^{58}Zn

^{58}Zn was first observed in 1986 by Seth et al. in "Mass of Proton-Rich ^{58}Zn by Pion Double Charge Exchange" (1986Se04). A π^+ beam with a central energy of 292 MeV hit a ^{58}Ni target to measure the (π^+,π^-) reaction at the Los Alamos Meson Physics Facility. ^{58}Zn was identified by the detection of negative pions π^- measured using a modified version of the EPICS spectrometer. "Using the known atomic $Q_0 = -17565.6 \pm 2.2$ keV for the ^{9}Be(π^+,π^-)^{9}C(g.s.) reaction, we obtain the atomic $Q_0 = -17930 \pm 50$ keV for the ^{58}Ni(π^+,π^-)^{58}Zn(g.s.) reaction. This corresponds to an atomic mass excess of -42295 ± 50 keV for ^{58}Zn."

Adapted from reference (2012Gr02)

1986Se04 K. K. Seth, S. Iversen, M. Kaletka, D. Barlow *et al.*, Phys. Lett. B **173**, 397 (1986).

2012Gr02 J. L. Gross, J. Claes, J. Kathawa, and M. Thoennessen, At. Data Nucl. Data Tables **98**, 75 (2012).

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