

⁵⁴Ar

In the paper “Discovery of ⁶⁰Ca and Implications For the Stability of ⁷⁰Ca”, Tarasov et al. described the first observation of ⁵⁴Ar in 2018 ([2018Ta17](#)). A 345 MeV/u ⁷⁰Zn beam from the RIKEN radioactive ion-beam factory (RIBF) accelerator complex irradiated ⁹Be targets. Projectile fragmentation products of interest were separated with the BigRIPS separator and identified event-by-event by the PID(Z,A,q) method. “The observed fragments include eight new isotopes that are the most neutron-rich nuclides of the elements from phosphorus to scandium, ⁴⁷P(12), ⁴⁹S(5), ⁵²Cl(2), ⁵⁴Ar(13), ⁵⁷K(8), ⁵⁹Ca(9), ⁶⁰Ca(2), ⁶²Sc(2) (the number of detected events is given in brackets). One event consistent with ⁵⁹K was observed as well.”

Adapted from reference ([2019Th02](#))

[2018Ta17](#) O. B. Tarasov, D. S. Ahn, D. Bazin, N. Fukuda *et al.*, Phys. Rev. Lett. **121**, 022501 (2018).

[2019Th02](#) M. Thoennessen, Int. J. Mod. Phys. E **28**, 1930002 (2019).

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