

30 A nuclear fusion reaction that occurs in stars can be represented as shown.



The table shows the masses of the nuclei involved in the reaction.

nuclei	mass / u
${}_2^4\text{He}$	4.002603
${}_4^8\text{Be}$	8.005305
${}_6^{12}\text{C}$	12.000000

What is the energy given off when one nucleus of  ${}_2^4\text{He}$  reacts with one nucleus of  ${}_4^8\text{Be}$ ?

- A  $1.14 \times 10^{-4}$  eV
- B 7.38 eV
- C 0.0246 MeV
- D 7.38 MeV

