^{23}Si

^{23}Si was first reported in 1986 by Langevin et al. in "Mapping of the proton drip-line up to Z = 20: Observation of the T_z=−5/2 series ^{23}Si, ^{27}S, ^{31}Ar, and ^{35}Ca" (1986La17). A 77.4 MeV/u ^{40}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_z series ^{23}Si, ^{27}S, ^{31}Ar, and ^{35}Ca clearly becomes visible."

Adapted from reference (2012Th10)

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