

${}^9\text{Be}({}^{25}\text{F}, {}^{24}\text{F}\gamma)$  2012Ro22

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia, Anagha Chakraborty		NDS 186, 2 (2022)	31-Mar-2022

Adapted from XUNDL dataset compiled by B. Singh (McMaster), July 30, 2012.

Beam energy  $\approx 700$  MeV/nucleon produced in fragmentation of fully ionized  ${}^{40}\text{Ar}$  beam at 700 MeV/nucleon with a  $4\text{ g/cm}^2$  thick  ${}^9\text{Be}$  target at SIS synchrotron facility at GSI. Projectiles of  ${}^{17}\text{C}$ ,  ${}^{19}\text{N}$ ,  ${}^{21}\text{O}$  and  ${}^{25}\text{F}$  were separated using FRS separator at GSI, and bombarded another  ${}^9\text{Be}$  target of  $1.720\text{ g/cm}^2$  thickness for neutron knockout reaction. Gamma rays were detected using MINIBALL array of eight triple-cluster detectors. Measured particle spectra,  $E_\gamma$ ,  $I_\gamma$ , (particle) $\gamma$  coin, longitudinal momentum distribution of knockout fragments of  ${}^{24}\text{F}$ , total one-neutron knockout cross section, partial cross section for excited states in the fragment.

 ${}^{24}\text{F}$  Levels

E(level)	$J^\pi$ <sup>†</sup>	Comments
0.0	(3 <sup>+</sup> )	Measured $\sigma=59\text{ mb}$ <i>l3</i> (2012Ro22).
521	(2 <sup>+</sup> )	Measured $\sigma=10\text{ mb}$ <i>3</i> (2012Ro22). Population of excited state was 15% <i>3</i> .

<sup>†</sup> From Adopted Levels.

 $\gamma({}^{24}\text{F})$ 

$E_\gamma$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$
521	521	(2 <sup>+</sup> )	0.0	(3 <sup>+</sup> )

 ${}^9\text{Be}({}^{25}\text{F}, {}^{24}\text{F}\gamma)$  2012Ro22Level Scheme