

²⁷Mg

²⁷Mg was discovered by Fermi et al. at the Physical Laboratory of the University of Rome as reported in the 1934 article “Artificial radioactivity produced by neutron bombardment” (1934Fe01). Aluminum targets were irradiated with neutrons from a 800 mCi radon beryllium source and activities were measured with Geiger-Müller counters. “13—Aluminium: This element acquires a strong activity under neutron bombardment. The decay curves indicate two periods of about 12 minutes ($i = 0.8$) and 15 hours ($i = 0.5$)... The active product with the 12-minute period has not been separated. However, we consider it likely to be Mg²⁷, as the other two possible cases, Al²⁸ and Al²⁶, are probably to be excluded, the first because Al²⁸, as we shall next see, is a radioactive isotope with a period of 3 minutes, and the latter because Al²⁶ should probably disintegrate with emission of positrons.”

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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