

${}^9\text{Be}({}^{44}\text{S},\text{X}\gamma)$ 2007Ba47

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja, E. A. Mccutchan		NDS 133, 1 (2016)	30-Sep-2015

${}^{44}\text{S}$ secondary beam with $E({}^{44}\text{S})=39$ MeV/nucleon produced in fragmentation of ${}^{48}\text{Ca}$ primary beam with $E({}^{48}\text{Ca})=60$ MeV/nucleon, separated with the ALPHA spectrometer and identified through time-of-flight and ΔE measurements. Secondary ${}^9\text{Be}$ target placed at the entrance of the SPEG spectrometer and recoils identified using ionization and drift chambers to measure ΔE and position and a plastic scintillator to determine time-of-flight and total energy. Measured $E\gamma$, $I\gamma$, $\gamma\gamma$ using an array of 74 BaF_2 crystals.

 ${}^{41}\text{P}$ Levels

E(level) [†]	Comments
0.0	J^π : shell model calculations predict $J^\pi=1/2^+$ for the ground state (2007Ba47).
172 11	J^π : shell model calculations predict $J^\pi=3/2^+$ for a level at 235 keV (2007Ba47).
1145 17	J^π : shell model calculations predict $J^\pi=5/2^+$ for levels at 990 and 1025 keV (2007Ba47).
1574 19	J^π : shell model calculations predict $J^\pi=3/2^+$ for a level at 1400 keV (2007Ba47).

[†] From a least-squares fit to $E\gamma$, by evaluators.

 $\gamma({}^{41}\text{P})$

E_γ	$E_i(\text{level})$	E_f
172 12	172	0.0
420 22	1574	1145
964 22	1145	172
1146 28	1145	0.0
1408 19	1574	172

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