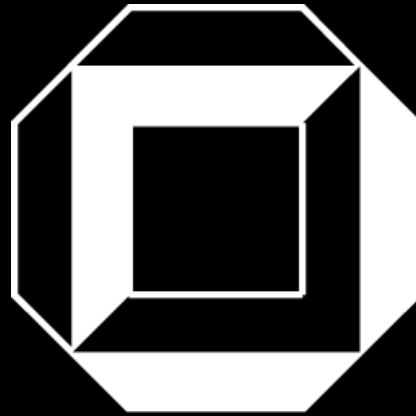




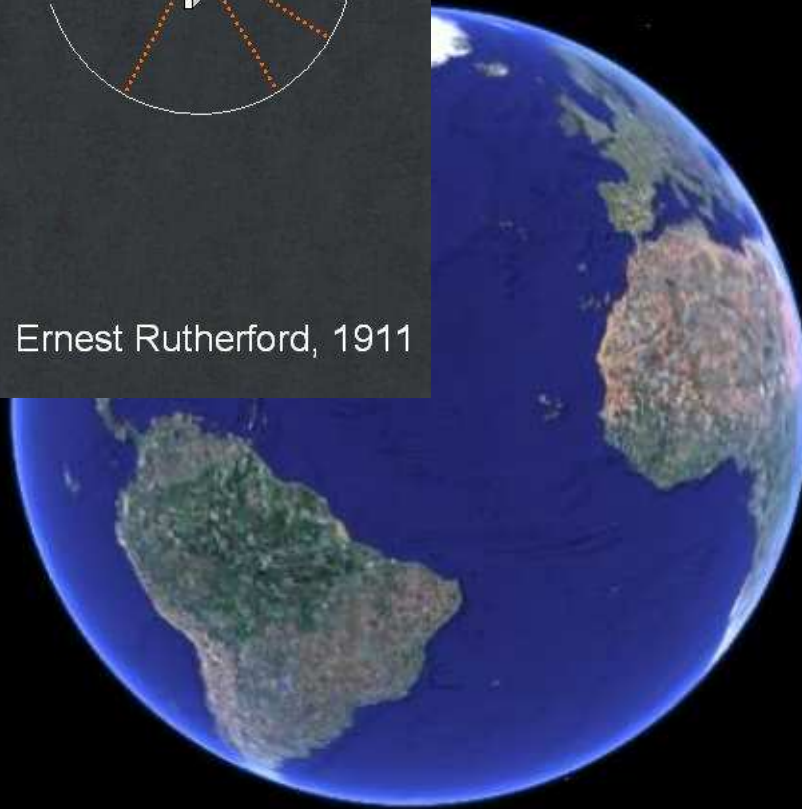
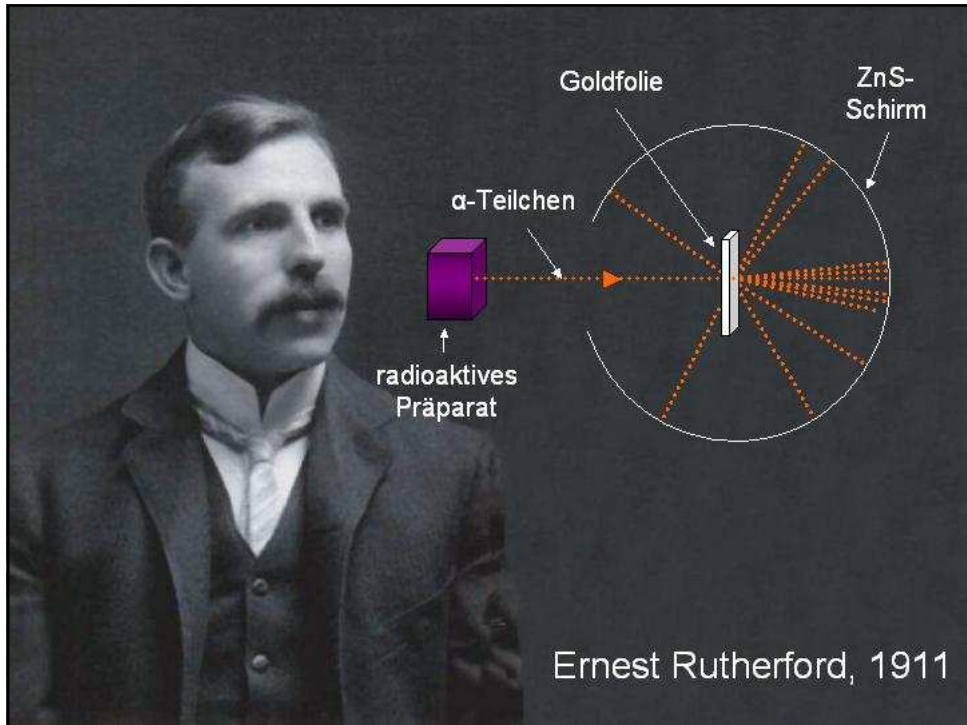
European Organization for Nuclear Research

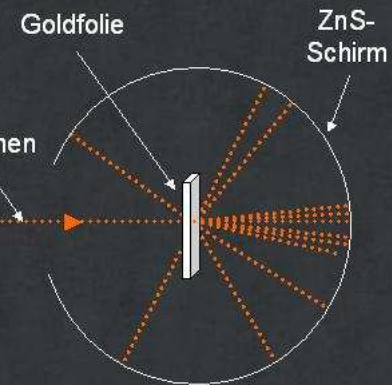
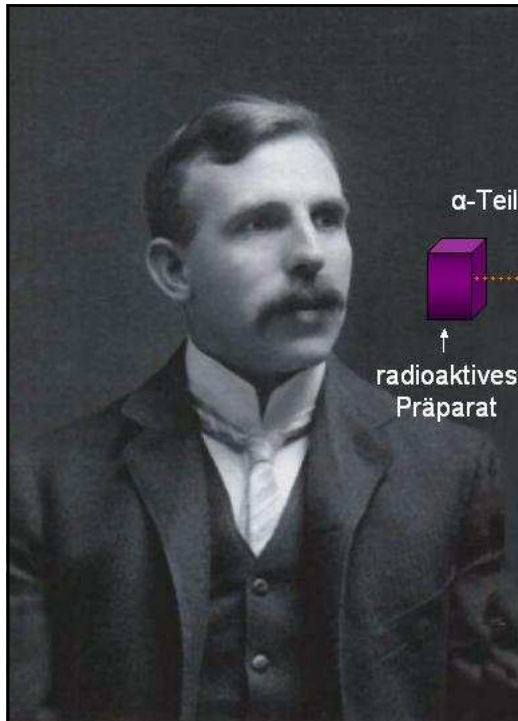


Universität Karlsruhe (TH)

Forschungsuniversität • gegründet 1825

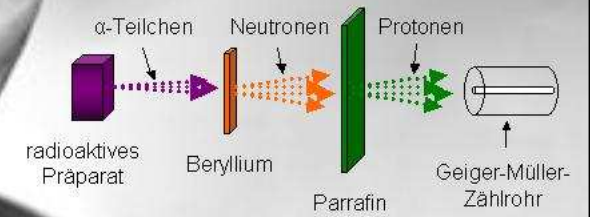


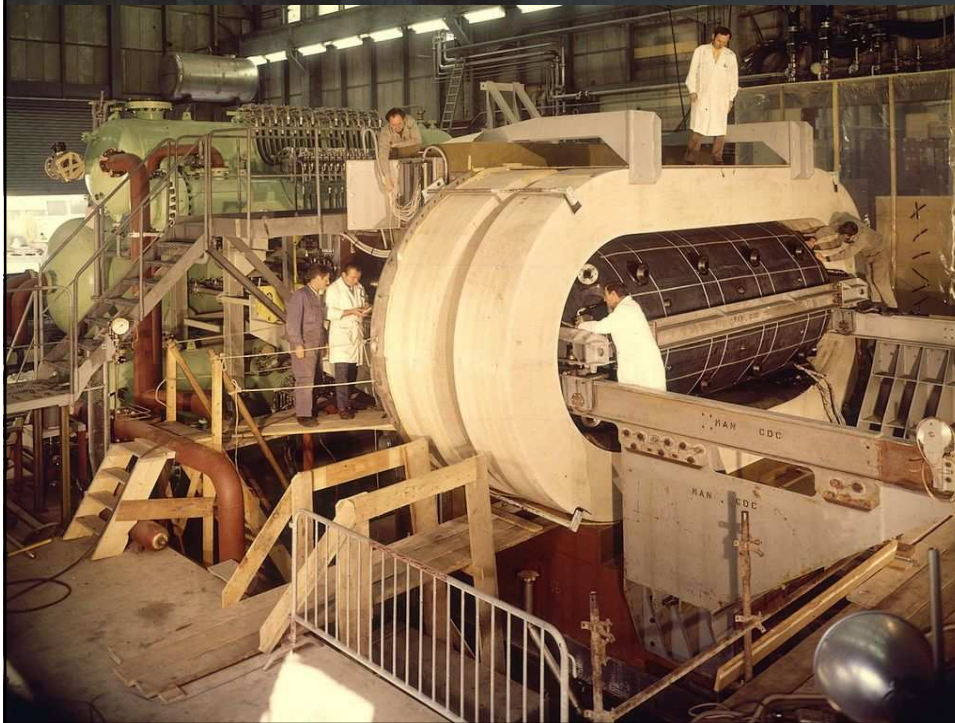
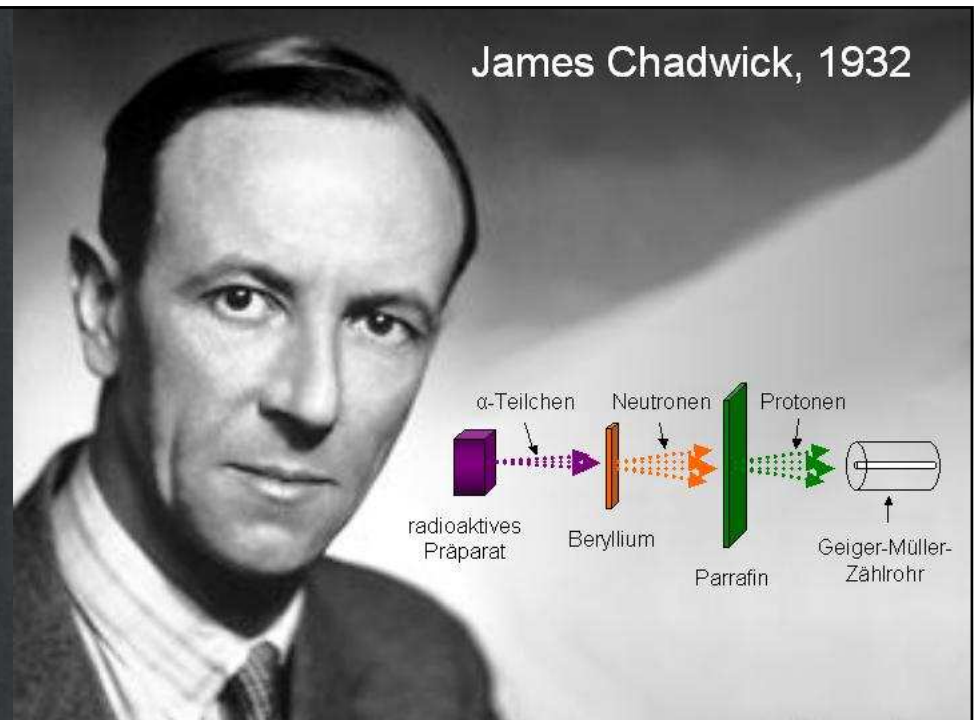
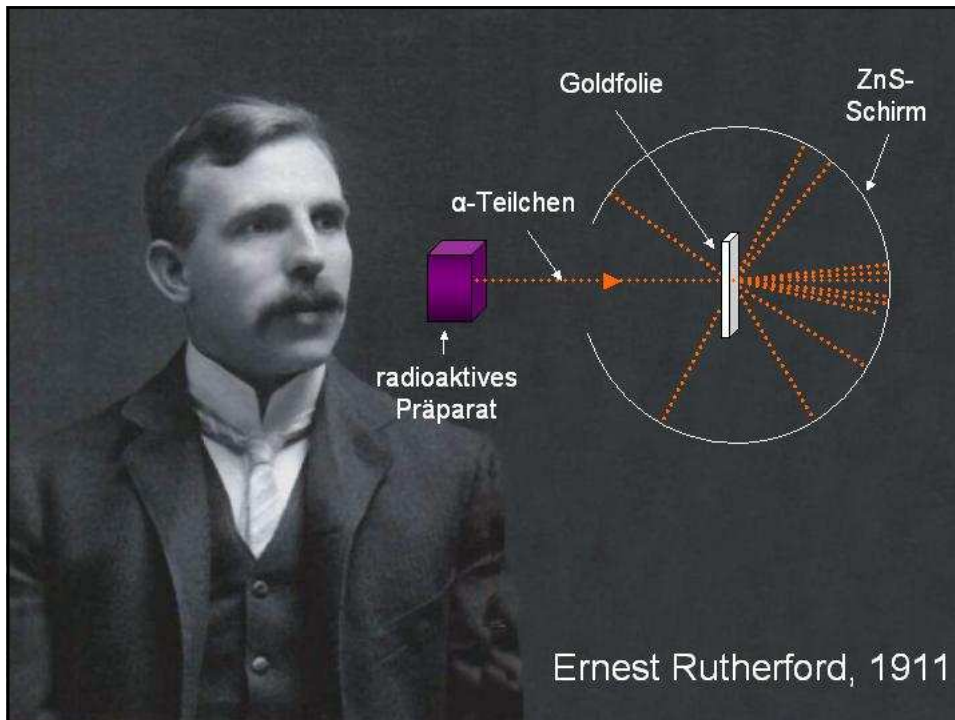


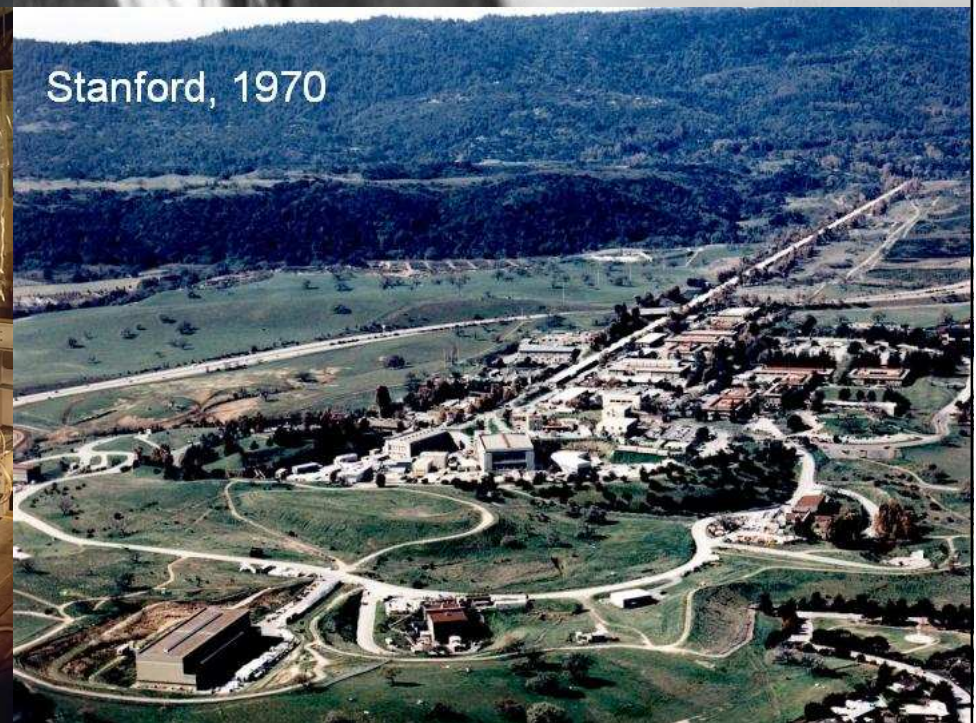
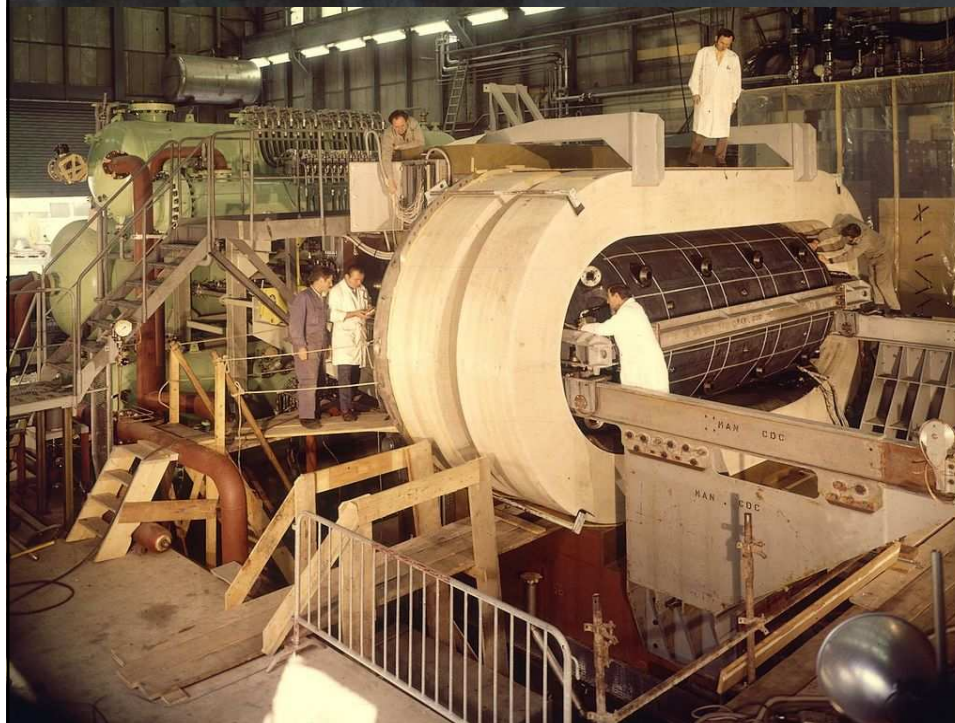
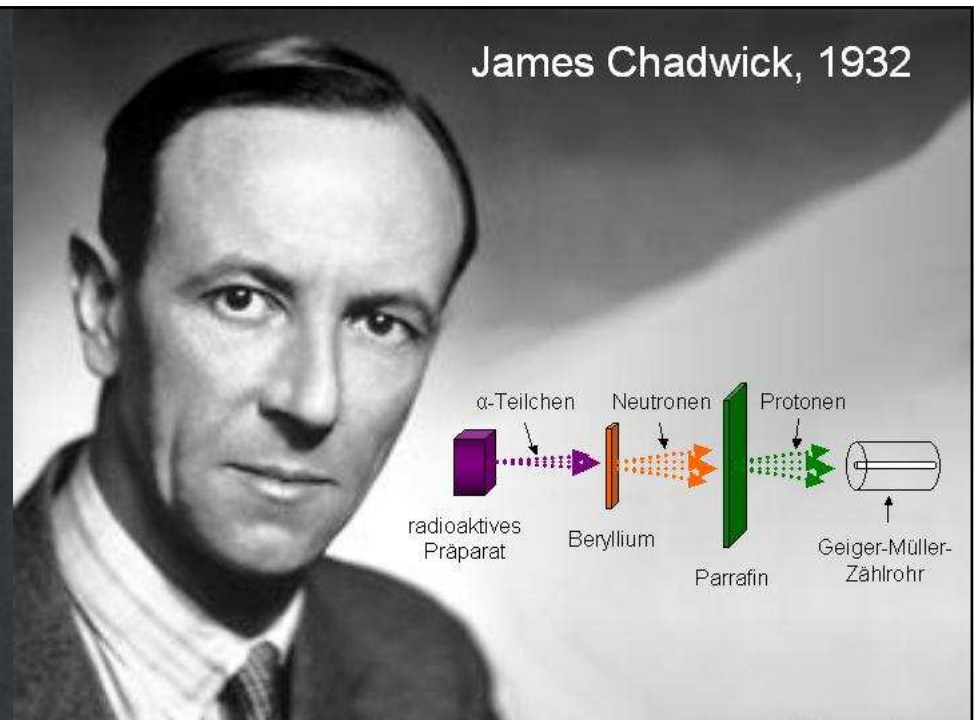
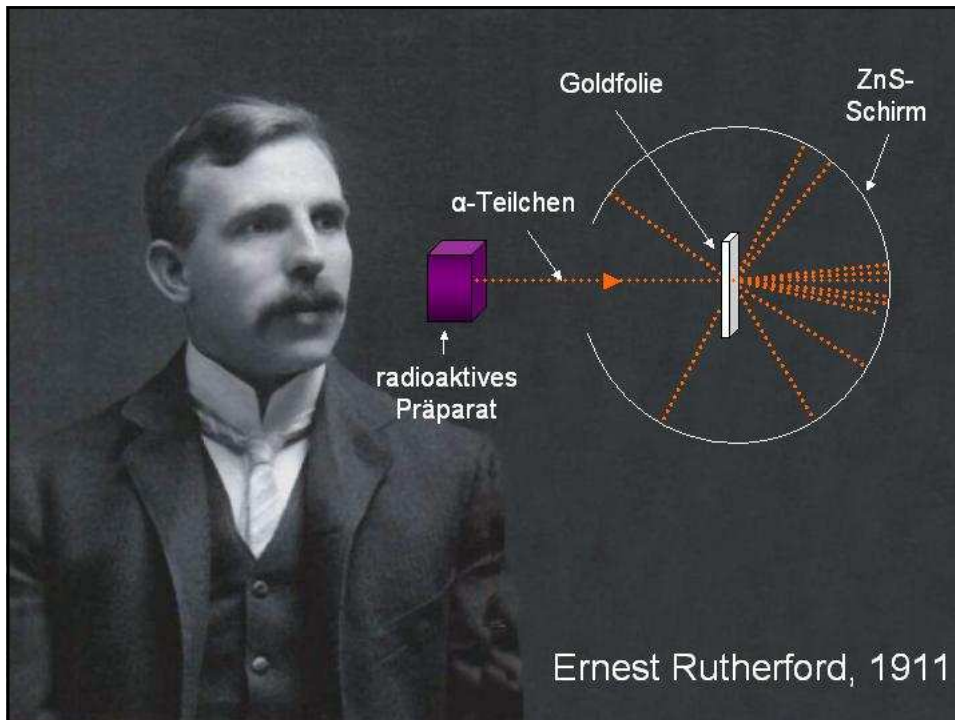


Ernest Rutherford, 1911

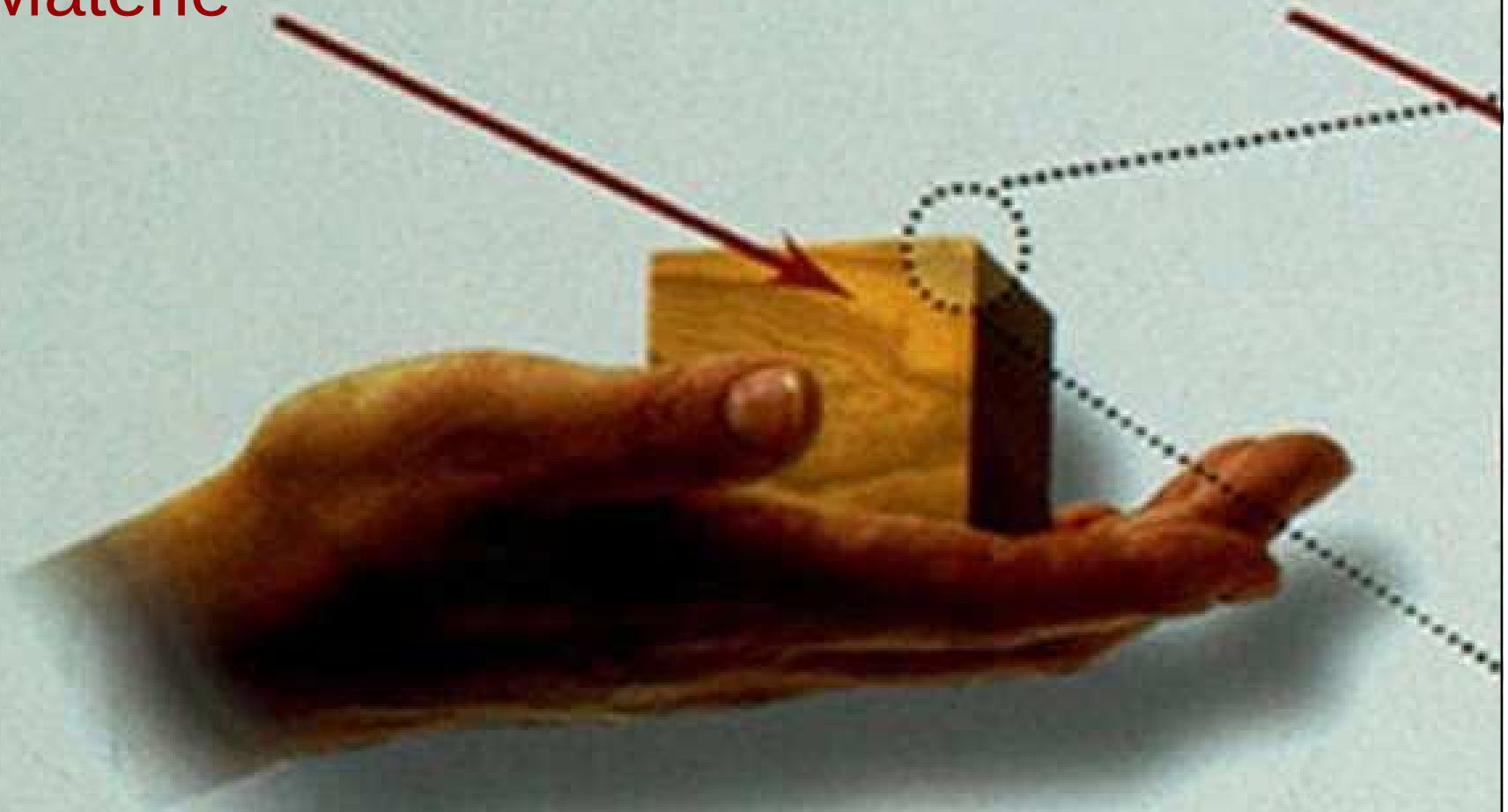
James Chadwick, 1932



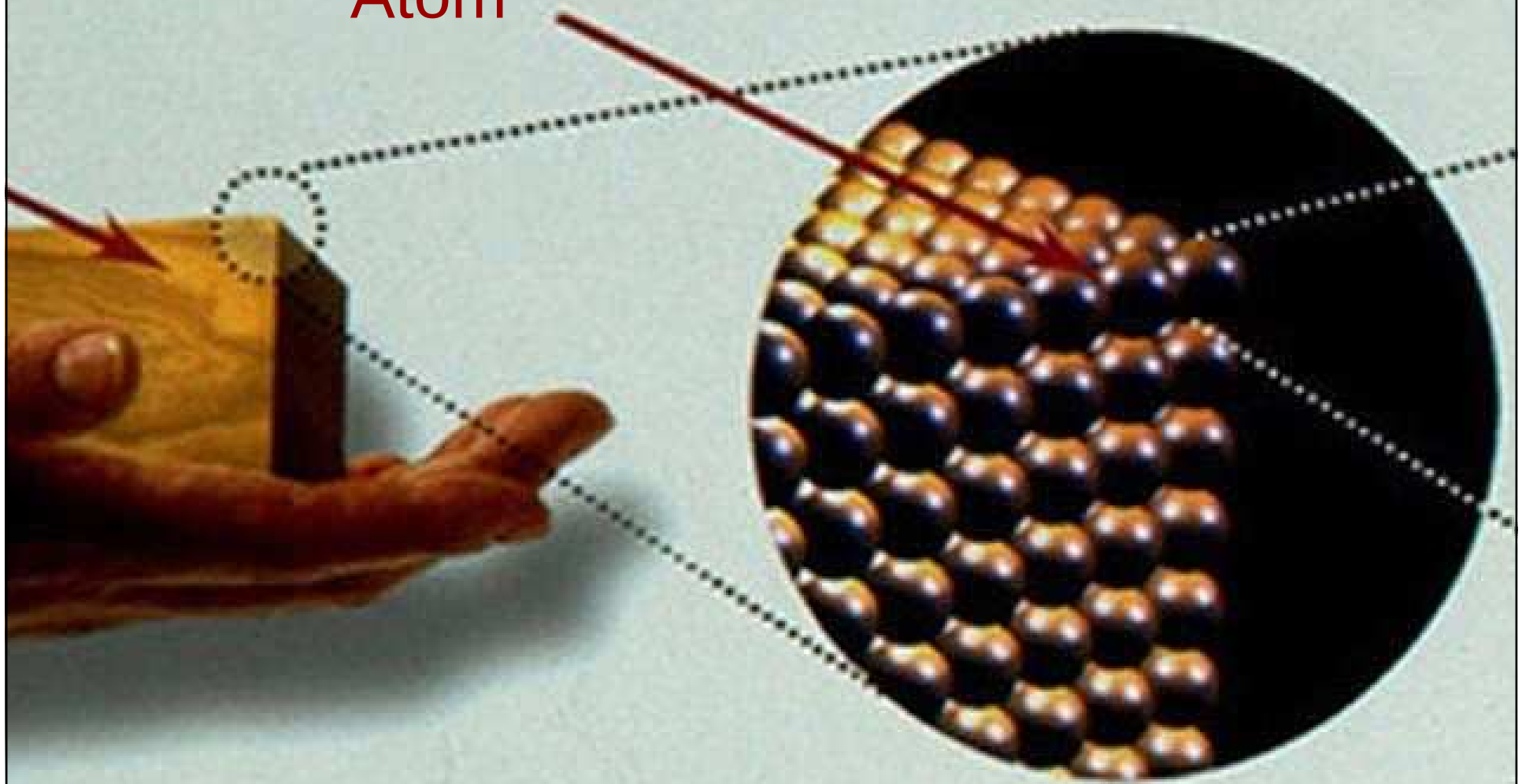




Materie

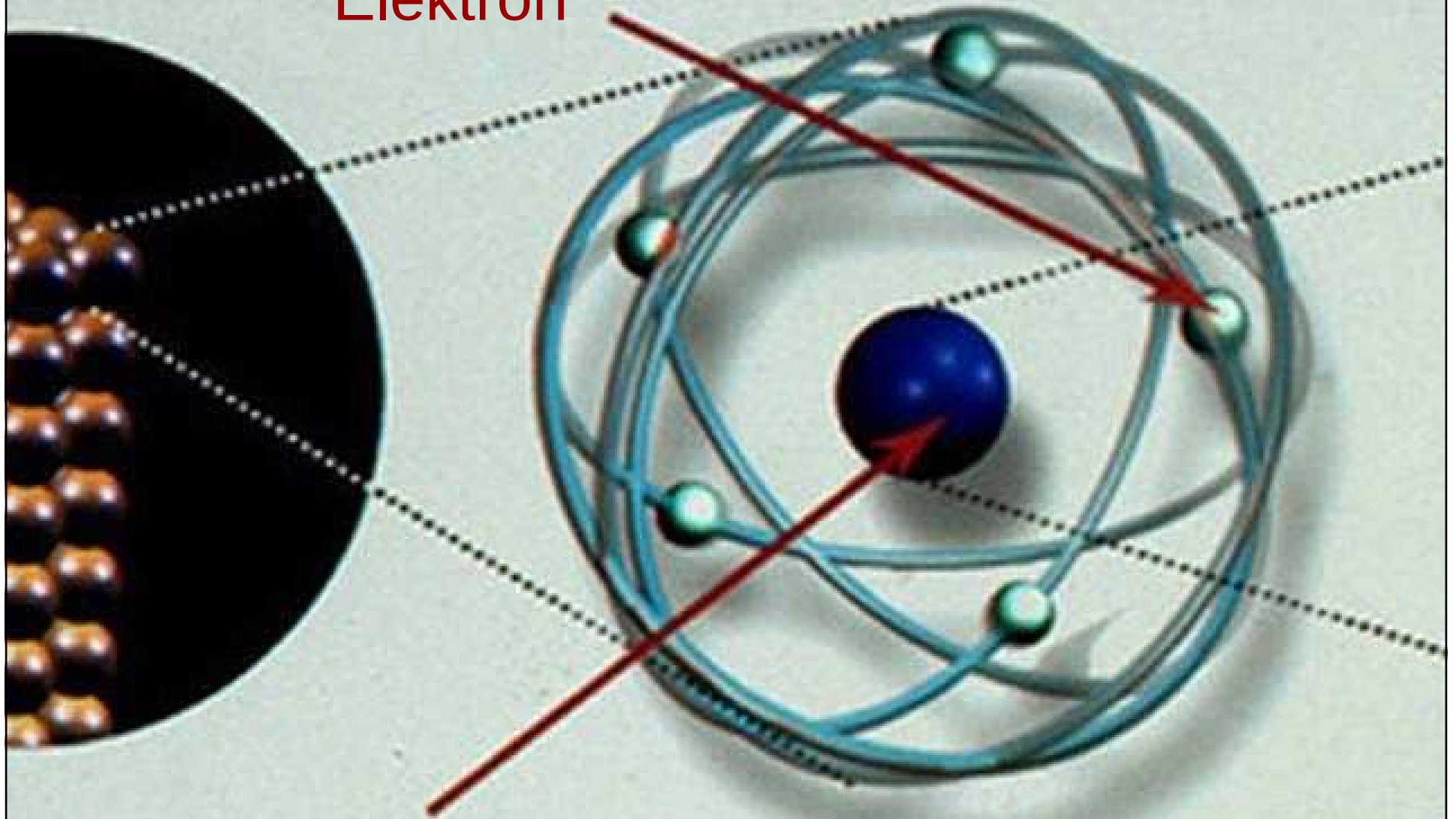


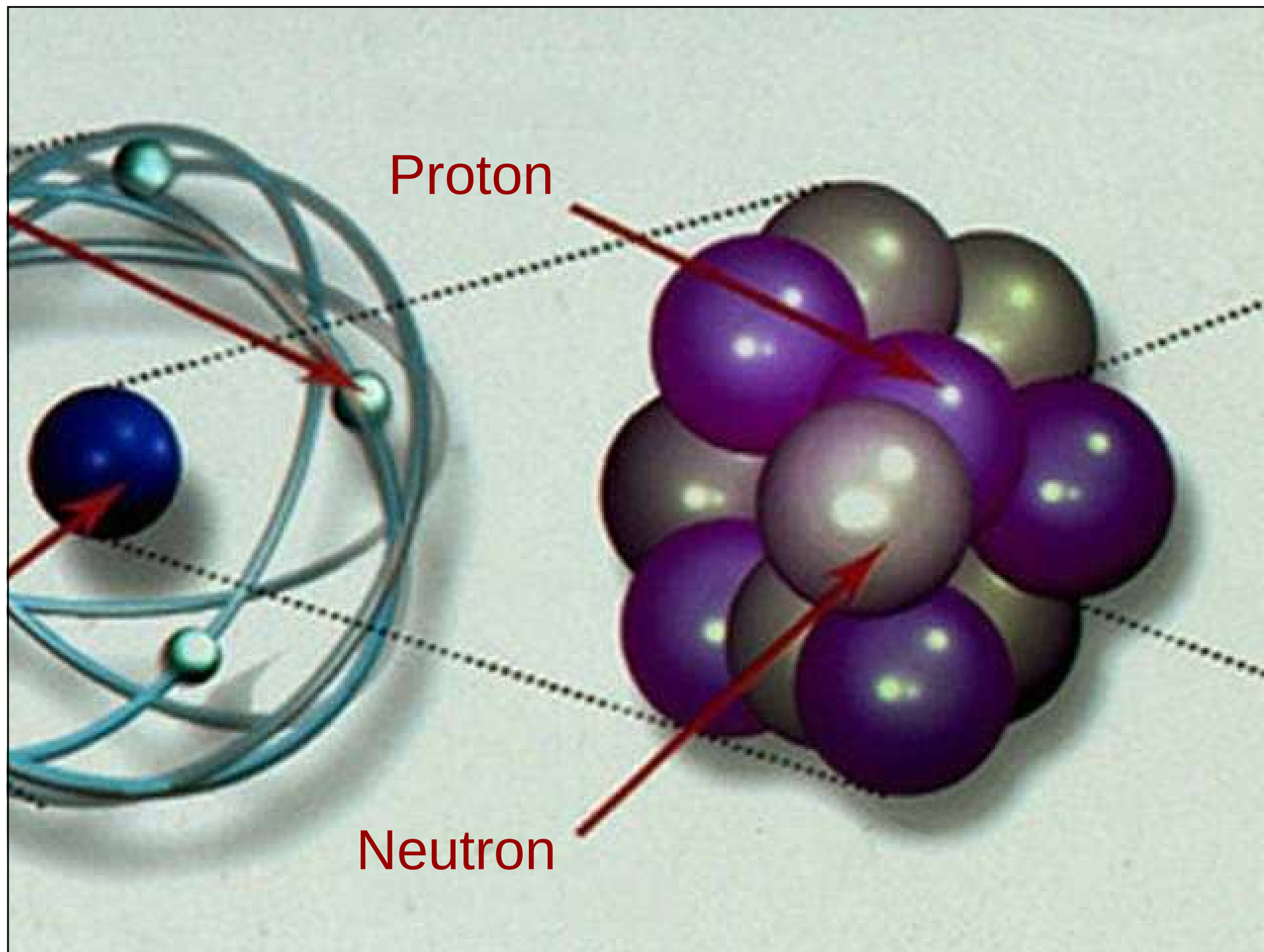
Atom

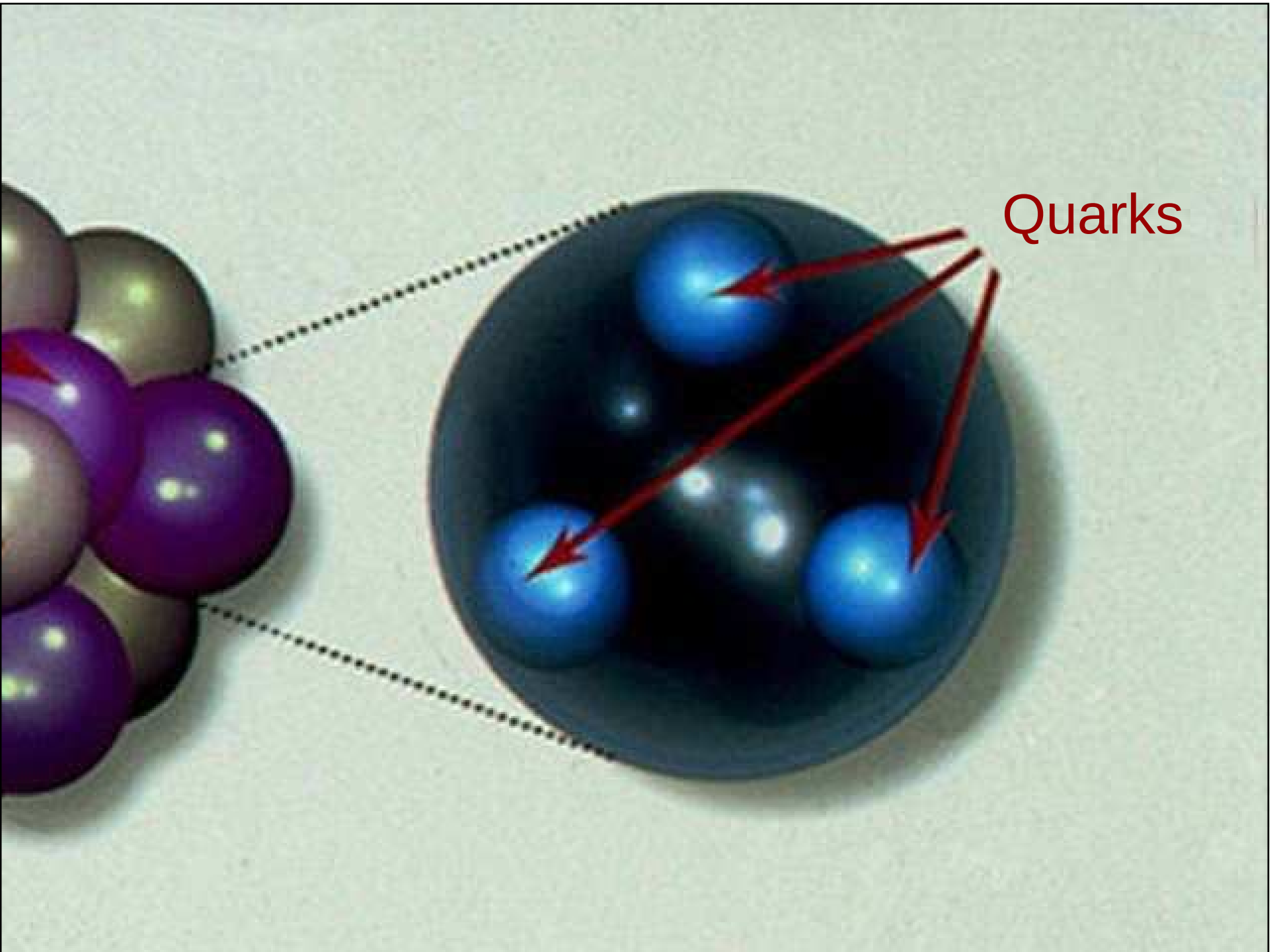


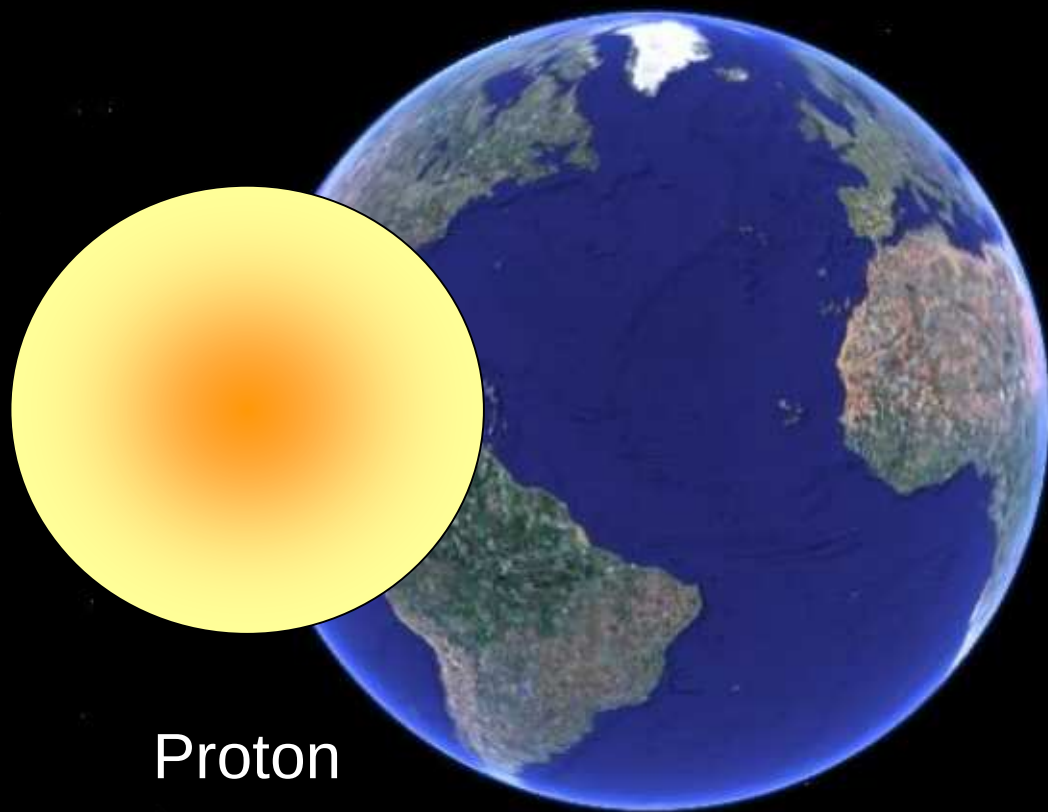
Elektron

Atomkern

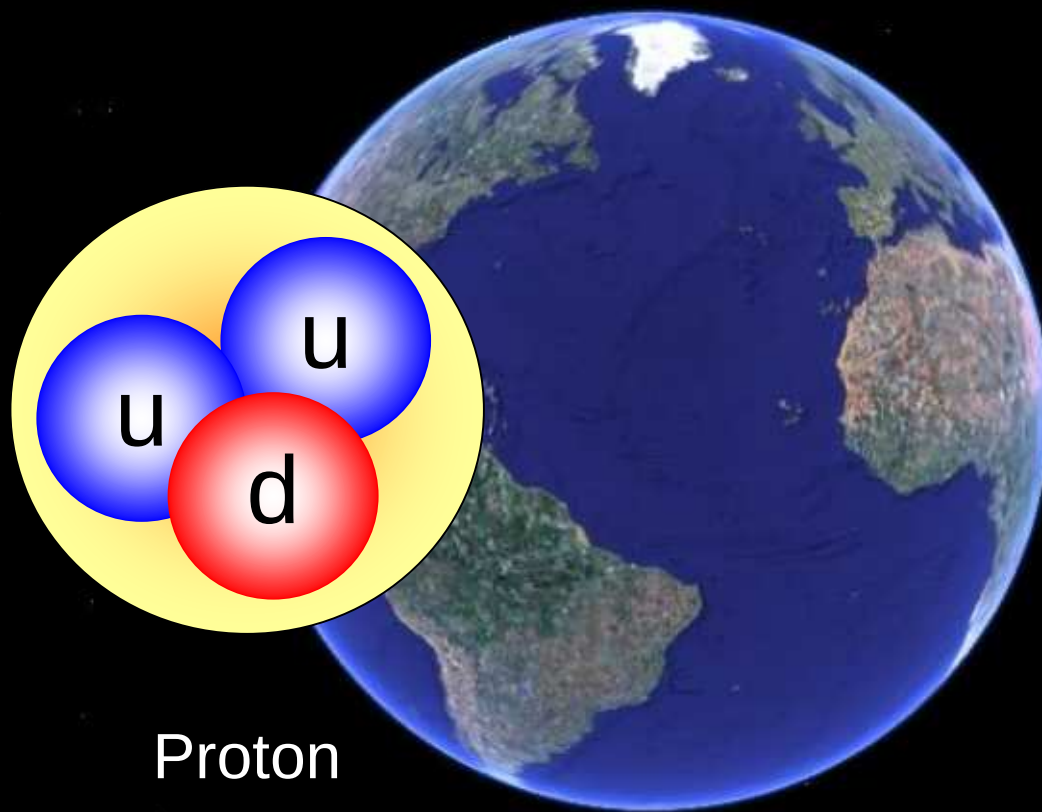




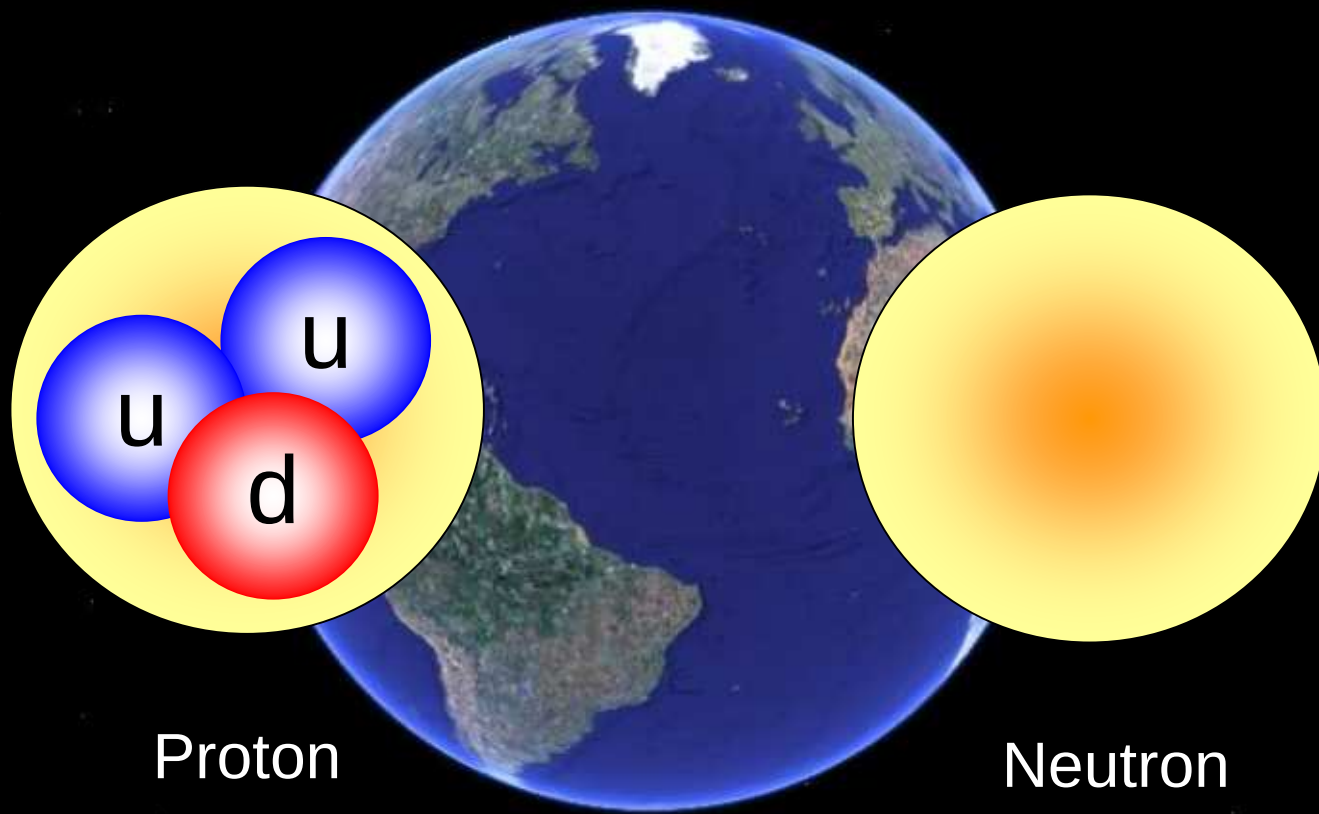


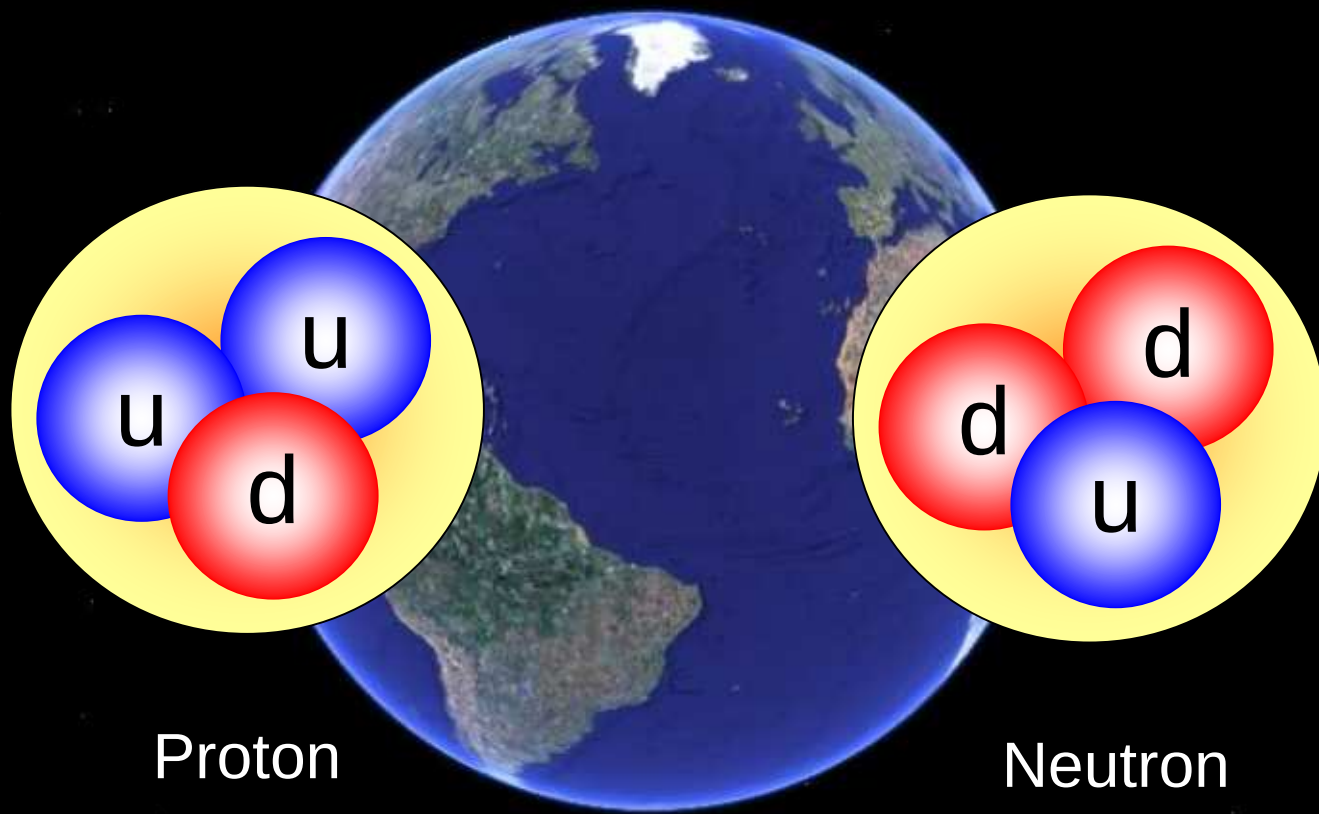


Proton

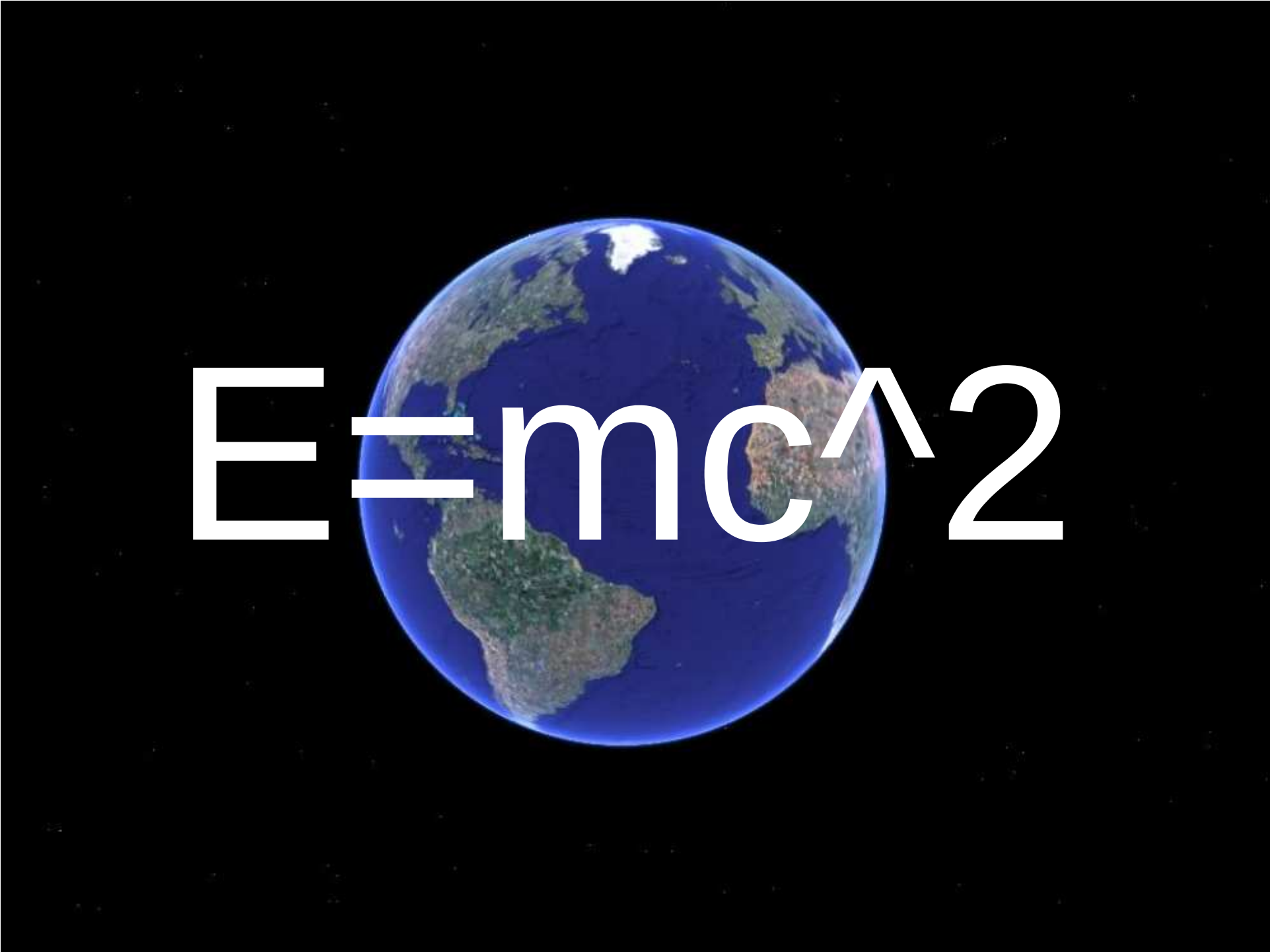


Proton



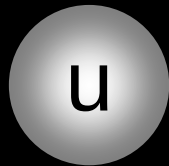





$$E=mc^2$$



Elektron



up-Quark

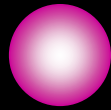


down-Quark

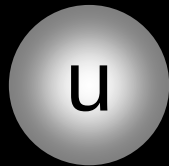




Elektron



Myon



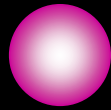
up-Quark



down-Quark



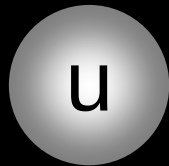
Elektron



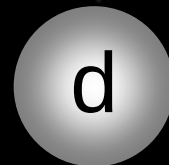
Myon



Tauon



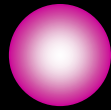
up-Quark



down-Quark



Elektron



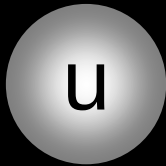
Myon



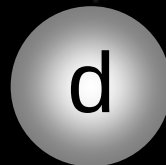
Tauon



e-Neutrino



up-Quark

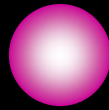


down-Quark





Elektron



Myon



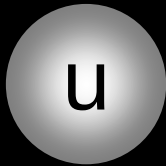
Tauon



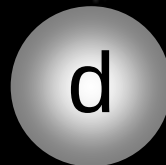
e-Neutrino



μ -Neutrino



up-Quark

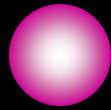


down-Quark





Elektron



Myon



Tauon



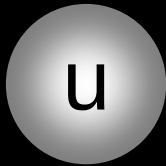
e-Neutrino



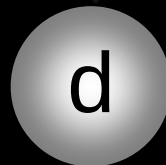
μ -Neutrino



τ -Neutrino



up-Quark

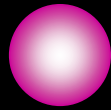


down-Quark





Elektron



Myon



Tauon



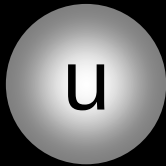
e-Neutrino



μ -Neutrino



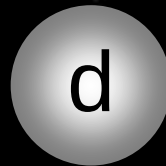
τ -Neutrino



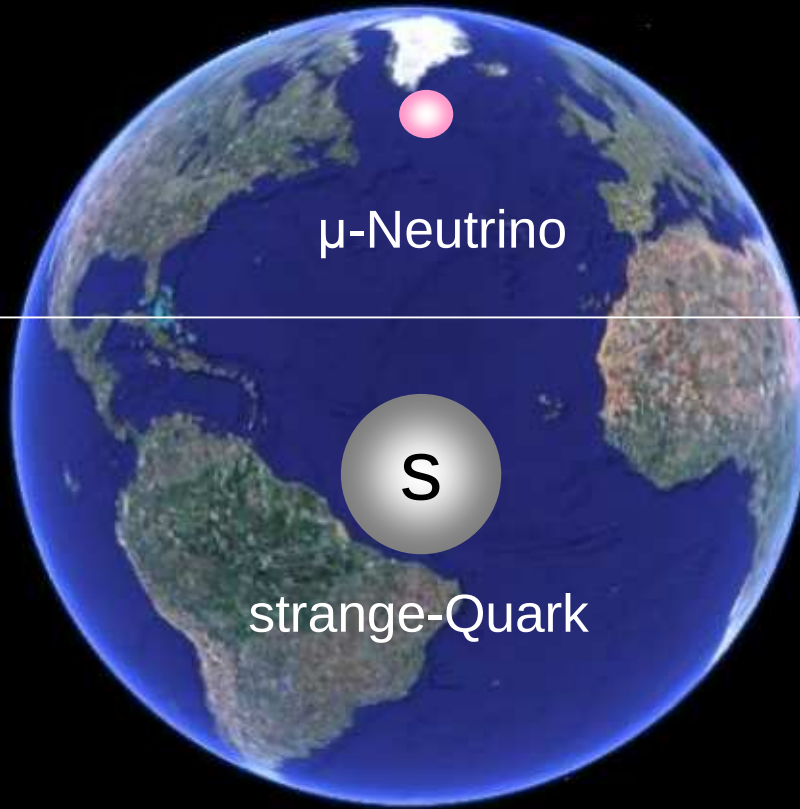
up-Quark



strange-Quark

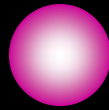


down-Quark





Elektron



Myon



Tauon



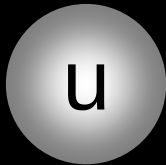
e-Neutrino



μ -Neutrino



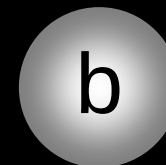
τ -Neutrino



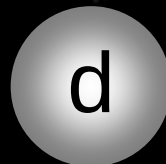
up-Quark



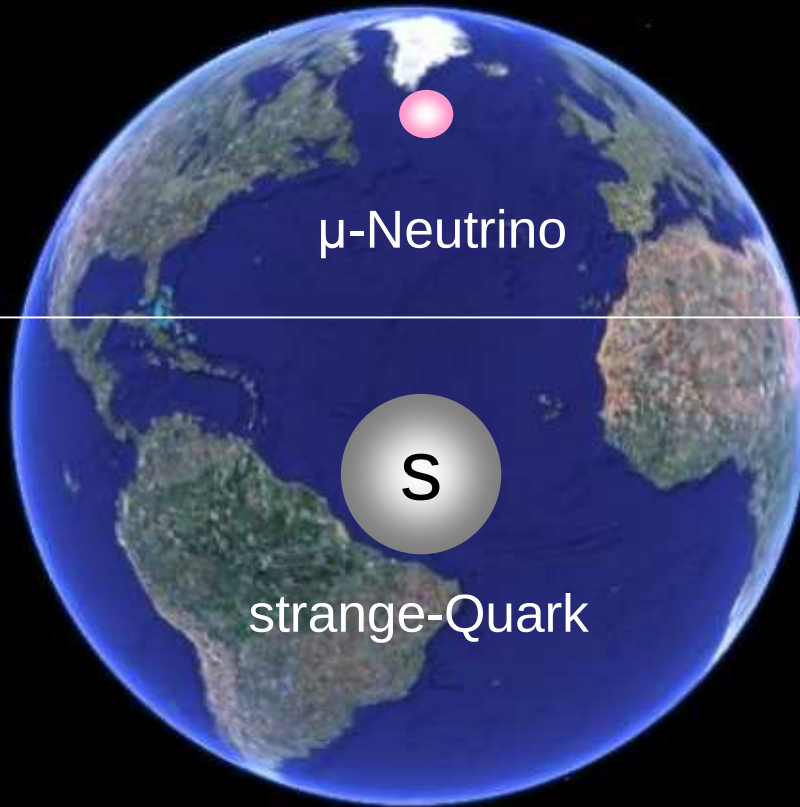
strange-Quark



bottom-Quark

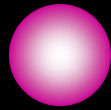


down-Quark





Elektron



Myon



Tauon



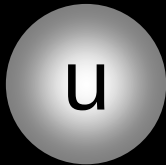
e-Neutrino



μ -Neutrino



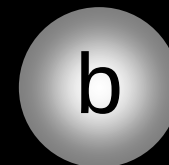
τ -Neutrino



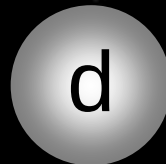
up-Quark



strange-Quark



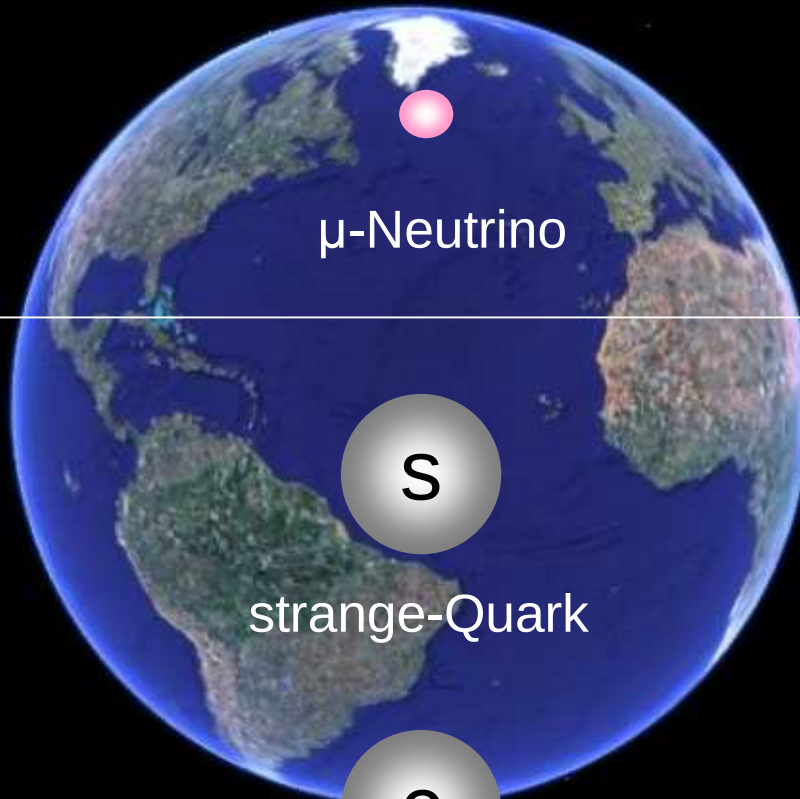
bottom-Quark



down-Quark

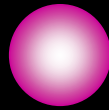


charm-Quark





Elektron



Myon



Tauon



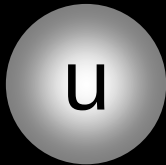
e-Neutrino



μ -Neutrino



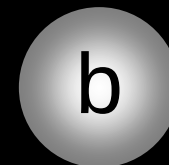
τ -Neutrino



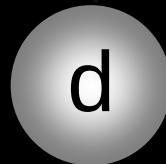
up-Quark



strange-Quark



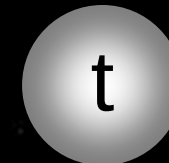
bottom-Quark



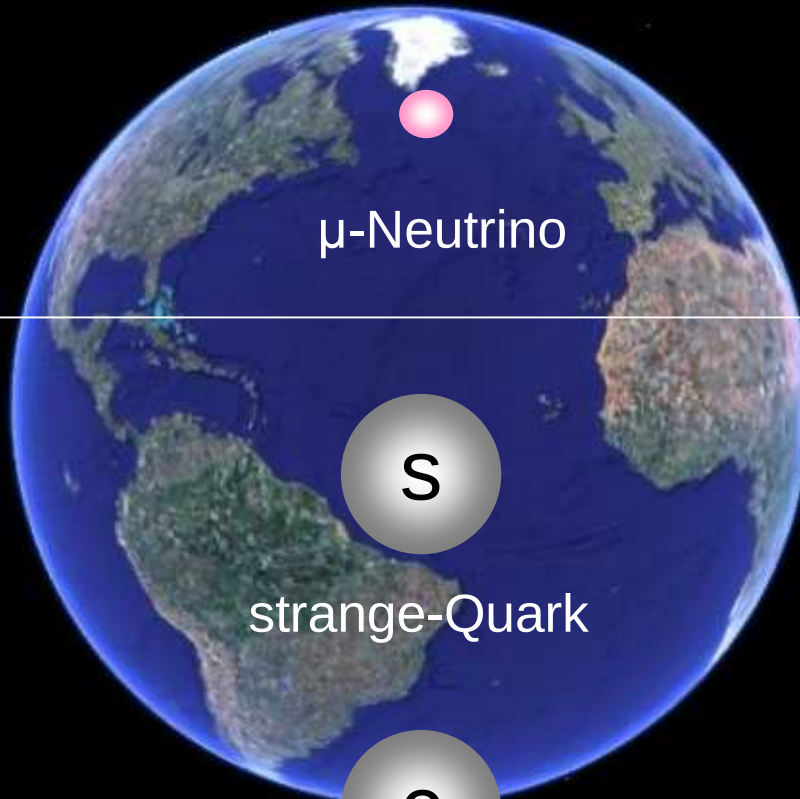
down-Quark

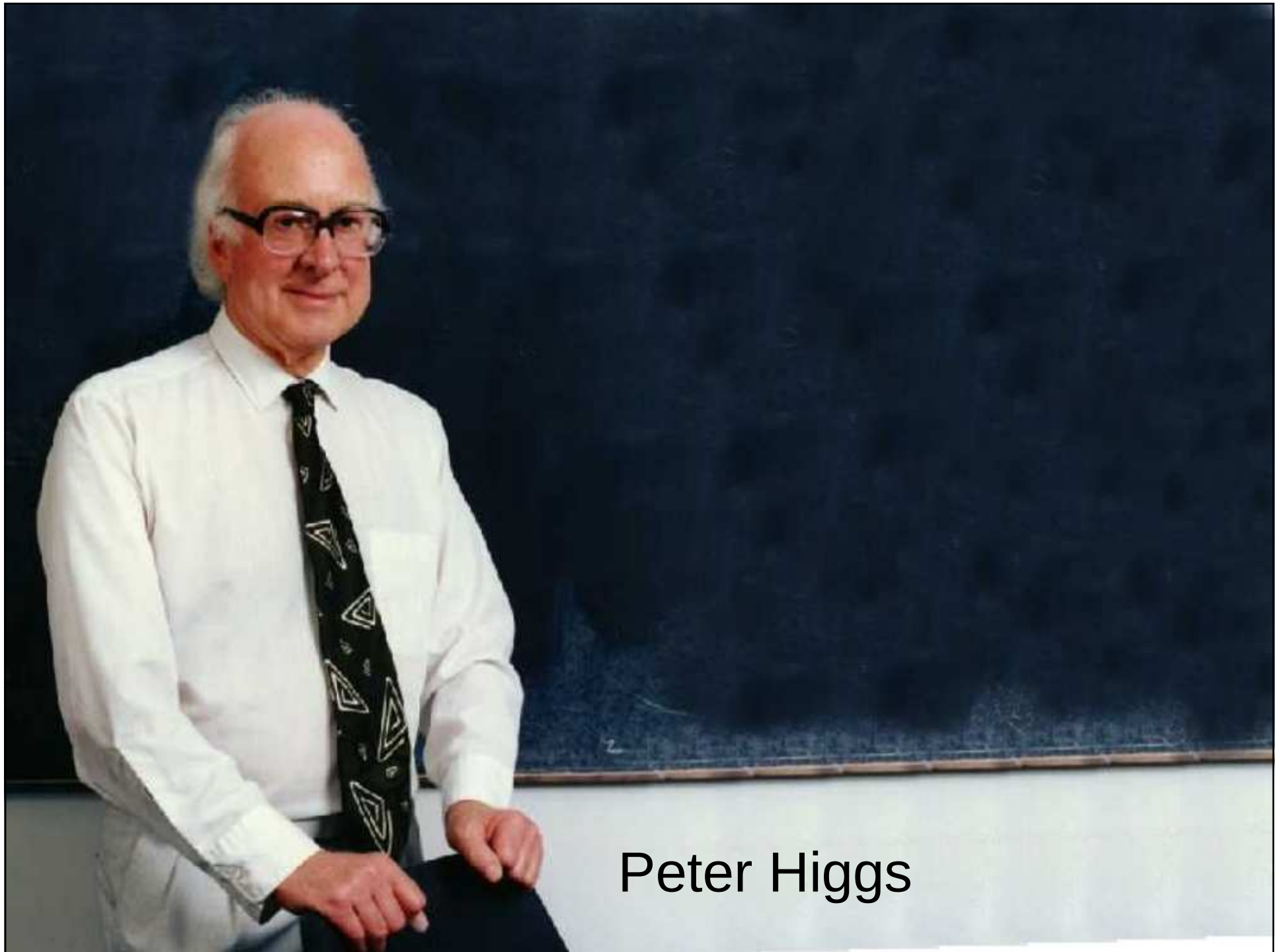


charm-Quark



top-Quark

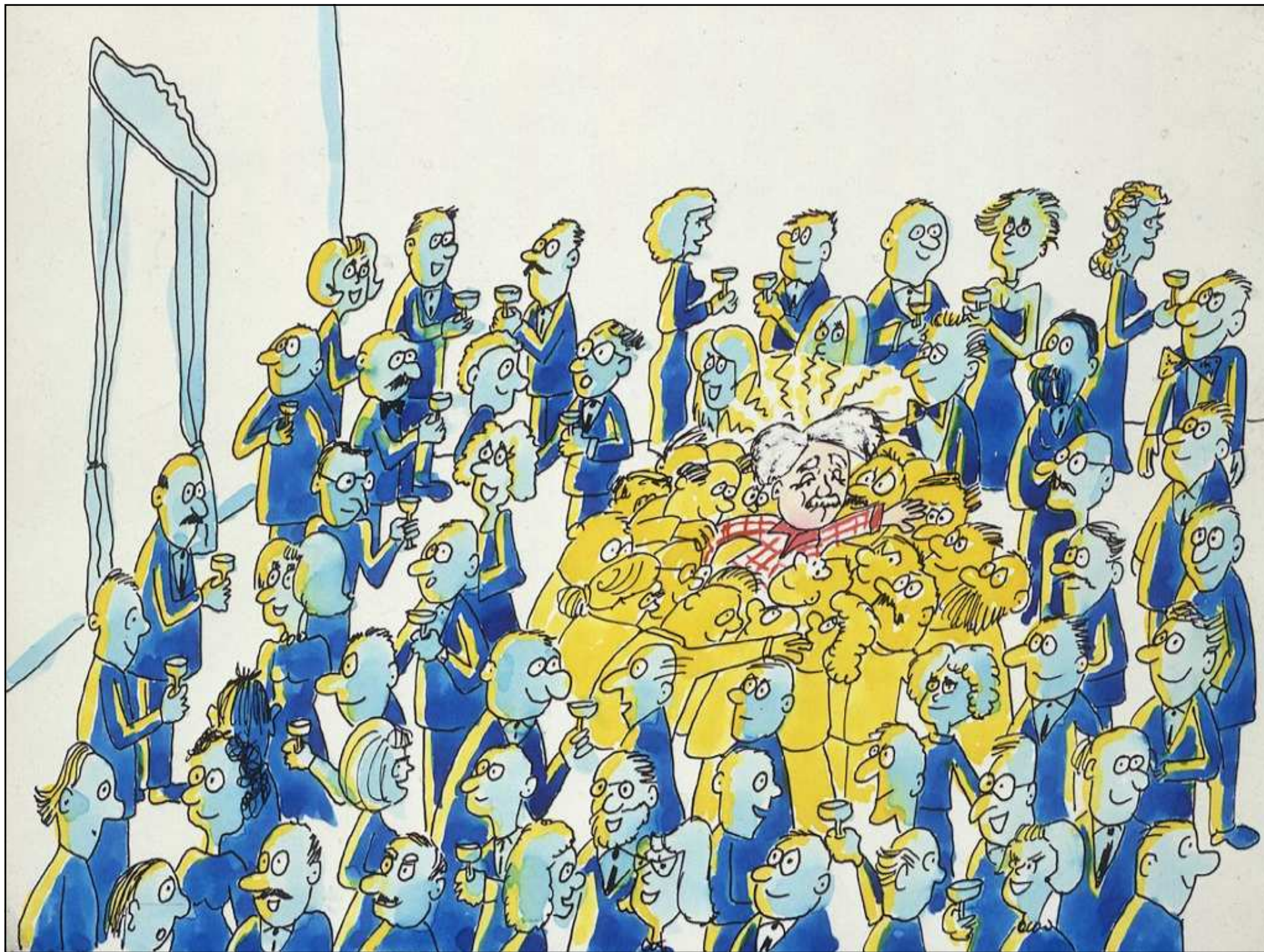




Peter Higgs

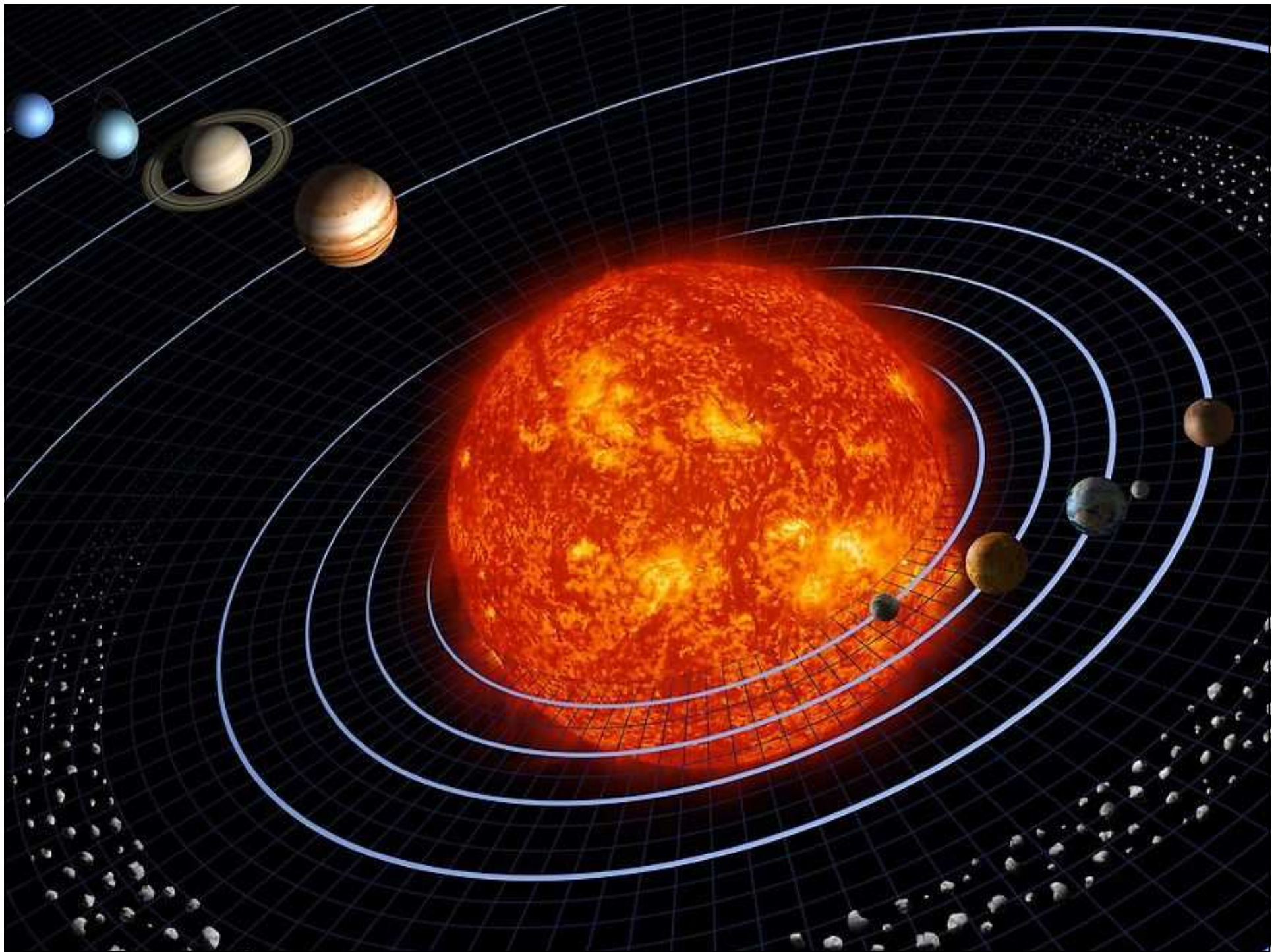


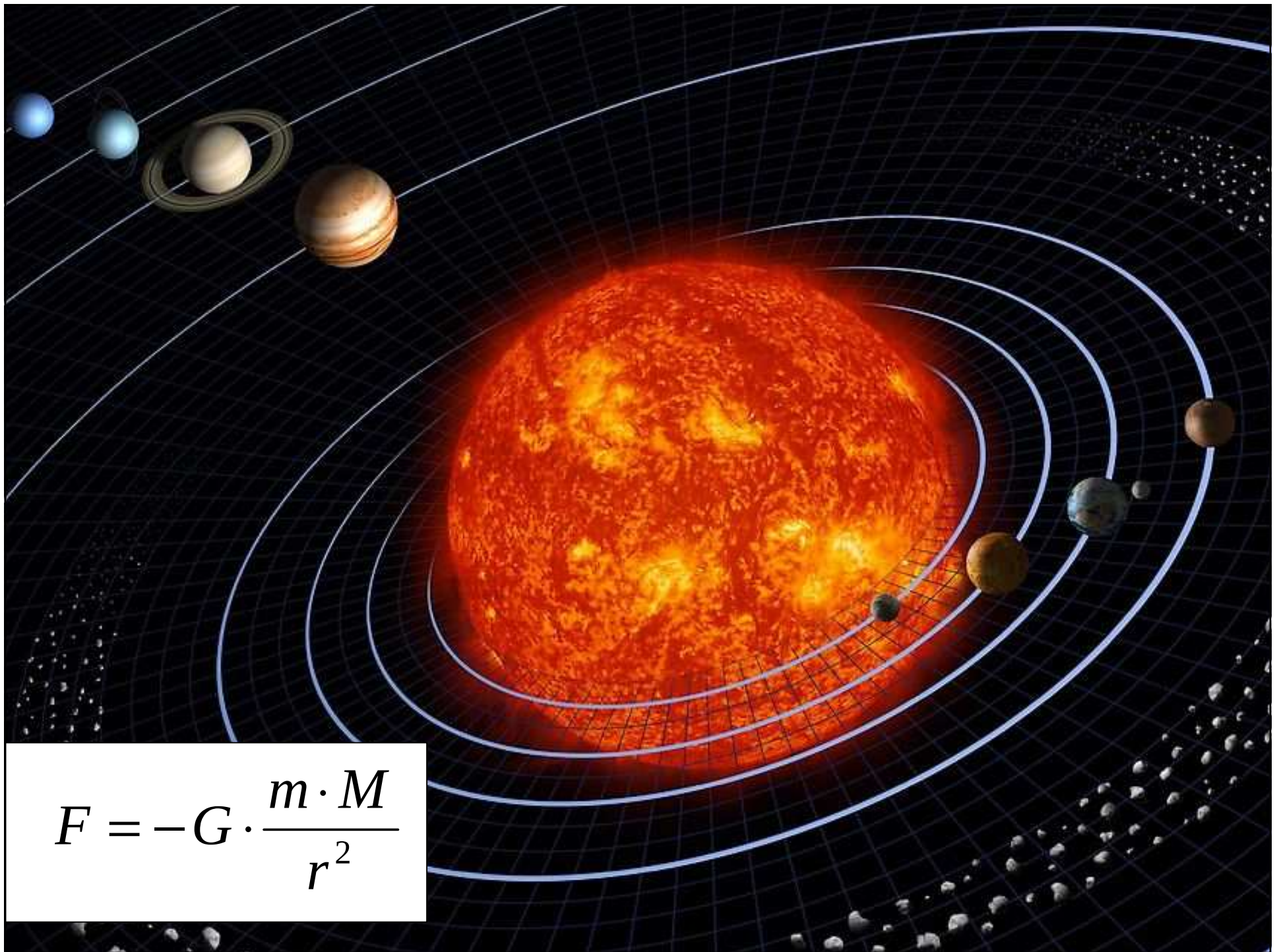








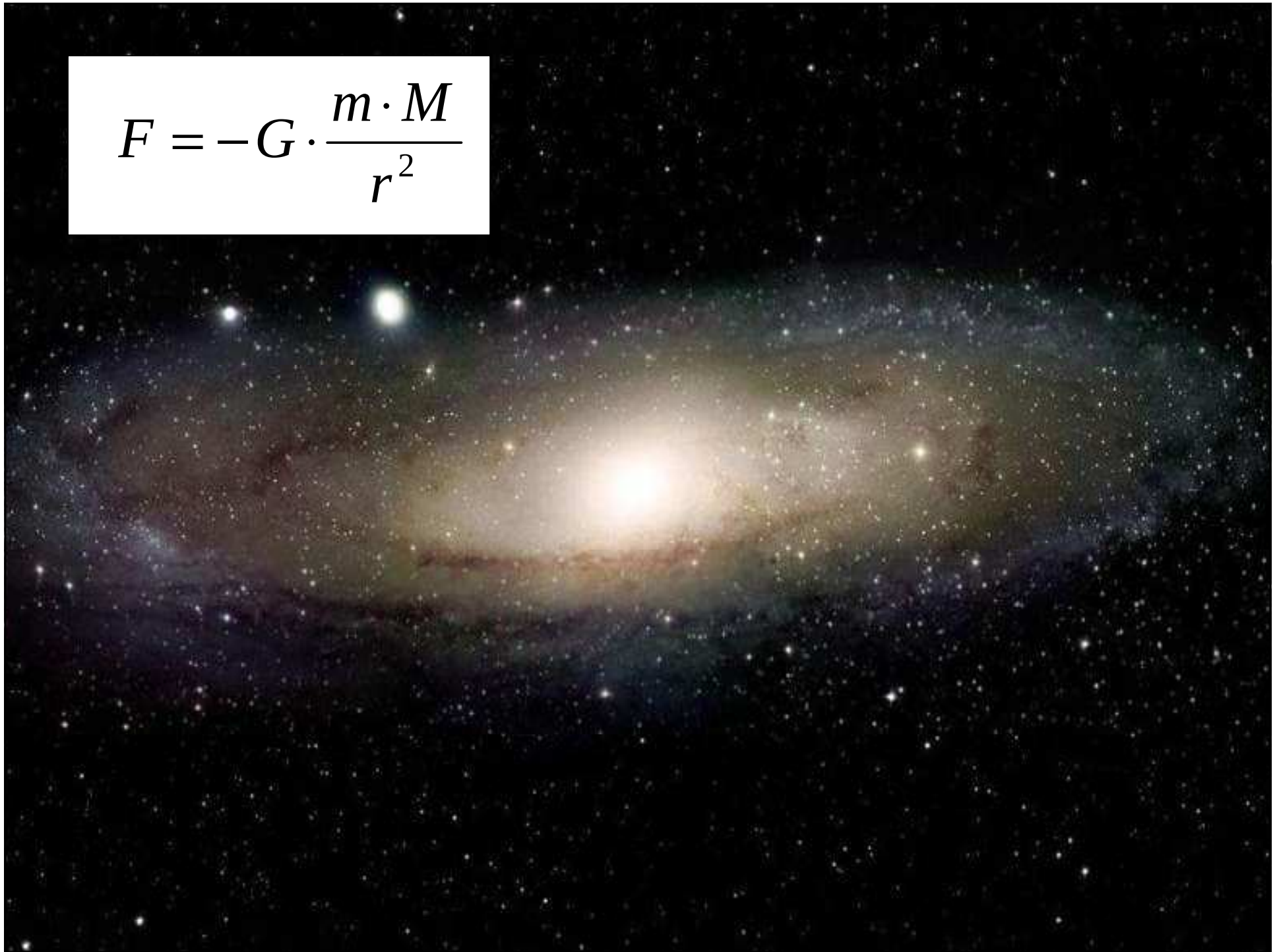




$$F = -G \cdot \frac{m \cdot M}{r^2}$$



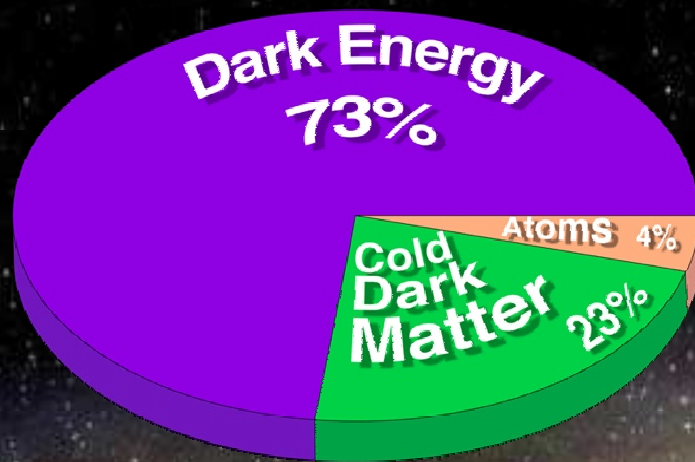
$$F = -G \cdot \frac{m \cdot M}{r^2}$$

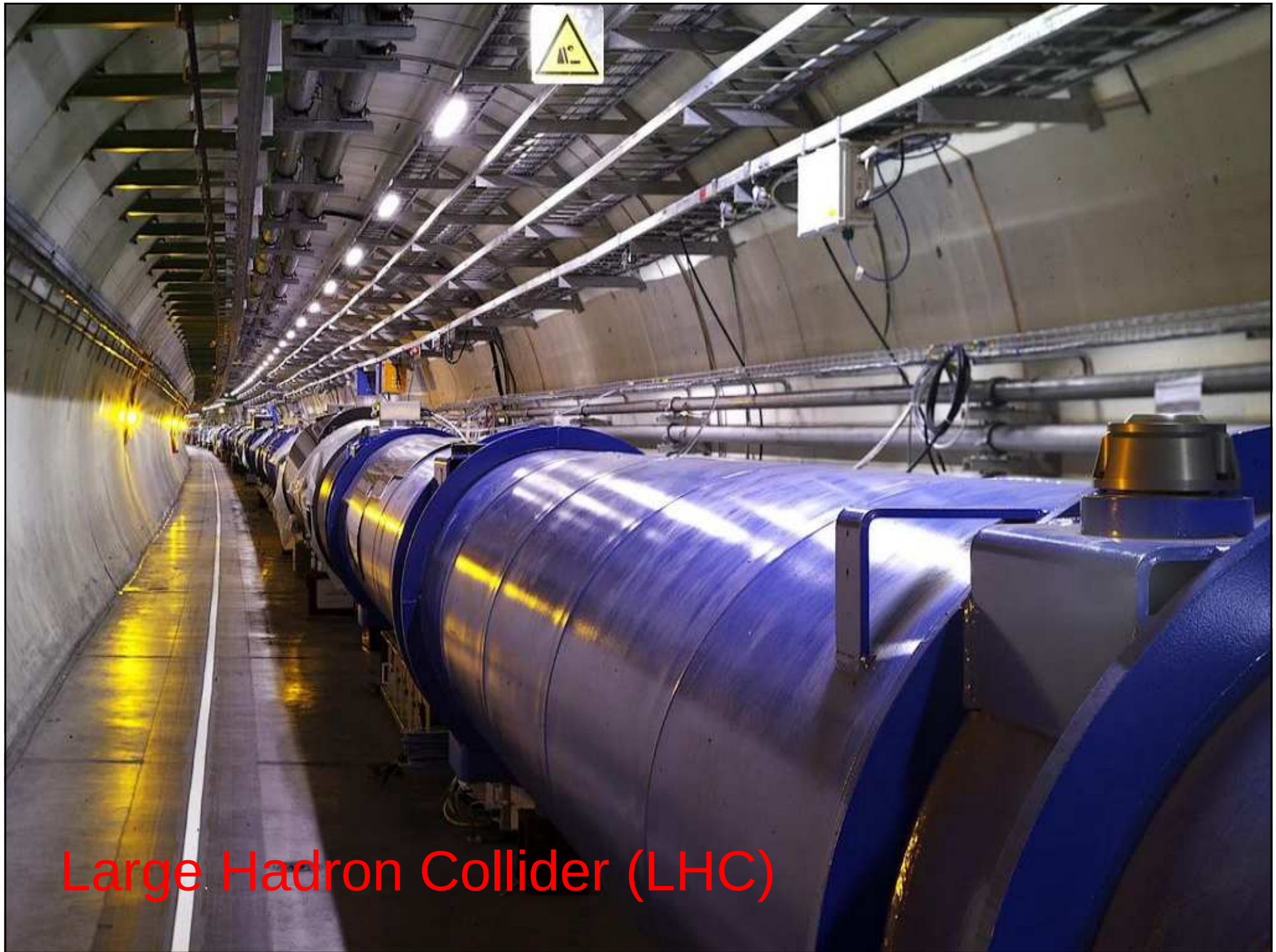


$$F = -G \cdot \frac{m \cdot M}{r^2}$$

„Dunkle
Materie“







Large Hadron Collider (LHC)

