

- 30** Nuclei of atoms can exist in excited states.

The mass of a nucleus in its ground state is $59.9308\text{ }u$.

When this nucleus returns from an excited state to the ground state, a gamma ray photon of energy $2.13 \times 10^{-13}\text{ J}$ is emitted.

What is the mass of a nucleus in the excited state?

- A** $59.9280\text{ }u$
- B** $59.9294\text{ }u$
- C** $59.9322\text{ }u$
- D** $59.9337\text{ }u$

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