^{9}Be(^{29}Na,^{25}F) 2012Sm08

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia, Anagha Chakraborty	NDS 205,1 (2025)	31-May-2025

Adapted/Edited the XUNDL dataset compiled by J. Chen (NSCL, MSU): December 11, 2014.

2012Sm08: Secondary beam of ^{26}F (6%) and ^{29}Na (94%) was produced at the Superconducting Cyclotron Laboratory, MSU, from fragmentation of ^{48}Ca primary beam, E=140 MeV/nucleon, on a Be target (thickness=987 mg/cm^2). ^{29}Na ions were identified by time-of-flight and bombarded another Be target (thickness 470 mg/cm^2), E not listed. Charged fragments were detected by a suite of charged-particle detectors and neutrons were detected by the Modular Neutron Array (MoNA). The measured decay energy spectra were reconstructed from the ^{24}F+n system. Deduced an unbound level. Comparisons with shell model calculations.

^{25}F Levels

E(level)	J^π	Comments
4.58×10^3 *22*	(3/2$^-$,5/2$^+$)	E(level): from measured decay energy of 300 *170* and and Sn(^{25}F)=4280 keV *140* in AME2020 (2021Wa16). Note that 2012Sm08 quote 4.66 MeV *17* using S(n)=4360 *120* from 2009Fi05, 2003Au03 − AME2003. J^π: from shell-model predictions.