

## <sup>47</sup>V

O'Connor et al. identified <sup>47</sup>V correctly for the first time in 1942 in their article "Artificial Radioactivity of <sup>49</sup>Cr" (1942Oc01). 10 MeV deuterons and 5 MeV protons used in the bombardments of TiO<sub>2</sub> were accelerated by the Ohio State University cyclotron. Decay and absorption measurements were made with a Wulf quartz fiber electrometer connected to a Freon-filled ionization chamber. A half-life of 33 m was measured which had previously been observed. However, it had been assigned to <sup>49</sup>V (1937Wa09, 1937Wa03). "A 33-minute activity assigned to <sup>49</sup>V is inconsistent with the assignment of the 41.9-minute activity to <sup>49</sup>Cr. In addition several bombardments of titanium with alpha-particles have failed to reveal the 33-minute period. However, deuteron bombardment of titanium and proton bombardment of titanium produce the 33-minute vanadium period with strong activity... If it belongs to <sup>47</sup>V, then it is produced from titanium by (p,n) and (d,n) reactions and possibly by (p,γ) and (d,2n) reactions. The 33-minute activity has been tentatively assigned to <sup>47</sup>V."

Adapted from reference (2010Sh05)

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