^{9}Be(^{26}Ne,N25F) 2011Fr13

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia and A. M. Hurst	NDS 134, 1 (2016)	1-Feb-2016

^{26}Ne secondary beam, E=80 MeV/nucleon, produced from a ^{40}Ar primary beam, E=140 MeV/nucleon, at the National Superconducting Cyclotron Laboratory of MSU. Target=721 mg/cm^2 thick beryllium target. ^{25}F fragments detected by charged-particle detectors. Neutrons were detected in coincidence by the Modular Neutron Array (MoNA). Measured decay energy spectra. Deduced resonance level.

^{26}F Levels

E(level)[†]	Comments
1.05×10^3 *12*	E(level): Deduced by evaluators from E(res)=271 keV *37*×(M(^{25}F)+M(n))/ M(^{25}F) + Sn(^{26}F)=770 keV *110* (2012Wa38). 2011Fr13 deduced 1072 keV *120*, using separation energy obtained from excess mass: 18680 keV 80 (2007Ju03). A broad peak in the decay spectrum, fitted considering a single resonance and yield 271 keV *37* which was assumed to decay to ground state of ^{25}F. Shell model calculations predict several unbound states.

[†] Decay energy spectra calculated from the difference of the invariant mass of ^{26}F and the sum masses of the neutron and ^{25}F. The mass excess values of ^{25}F and ^{26}F used were 11410 keV *90* and 18680 keV *80*, respectively.