

## <sup>31</sup>Ar

<sup>31</sup>Ar was first reported in 1986 by Langevin et al. in “Mapping of the proton drip-line up to Z = 20: Observation of the T<sub>z</sub>=−5/2 series <sup>23</sup>Si, <sup>27</sup>S, <sup>31</sup>Ar, and <sup>35</sup>Ca” (1986La17). A 77.4 MeV/u <sup>40</sup>Ca beam was fragmented on a nickel target at GANIL and the projectile-like fragments were separated by the zero degree doubly achromatic LISE spectrometer. The isotopes were identified by measuring energy loss and time-of-flight. “The bidimensional plot (see [the figure]) of  $\sqrt{\Delta}/t.o.f.$  (i.e. Z) versus t.o.f (i.e. A/Z) was inspected on-line to calibrate the particle identification... [The figure] shows the same bidimensional representation after 14 hours of integration time. The T<sub>z</sub> series <sup>23</sup>Si, <sup>27</sup>S, <sup>31</sup>Ar, and <sup>35</sup>Ca clearly becomes visible.”

Adapted from reference (2012Th10)

1986La17 M. Langevin, A. C. Mueller, D. Guillemaud-Mueller, M. G. Saint-Laurent *et al.*, Nucl. Phys. A **455**, 149 (1986).

2012Th10 M. Thoennessen, At. Data Nucl. Data Tables **98**, 933 (2012).

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