑ Discovered atoms have a positively charged nucleus after firing alpha particles at a sheet of zinc sulfide in the Gold Foil experiment
 - ❑ Done with Geiger and Marsden

