^{24}Na

^{24}Na was discovered by Fermi et al. at the Physical Laboratory of the University of Rome and published in the 1934 article "Artificial radioactivity produced by neutron bombardment" (1934Fe01). Magnesium targets were irradiated with neutrons from a 800 mCi radon beryllium source and activities were measured with Geiger-Müller counters following chemical separation. "The active element decaying with the 15 hours' period could be chemically separated. The irradiated magnesium was dissolved, and a sodium salt was added. The magnesium was then precipitated as phosphate and found to be inactive, while the sodium which remains in the solution carries the activity. The active atom is thus proved not to be an isotope of magnesium, and as neon also can be excluded, we assume it to be an isotope of sodium, formed according to the reaction: $Mg_{12}^{24} + n_0^1 = Na_{11}^{24} + H_1^1$."

Adapted from reference (2012Th10)

1934Fe01 E. Fermi, E. Amaldi, O. D'Agostino, F. Rasetti, and E. Segre, Proc. Roy. Soc. (London) **146**, 483 (1934).

2012Th10 M. Thoennessen, At. Data Nucl. Data Tables **98**, 933 (2012).

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