^{53}Co

Jackson et al. discovered ^{53}Co as described in the 1970 paper "^{53}Co^{m}: A Proton-Unstable Isomer" (1970Ja22). The Harwell variable energy cyclotron accelerated a ^{16}O beam to 81 MeV and ^{53}Co was produced in the fusion-evaporation reaction ^{40}Ca(^{16}O,2np). The life-time of delayed protons was measured using a ΔE-E telescope. "It is our opinion that the best explanation for the origin of the observed activity is the weak proton radioactivity of ^{53}Co^{m}." The ground state of ^{53}Co was estimated to be bound by 1.6 MeV so the observed proton activity was assigned to the decay of an isomeric state. Cerny et al. (1970Ce04) confirmed the interpretation of the results as proton radioactivity in a paper submitted on the same date and published in the same issue immediately following the paper by Jackson et al. The ground state was observed for the first time three years later by Kochan et al. (1973Ko10) reporting a half-life of 262±25 ms.

Adapted from reference (2010Sz02)

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