

⁴⁸Mn

⁴⁸Mn was discovered in 1987 by Sekine et al. as described in the paper “The Beta Decay of ⁴⁸Mn: Gamow-Teller quenching in fp-shell nuclei” (1987Se07). At the UNILAC at GSI, Darmstadt an 11.4 MeV/u ⁴⁰Ca beam was aimed at a FEBIAD-F ion source with a graphite catcher and ⁴⁸Mn was produced in the fusion evaporation reaction ¹²C(⁴⁰Ca,p3n). The isotopes were separated by mass in a magnetic sector field and identified by γ - and β -ray decay spectroscopy. “After accounting for single and double escape peaks as well as for peaks due to summing with 511 keV annihilation radiation, and leaving the γ -lines at 1660 and 2167 keV unassigned, 16 γ -transitions were ascribed to the decay of ⁴⁸Mn.” A half-life of 150(10) ms was recorded.

Adapted from reference (2012Ga06)

1987Se07 T. Sekine, J. Cerny, R. Kirchner, O. Klepper *et al.*, Nucl. Phys. A **467**, 93 (1987).

2012Ga06 K. Garofali, R. Robinson, and M. Thoennessen, At. Data Nucl. Data Tables **98**, 356 (2012).

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