^{31}Si

^{31}Si 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−Phosphorus−This element shows a strong activity (i = 0.6) decaying with a period of about 3 hours... The 3 hours' active product could be chemically separated. For this purpose phosphorus was irradiated as a concentrated solution of phosphoric acid. This solution was afterwards diluted with water, adding sulphuric acid and a small amount of sodium silicate. The substance is dried up to render silica insoluble, and then dissolved in water and filtered. The activity is found with the silica. The nuclear reaction is then probably $P_{15}^{31} + n_0^1 = Si_{13}^{31} + H_1^1$."

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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