^{29}Cl

In the 2015 paper "Observation and Spectroscopy of New Proton-Unbound Isotopes ^{30}Ar and ^{29}Cl: An Interplay of Prompt Two-Proton and Sequential Decay" Mukha et al. identified ^{29}Cl for the first time (2015Mu13). A secondary ^{31}Ar was produced in projectile fragmentation from a 885 MeV/nucleon ^{36}Ar beam from the SIS facility at GSI and separated with the FRS fragment separator. ^{30}Ar was produced in one-neutron removal reactions on a secondary beryllium target located at the midplane of the FRS. In-flight decay products were measured with four large-area microstrip silicon detectors. "Previously unknown isotopes ^{30}Ar and ^{29}Cl have been identified by measurement of the trajectories of their in-flight decay products ^{28}S + p + p and ^{28}S + p, respectively. The analysis of angular correlations of the fragments provided information on decay energies and the structure of the parent states. The ground states of ^{30}Ar and ^{29}Cl were found at $2.25^{+0.15}_{-0.10}$ and 1.8±0.1 MeV above the two- and one-proton thresholds, respectively."

Adapted from reference (2016Th03)

2015Mu13 I. Mukha, L. V. Grigorenko, X. Xu, L. Acosta *et al.*, Phys. Rev. Lett. **115**, 202501 (2015).

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