^{9}Be(^{40}Ar,^{18}N)

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	R. Spitzer, J. H. Kelley	ENSDF	30-Jun-2021

2000Oz01: A beam of ^{40}Ar at E≈1 GeV/nucleon impinged on a Be target (4.0 g/cm^2) at the GSI/FRS facility. The ^{19}B fragments of interest were identified using the B_ρ settings along with scintillators to measured ΔE and time-of-flight. The ^{18}N production cross section was measured as roughly ≈3.95×10^{-14} b.

2007No13: Production of ^{18}N via projectile fragmentation was studied at the RIKEN Accelerator Research Facility 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 (tof) 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, and 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.

^{18}N Levels

E(level)
0