

Answer on question #53073, Physics / Quantum Mechanics

Question The mass of a nucleus is 0.042 amu less than the sum of the masses of 3 protons and 4 neutrons. What is the binding energy per nucleon in ${}^7_3\text{Li}$?

Solution Binding energy per nucleon is

$$E = \Delta mc^2 / \text{per nucleon} = \frac{0.042c^2}{3 + 4} = 0.06 \text{ amu} = 0.06 \cdot 931.5 = 55.89 \text{ MeV}$$

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