

36. The mass change is

$$\Delta M = (4.002603 \text{ u} + 15.994915 \text{ u}) - (1.007825 \text{ u} + 18.998405 \text{ u}) = -0.008712 \text{ u} .$$

Using Eq. 38-47 and Eq. 38-43, this leads to

$$Q = -\Delta M c^2 = -(-0.008712 \text{ u})(931.5 \text{ MeV/u}) = 8.12 \text{ MeV} .$$