# $^{138}$Pr

Stover from the University of California at Berkeley reported the observation of $^{138}$Pr in the 1951 paper, "New neutron-deficient radioactive isotopes of the light rare-earth region" (1951St03). Cerium metal was bombarded with 10-, 20-, and 32-Mev protons and activities were measured with end-on type Geiger-Müller counters following chemical separation. "In the bombardments with 32-Mev protons a 120-min praseodymium activity appeared in higher yield than the 4.50-hr $Pr^{139}$. On the basis of the approximate threshold of 30 Mev, it was allocated to $Pr^{138}$ as the product of a (p,3n) reaction on $Ce^{140}$." The half-life for $^{138}$Pr corresponds to an isomeric state. The ground state was first observed fifteen years later by Gromov et al.(1966Gr15) measuring a half-life of 1.50(15) min..

Adapted from reference (2012Ma48)


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