^{35}Ca

^{35}Ca was discovered by Äystö et al. in 1985, and published in "Observation of the First T_z=$-\frac{5}{2}$ Nuclide, ^{35}Ca, via Its β-Delayed Two-Proton Emission" (1985Ay01). A beam of 135-MeV ^{3}He from the Berkeley 88-inch cyclotron bombarded a 2-mg/cm^2 natural-calcium target. The β-delayed two-proton sum spectra were measured and assigned to ^{35}Ca. "The assignment of the observed groups to ^{35}Ca is based on excellent agreement with the predicted decay energy for the higher sum peak populating the ^{33}Cl ground state and with the known energy difference for decays to the ground (G) and the first excited (X) states at 811 keV in ^{33}Cl. Further, the half-life is consistent with the predictions for ^{35}Ca and no other new beta-delayed two-proton emitters (e.g., ^{27}S), if produced, are expected to have these two-proton sum energies."

Adapted from reference (2011Am01)

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