

Consider inelastic collision



$$M = \sigma 2m_0 > 2m_0 !!!$$

increase in mass:

$$\Delta M = M - 2m_0 = \frac{2K}{c^2} = \frac{2}{c^2} (\sigma - 1) m_0 c^2$$

⇒ Conversion of K.E. into mass !!!

Applications:



$$Q = [M - (M_1 + M_2 + M_3)] c^2 = \Delta m c^2$$

disintegration energy



$$\sum m_i c^2 \longrightarrow M c^2 + \underline{\text{B.E}}$$