^{9}Be(^{26}Ne,2pnX) 2007Sc32,2008Fr10

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia[#], A. Chakraborty[##]	NDS 171, 1 (2021)	1-Jun-2020

Other: 2008Ch07 – ^{9}Be(^{48}Ca,X), E=60 MeV/nucleon.
Based on XUNDL:
Compiled from 2007Sc32 by S. Geraedts and B. Singh (McMaster) Sep 17, 2007.
2007Sc32,2008Fr10: ^{9}Be(^{26}Ne,2pnX) – ^{26}Ne beam, E=86 MeV/nucleon, provided by NSCL at MSU. The ^{26}Ne beam produced in the primary reaction ^{9}Be(^{40}Ar,X) with E(^{40}Ar)=140 MeV/nucleon. The fragments were separated by A1900 fragment separator. ^{26}Ne beam purity about 93%. Measured (neutron)(fragment) coincidences using position-sensitive parallel-plate avalanche counters (PPAC) for charged fragments and Modular neutron array (MoNA) of plastic scintillators for neutrons.

^{23}O Levels

E(level)	J^{π}	Γ	Comments
0.0	$1/2^{+}$		J^{π}: From Adopted Levels.
2.79×10^{3} *13*	$5/2^{+}$	<5 keV	%n≈100 This state decays mainly by neutrons. Calculated partial γ-ray width=0.15 meV, corresponding to γ-decay lifetime of 4.5 ps. E(level),J^{π}: $5/2^{+}$ hole state, 45 keV *2* (2007Sc32,2008Fr10) above S(n). Γ_{decay} from 2008Ch07. 2007Sc32 note the width (100 keV) due to experimental conditions overshadows the Wigner limit by about 3 orders of magnitude and so its lifetime was not determined. However, note their calculated value of total decay width Γ_{decay}=5 eV is extremely small. [Measured values in 2007Sc32 and 2008Ch07 should be considered as upper limit due to experimental resolution – email communication with co/corresponding author M. Thoennessen (March 10, 2017)].