

## <sup>73</sup>Rb

In the 1993 publication “Beta-delayed proton decay of <sup>73</sup>Sr” Batchelder et al. reported the observation of a proton-unbound excited state of <sup>73</sup>Rb ([1993Ba61](#)). A natural calcium target was bombarded with a 245 MeV <sup>36</sup>Ar beam from the Berkeley 88-inch cyclotron and <sup>73</sup>Rb was populated by  $\beta$ -decay of the fusion-evaporation residue <sup>73</sup>Sr. The reaction products were transported with a He-jet system onto a rotating wheel which was viewed by two Si-Si detector telescopes. Beta-delayed protons were recorded: “A single proton group at a laboratory energy of  $3.75 \pm 0.04$  MeV has been observed, corresponding to the decay of the T = 3/2 isobaric analog state in <sup>73</sup>Rb to the ground state of <sup>72</sup>Kr.” Previous unsuccessful searches for proton-bound states showed that <sup>73</sup>Rb is the first rubidium isotope beyond the proton dripline ([1977Da04](#), [1991Mo10](#), [1992Ye04](#)). The observed level corresponds to an isomeric state and the ground state has not yet been observed ([1996Pf01](#), [1996Jo17](#), [2005Ro39](#), [2017Su31](#)).

Adapted from reference ([2012Pa21](#))

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