^{9}Be(^{40}Ar,^{19}N) 2000Oz01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	G. C. Sheu, J. H. Kelley	ENSDF	06-Nov-2018

1986Du07: Thirteen nuclei of interest were produced by the fragmentation of a 60 MeV/nucleon ^{40}Ar beam on a Be (190 mg/cm^2) target at GANIL. The fragments were filtered by the LISE spectrometer and implanted in a Ge detector. Gammas in coincidence with betas along with their relative intensities were measured. The half-life of ^{19}N, $T_{1/2}$=0.32 s *10*, was deduced.

2000Oz01: A beam of ^{40}Ar at E≈1 GeV/nucleon impinged on a Be target (4007 mg/cm^2) at the GSI SIS/FRS facility. The ^{19}N fragments of interest were identified using Bρ settings along with scintillators to measured ΔE and time-of-flight. ^{19}N production cross sections was measured as σ_F=7.1×10^{-5} b *22*.

2007No13: Production of ^{19}N via projectile fragmentation was studied at RIKEN using ^{40}Ar beams at E=90, 94 MeV/nucleon that impinged on either a 95 mg/cm^2 thick ^{9}Be target or a 17 mg/cm^2 thick ^{nat}Ta target. The beams were momentum analyzed using the RIPS doubly achromatic spectrometer before being identified using two surface-barrier silicon counters and a plastic scintillator to identify products via ΔE and time-of-flight at the focal plane. The fragment momentum distribution and production cross sections were deduced. See also (2015Mo17) for transverse momentum (P_T) distribution and width (σ_T) analysis.

2012Kw02: Several light neutron-rich nuclides, produced by projectile fragmentation of an ^{40}Ar beam at E=140 MeV/nucleon, bombarded one of three targets, 668 mg/cm^2 ^{9}Be, 775 mg/cm^2 ^{nat}Ni, or 1086 mg/cm^2 ^{181}Ta at the National Superconducting Cyclotron Laboratory (NSCL). Fragments were momentum analyzed using the A1900 separator and identified at the final focus using time-of-flight and a telescope consisting of five Si ΔE detectors. The fragmentation cross sections, parallel momentum transfers, and parallel momentum distribution widths were measured and compared to the theoretical predictions.

^{19}N Levels

E(level)	$T_{1/2}$	Comments
0	0.32 s *10*	$T_{1/2}$: From (1986Du07).