

PHYS1120

Summer 2025

1. Calculate the energy released if eight hydrogen atoms and eight neutrons combine to form one ^{16}O atom. One proton has mass $m_p = 1.007825 \text{ u}$, one neutron has mass 1.008665 u , ^{16}O has mass 15.994915 u , and $1 \text{ u} = 1.660539 \times 10^{-27} \text{ kg}$.