

$^{48}\text{Ca}(^{238}\text{U},\text{X}\gamma)$  2009Bh02

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Wang Jimin and Huang Xiaolong		NDS 144, 1 (2017)	1-Mar-2016

**2009Bh02:** E=1.31 GeV beam provided by CSS1 cyclotron of GANIL. The target-like residues produced in deep-inelastic reactions were detected and analyzed using VAMOS spectrometer. The focal plane detection system consisted of two position-sensitive drift chambers, electron (timing) detector (SeD) and a segmented ionization chamber followed by a 21-element Si wall. The mass/charge identification was made on the basis of magnetic rigidity and time-of-flight. Measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma$  rays in singles and coincidence mode using EXOGAM array of clover Ge detectors. The  $\gamma$ -ray spectra were Doppler corrected. The  $\gamma$  rays were detected in coin with  $^{51}\text{Sc}$  fragments.

 $^{51}\text{Sc}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>‡</sup>
0 <sup>#</sup>	(7/2) <sup>-</sup>
860 4	(3/2) <sup>-</sup>
1064 <sup>#</sup> 3	(11/2) <sup>-</sup>
1166 4	(3/2,5/2,7/2 <sup>+</sup> )
1393 4	(3/2,5/2)
1712 4	
3034 7	(3/2 <sup>-</sup> ,5/2 <sup>-</sup> )
3193 7	(3/2 <sup>-</sup> ,5/2 <sup>-</sup> )
3875 <sup>#</sup> 9	(15/2) <sup>-</sup>

<sup>†</sup> From  $E\gamma$ 's, assuming 5 keV uncertainty for  $E\gamma$  when not quoted by 2009Bh02.

<sup>‡</sup> From Adopted Levels.

<sup>#</sup> Band(A): Yrast structure.

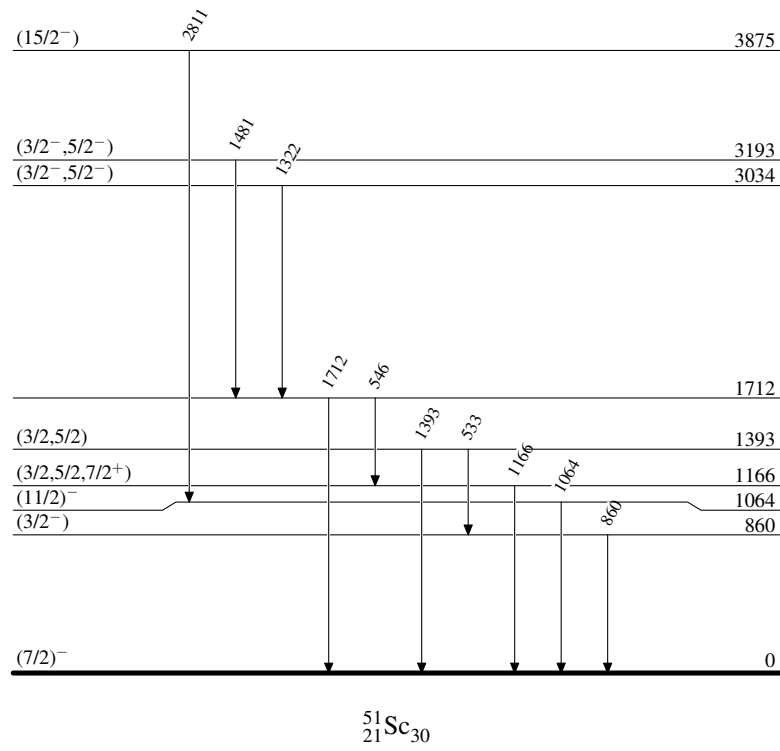
 $\gamma(^{51}\text{Sc})$ 

$E_\gamma$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	$E_\gamma$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$
533	1393	(3/2,5/2)	860	(3/2) <sup>-</sup>	1393	1393	(3/2,5/2)	0	(7/2) <sup>-</sup>
546	1712		1166	(3/2,5/2,7/2 <sup>+</sup> )	1481	3193	(3/2 <sup>-</sup> ,5/2 <sup>-</sup> )	1712	
860	860	(3/2) <sup>-</sup>	0	(7/2) <sup>-</sup>	1712	1712		0	(7/2) <sup>-</sup>
1064 3	1064	(11/2) <sup>-</sup>	0	(7/2) <sup>-</sup>	<sup>x</sup> 1822 6				
1166	1166	(3/2,5/2,7/2 <sup>+</sup> )	0	(7/2) <sup>-</sup>	<sup>x</sup> 1864 8				
1322	3034	(3/2 <sup>-</sup> ,5/2 <sup>-</sup> )	1712		2811 8	3875	(15/2) <sup>-</sup>	1064	(11/2) <sup>-</sup>

<sup>x</sup>  $\gamma$  ray not placed in level scheme.

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## Level Scheme



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Band(A): Yrast structure

(15/2<sup>-</sup>)      3875

2811

(11/2<sup>-</sup>)      1064

1064

(7/2<sup>-</sup>)      0 ${}^{51}_{21}\text{Sc}_{30}$