

28 What is the mass defect of an α -particle?

$$\text{mass of a proton} = 1.6726 \times 10^{-27} \text{ kg}$$

$$\text{mass of neutron} = 1.6749 \times 10^{-27} \text{ kg}$$

$$\text{mass of slow-moving } \alpha\text{-particle} = 6.6442 \times 10^{-27} \text{ kg}$$

A $4.898 \times 10^{-29} \text{ kg}$

B $5.080 \times 10^{-29} \text{ kg}$

C $3.297 \times 10^{-27} \text{ kg}$

D $6.642 \times 10^{-27} \text{ kg}$

29 Rutherford's α -particle scattering experiment consisted of an α -particle source that directed its