

$^{232}\text{Th}(\text{p},\alpha)$  2003Bu12

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli		NDS 109, 2657 (2008)	1-Jun-2008

**Additional information 1.**

E=20 MeV. Measured  $E\alpha$ ,  $\sigma(E,\theta)$  using an Enge split-pole magnetic spectrograph and a position-sensitive Si detector in the focal plane of the spectrograph and DWBA analysis.

 $^{229}\text{Ac}$  Levels

Cross-section given under comments are at  $5^\circ$  in  $\mu\text{b}/\text{sr}$ .

The  $J^\pi$  assignments and configurations are from [1977Th04](#).

E(level)	$J^\pi$	L	Comments
36 <sup>†</sup> 4	7/2 <sup>+</sup>		$d\sigma/d\omega = 0.9$ 2.
96 2	13/2 <sup>+</sup> & 3/2 <sup>-</sup>	6	$d\sigma/d\omega = 2.3$ 4. configuration: 3/2[651] and 1/2[530].
151 <sup>#</sup>	1/2 <sup>+</sup>	0	$d\sigma/d\omega = 9.8$ 12.
166 <sup>‡</sup> 1	7/2 <sup>-</sup>	3+5	$d\sigma/d\omega = 3.0$ 10.
193 <sup>#</sup> 3	(3/2 <sup>+</sup> )	2	$d\sigma/d\omega = 5.7$ 9.
293 3			$d\sigma/d\omega = 0.9$ 2.
335 <sup>@</sup> 2	3/2 <sup>+</sup>	2	$d\sigma/d\omega = 4.2$ 6.
368 <sup>@</sup> 3	(5/2 <sup>+</sup> )		$d\sigma/d\omega = 2.2$ 4.
595 3			$d\sigma/d\omega = 3.0$ 5.
629 4			$d\sigma/d\omega = 1.4$ 3.
850 6			$d\sigma/d\omega = 1.3$ 4.
926 5			$d\sigma/d\omega = 5.2$ 7.
1001 5			$d\sigma/d\omega = 5.9$ 8.
1044 5			$d\sigma/d\omega = 1.7$ 4.
1111 6			$d\sigma/d\omega = 0.9$ 3.
1173 6			$d\sigma/d\omega = 0.7$ 4.
1245 6			$d\sigma/d\omega = 4.6$ 20.

<sup>†</sup> Band(A): 3/2[651].

<sup>‡</sup> Band(B): 1/2[530].

<sup>#</sup> Band(C): 1/2[400].

<sup>@</sup> Band(D): 3/2[402].

${}^{232}\text{Th}(\text{p},\alpha)$  2003Bu12

Band(D): 3/2[402]

(5/2<sup>+</sup>) 3683/2<sup>+</sup> 335

Band(C): 1/2[400]

(3/2<sup>+</sup>) 193

Band(B): 1/2[530]

7/2<sup>-</sup> 1661/2<sup>+</sup> 151

Band(A): 3/2[651]

7/2<sup>+</sup> 36