^{32}P

^{32}P was discovered by Fermi et al. at the Physical Laboratory of the University of Rome and reported in the 1934 article "Artificial radioactivity produced by neutron bombardment" (1934Fe01). Phosphorus targets were irradiated with neutrons from a 800 mCi radon beryllium source and activities were measured with Geiger-Müller counters following chemical separation. "15−Sulphur: Sulphur shows a fairly strong activity, decaying with a period of about 13 days (rather inaccurately measured). Half-value absorption thickness of the β-rays 0.10 gm/cm^2. A chemical separation of the active product was carried out as follows: irradiated sulphuric acid was diluted, a trace of sodium phosphate added, and phosphorus precipitated as phosphomolibdate by addition of ammonium molibdate. The activity was found in the precipitate. We think, in consequence, that the nuclear reaction is $S^{32}_{16} + n^{1}_{0} = P^{32}_{15} + H^{1}_{1}$."

Adapted from reference (2012Th10)

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

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