

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

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

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

