A Level · OCR · Physics

2 mins 2 questions

Multiple Choice Questions

Nuclear Fission & Fusion

Energy & Mass Equation / Particle-Antiparticle Pairs / Mass Defect & Binding Energy / Calculating Binding Energy / Nuclear Fission / Nuclear Fission Reactor & Waste / Nuclear Fusion / Balancing Nuclear Equations

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Total Marks /2

1 The total energy released in a single fusion reaction is 4.0 MeV.

What is the change in mass in this fusion reaction?

A. 7.1×10^{-36} kg

B. 7.1×10^{-30} kg

C. 2.1×10^{-21} kg

D. 4.4×10^{-17} kg

(1 mark)

2 A proton collides with a stationary oxygen-18 nucleus. The collision produces a fluorine-18 nucleus and particle X.

$$ {}^{1}_{1}\mathrm{p} + {}^{18}_{8}\mathrm{O} \rightarrow {}^{18}_{9}\mathrm{F} + \mathrm{X} $$

What is particle X?

A. neutron

B. proton

C. electron

D. positron

(1 mark)