

29 Nuclei of atoms can exist in excited states. When an excited nucleus returns to its state of lowest energy (the ground state), a γ -ray photon may be emitted.

The mass of a nucleus in its ground state is 59.9308 u. The energy of the photon emitted when this nucleus returns from an excited state to the ground state is 2.13×10^{-13} J.

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

A 59.9208 u **B** 59.9294 u **C** 59.9322 u **D** 59.9337 u