^{45}K

Morinaga and Wolzak from the Instituut voor Kernphysisch Onderzoek in Amsterdam discovered ^{45}K in 1964 as reported in "Potassium 45" (1964Mo18). An enriched $Ca^{48}CO_3$ target was irradiated with 52 MeV α-particles. Gamma-ray spectra were measured with a NaI(Tl) detector following chemical separation. "Assignment of this activity to K^{45} is most unambiguously made from its gamma spectrum. The energy of one of the most intense gamma ray (0.175 MeV) corresponds to the first excited state energy of Ca^{45} and that of a 1.7 MeV gamma ray can be ascribed to the gamma ray from the 1.9 MeV state to the first excited state. The total decay energy of 4.0 MeV, which results from the decay scheme, also supports the assignment of the 20 min. activity to K^{45}."

Adapted from reference (2012Th10)

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