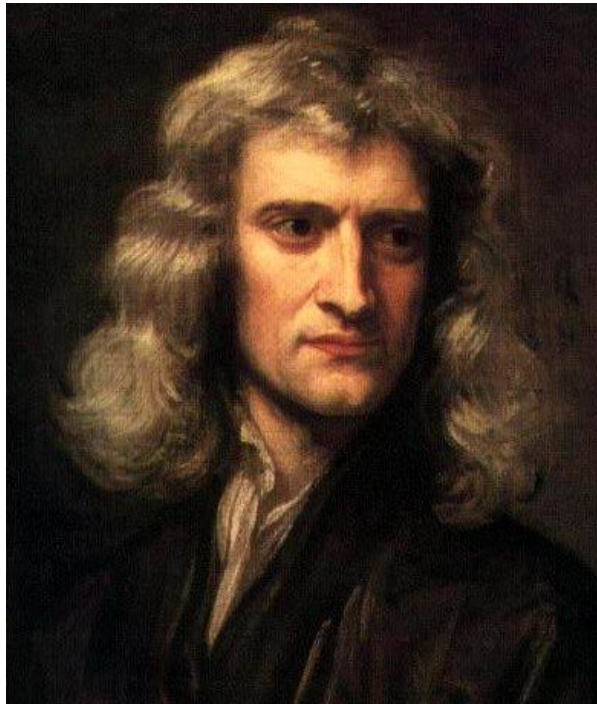


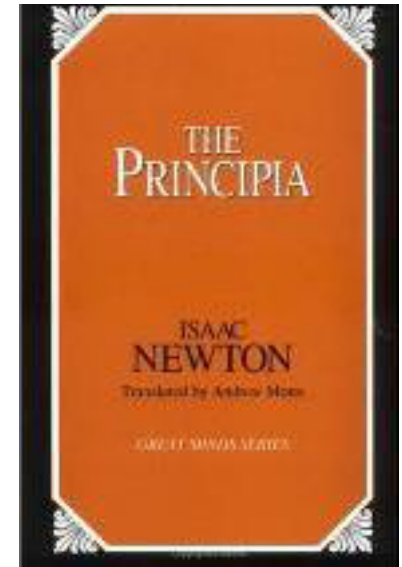
Isaac Newton 1642-1727



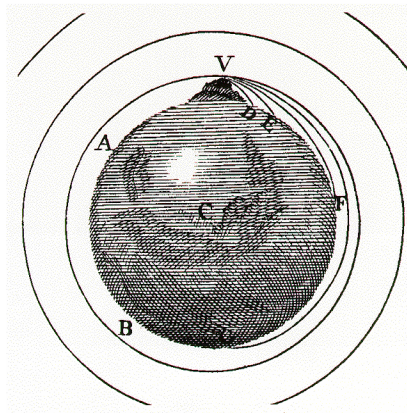
Unification
of terrestrial
and astronomical
mechanics

Three mechanics laws

1. $F=0: V=\text{const}$
2. $F=ma$
3. $F=-F'$



Gravity
 $F = GmM/R^2$



Calculus $\Delta F/\Delta x \Rightarrow \dot{F}$

Speed $\dot{y}$, Acceleration $\ddot{y}$

The physical application of calculus

Atomic theory – including
light “atoms” - not waves.

Credit war with Leibniz:
Invention of calculus

Elliptic planet orbits
Asked by Halley, Hooke & Wren

Newtons reflecting telescope

