

$^{239}\text{Pu}(\text{d,d}')$ 1976Th01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli		NDS 122, 293 (2014)	30-Jun-2013

E(d)=16-MeV, FWHM \approx 12 keV. $\sigma(90^\circ, 125^\circ)$ measured (1976Th01). Other measurement: 1973Gr26.

 ^{239}Pu Levels

E(level)	J^π [†]	E(level)	J^π [†]	E(level)	J^π [†]	E(level)
0 [‡]	1/2 ⁺	360 [‡] 2	15/2 ⁺	659 [#] 3	11/2 ⁻	900 2
57 [‡] 2	5/2 ⁺	470 [#] 2	1/2 ⁻	750 3		915 3
76 [‡] 2	7/2 ⁺	491 [#] 4	3/2 ⁻	779 3		948 3
164 [‡] 2	9/2 ⁺	505 [#] 2	5/2 ⁻	800 3		993 3
194 [‡] 2	11/2 ⁺	555 [#] 2	7/2 ⁻	824 2		1027 2
317 [‡] 2	13/2 ⁺	583 [#] 3	9/2 ⁻	854 2		1062 2

[†] From 1976Th01 based upon cross section signature pattern for rotational bands.

[‡] Band(A): 1/2[631].

[#] Band(B): 1/2[631] \times 0⁻ octupole vibration on g.s.

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**Band(B): $1/2[631] \times 0^-$
octupole vibration on
g-s**

$11/2^-$ **659**

$9/2^-$ **583**

$7/2^-$ **555**

$5/2^-$ **505**

$3/2^-$ **491**

$1/2^-$ **470**

Band(A): $1/2[631]$

$15/2^+$ **360**

$13/2^+$ **317**

$11/2^+$ **194**

$9/2^+$ **164**

$7/2^+$ **76**

$5/2^+$ **57**

$1/2^+$ **0**