$^{9}\text{Be}(^{26}\text{Si},^{25}\text{Si}\gamma)$ **2010Re05**

History

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

Additional information 1.

Adapted/Edited the XUNDL data set compiled by B. Karamy and B. Singh (McMaster), June 23, 2010.

Measured Eγ, Iγ, $\gamma\gamma$, σ using SeGA array comprised of 17 high-purity 32-fold segmented Ge detectors at the National Superconducting Cyclotron Laboratory of Michigan State University (MSU). The ^{36}Ar primary beam at the energy of 150 MeV/nucleon was used. The primary beam impinged on a ^{9}Be production target at the midacceptance position of the A1900 fragment separator. The resulting secondary beam of ^{26}Si was then steered onto a 376 mg/cm^2 thick ^{9}Be secondary target located at the pivot point of the S800 large acceptance magnetic spectrograph. The energy of ^{26}Si at the mid-target position was 109 MeV/nucleon. The secondary target was surrounded by the detector array, SeGA. The experimental results were compared with the USDB shell-model calculations.

^{25}Si Levels

E(level)	J$^{\pi\dagger}$	σ (mb)	Comments
0	(5/2$^+$)	21.0 _35_	σ includes the contributions from both the ground state and the 40 keV state.
821 _15_	(1/2$^+$)	4.1 _6_	
1909 _27_	(3/2$^+$)	1.06 _21_	

† Tentative assignments from shell-model predictions.

$\gamma(^{25}\text{Si})$

E$_\gamma$	E$_i$(level)	J$^{\pi}_i$	E$_f$	J$^{\pi}_f$
821 _15_	821	(1/2$^+$)	0	(5/2$^+$)
1088 _22_	1909	(3/2$^+$)	821	(1/2$^+$)

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Level Scheme

$^{25}_{14}$Si$_{11}$