^{67}Ni

Kouzes et al. identified ^{67}Ni in the 1978 paper " Mass of ^{67}Ni" (1978Ko28). An enriched ^{70}Zn target was bombarded with a 56 MeV ^{4}He beam from the Princeton University AVF cyclotron. ^{67}Ni was produced in the multiple particle transfer reaction ^{70}Zn(^{4}He,^{7}Be)^{67}Ni, separated with the quadrupole-dipole-dipole-dipole spectrograph, and measured with two resistive-wire gas-proportional counters and a plastic scintillator. "This measurement gives a result for the Q value of -19164 ± 22 keV measured relative to the Q value of -18512 ± 2 keV for ^{25}Mg(^{4}He,^{7}Be)^{22}Ne. Using -69560 ± 3 keV for the ^{70}Zn mass excess this gives a ^{67}Ni mass excess of -63741 ± 22 keV." Previous observations of half-lives of 50(3) s (1965Me06), 18(4) s (1971Ta03), and 16(4) s (1975Re09) were incorrect. The latter two assignments were based on γ-ray measurements which were reassigned by Runte et al. to ^{70}Cu.

Adapted from reference (2012Ga06)

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