

$^{246}\text{Cm}(\text{d,t}), ^{244}\text{Cm}(\text{d,p})$ 1971Br27

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 189,1 (2023)	14-Feb-2023

1971Br27 (see also 1968Fr09): The experiment was performed at $E(\text{d})=12$ MeV. Protons and tritons were detected by magnetic spectrograph at angles of 90° and 140° . L values were estimated from cross-section ratios at 90° and 140° . Comparison of measured cross sections with the calculated signature are the bases for spin and single-particle assignments.
 $Q(\text{d,t})=-196.6$ keV; $Q(\text{d,p})=3297.7$ keV (1971Br27).

 ^{245}Cm Levels

E(level)	J^π	$d\sigma(\text{d,p})^\dagger$	$d\sigma(\text{d,t})^\ddagger$	E(level)	J^π	$d\sigma(\text{d,p})^\dagger$	$d\sigma(\text{d,t})^\ddagger$
0 [@]	$7/2^+$	<10	10 2	856 ^c 3	$(7/2^+)$	58 15	12 2
52 [@] 1	$9/2^+$	<10	20 5	891 ^c 4	$(9/2^+)$	73 15	<5
119 [@] 1	$11/2^+$	<10	38 7	908 ^f 5	$(3/2^+)$		10 3
251 ^{&} 1	$5/2^+$	18 9	81 7	913 ^g 3	$1/2^-$	91 20	5.2×10^2 6
294 ^{&} 3	$7/2^+$	<10	10 2	942 ^f 3	$(5/2^+)$	85 15	20 5
349 ^{&} 3	$9/2^+$		3.1×10^2 4	956 ^g 2	$(3/2^-, 5/2^-)$	<15	2.1×10^2 4
358 ^{#a} 3	$1/2^+, 3/2^+$	87 20	4.0×10^2 4	980 ^h 5	$(3/2^-)$		25 7
417 ^{&} 3	$11/2^+$	<10	17 5	995 ^{#f} 5	$(7/2^+)$	2.6×10^2 4	1.8×10^2 4
431 ^a 2	$7/2^+$	<10	55 10	995 ^{#i} 5	$(5/2^+)$	2.6×10^2 4	1.8×10^2
496 ^{&} 3	$(13/2^+)$	<10	13 3	1017 ^h 4	$(7/2^-)$	1.7×10^2 3	<10
532 ^a 2	$9/2^+$	30 10	116 15	1042 ^f 5	$(9/2^+)$		<10
555 ^a 5	$(11/2^+)$	<10	10 3	1050 5		126 22	<10
587 ^b 3	$15/2^-$	35 10	28 4	1056 3		<20	53 10
660? 5		<10	<5	1083 ⁱ 3	$(9/2^+)$	<20	60 11
741 ^c 2	$(1/2^+)$	1.6×10^2 4	24 8	1103 3		<20	102 15
763 ^c 6	$(3/2^+)$	10 5	<5	1259 5		50 25	20 5
771 ^d 4	$(11/2^-)$	<15	15 7	1271 ^j 2	$(5/2^-)$	74 18	2.9×10^2 6
782 ^e 4	$(9/2^+)$		24 10	1473 3		<20	45 15
791 ^c 4	$(5/2^+)$	2.7×10^2 3	24 10				

[†] $d\sigma(\text{d,p})$ at 140° ($\mu\text{b/sr}$).

[‡] $d\sigma(\text{d,t})$ at 140° ($\mu\text{b/sr}$).

Unresolved doublet.

@ Band(A): $7/2[624]$ rotational band.

& Band(B): $5/2[622]$ rotational band.

^a Band(C): $1/2[631]$ rotational band.

^b Band(D): $9/2[734]$ rotational band.

^c Band(E): $1/2[620]$ rotational band.

^d Band(F): $7/2[743]$ rotational band.

^e Band(G): $7/2[613]$ rotational band.

^f Band(H): $3/2[622]$ rotational band.

^g Band(I): $1/2[501]$ rotational band.

^h Band(J): $1/2[750]$ rotational band.

ⁱ Band(K): $3/2[631]$ rotational band.

^j Band(L): $5/2[503]$ rotational band.

<u>²⁴⁶Cm(d,t), ²⁴⁴Cm(d,p) 1971Br27</u>			
		Band(E): 1/2[620] rotational band	
		(9/2 ⁺)	891
		(7/2 ⁺)	856
		Band(F): 7/2[743] rotational band	
		(5/2 ⁺)	791
		(3/2 ⁺)	763
		(1/2 ⁺)	741
		Band(D): 9/2[734] rotational band	
		15/2 ⁻	587
		Band(C): 1/2[631] rotational band	
		(11/2 ⁺)	555
		9/2 ⁺	532
		Band(B): 5/2[622] rotational band	
		(13/2 ⁺)	496
		11/2 ⁺	417
		7/2 ⁺	431
		1/2 ⁺ , 3/2 ⁺	358
		9/2 ⁺	349
		7/2 ⁺	294
		5/2 ⁺	251
		Band(A): 7/2[624] rotational band	
		11/2 ⁺	119
		9/2 ⁺	52
		7/2 ⁺	0
²⁴⁵ ₉₆ Cm ₁₄₉			

²⁴⁶Cm(d,t), ²⁴⁴Cm(d,p) 1971Br27 (continued)

Band(L): 5/2[503]
rotational band

(5/2⁻) 1271

Band(K): 3/2[631]
rotational band

(9/2⁺) 1083

Band(H): 3/2[622]
rotational band

(9/2⁺) 1042

Band(J): 1/2[750]
rotational band

(7/2⁻) 1017

(7/2⁺) 995

(5/2⁺) 995

(3/2⁻) 980

Band(I): 1/2[501] rotational band

(3/2⁻, 5/2⁻) 956

(5/2⁺) 942

1/2⁻ 913

(3/2⁺) 908

Band(G): 7/2[613]
rotational band

(9/2⁺) 782