

⁷⁹Br(p,d) 1979KI05

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Ameenah R. Farhan, Balraj Singh		NDS 110, 1917 (2009)	30-Jun-2009

$J^\pi(^{79}\text{Br g.s.})=3/2^-$.

E=22.8 MeV. Deuterons analyzed by magnetic spectrometers, FWHM=14 keV; DWBA analysis; $\sigma(\theta)$ measured from 5° to 55° in 5° steps. See also thesis by [1978KIZT](#).

⁷⁸Br Levels

E(level) [†]	L [#]	C ² S [‡]	Comments
0	1+3	0.153,0.134	L=1(70%)+L=3(30%). C ² S=0.152 for L=3.
30 4	1	0.016,0.014	J ^π : the L-transfer value is inconsistent with the adopted parity of J ^π .
52 4	1+3	0.021,0.019	L=1(70%)+L=3(30%). C ² S=0.021, 0.014 for L=3.
125 4	1	0.153,0.134	
202 4	1	0.133,0.117	
242 4	4+2	0.461,0.263	L=4(90%)+L=1(10%). C ² S=0.025, 0.020 for L=2.
263 4	4	1.24,0.701	
327 4	3+1	0.442,0.294	L=3(60%)+L=1(40%). C ² S=0.101, 0.088 for L=1.
369 4	2	0.021,0.017	
389 4	4+2	0.703,0.402	L=4(90%)+L=2(10%). C ² S=0.040, 0.033 for L=2.
435 4	1	0.172,0.151	
475 4	(4)	1.80,1.03	
495 4	1	0.110,0.096	
551 4	1	0.059,0.052	
579 4	1	0.200,0.176	
643 4	1	0.068,0.060	
663 4	4+1	0.149,0.085	L=4(70%)+L=1(30%). C ² S=0.016, 0.014 for L=1.
717 4	3+1	0.660,0.439	L=3(70%)+L=1(30%). C ² S=C ² S=0.104, 0.091 for L=1.
792 4	1(+3)	0.032,0.028	L=3(60%)+L=1(40%). C ² S=0.134, 0.089 for L=3.
854 4	3+1	0.100,0.066	L=3(50%)+L=1(50%). C ² S=0.036, 0.032 for L=1.
868 4	1(+3)	0.052,0.046	L=3(50%)+L=1(50%). C ² S=0.100, 0.066 for L=3.
891 4	1+3	0.054,0.048	L=1(70%)+L=3(30%). C ² S=0.050, 0.017 for L=3.
916 4	1	0.065,0.057	
930 4	3+1	0.134,0.090	L=3(60%)+L=1(40%). C ² S=0.039, 0.034 for L=1.
989 4	1	0.061,0.053	
1005 4	1(+3)	0.058,0.051	L=1(70%)+L=3(30%). C ² S=0.052, 0.035 for L=3.
1026 4	1	0.046,0.040	
1039 4	1	0.032,0.028	
1060 4	1(+3)	0.028,0.018	L=1(50%)+L=3(50%). C ² S=0.056, 0.032 for L=3.
1130 4	(3+1)	0.028,0.019	L=3(70%)+L=1(30%). C ² S=0.0047, 0.0041 for L=1.

Continued on next page (footnotes at end of table)

$^{79}\text{Br}(\text{p,d})$ 1979KI05 (continued) ^{78}Br Levels (continued)

<u>E(level)[†]</u>	<u>L[#]</u>	<u>C²S[‡]</u>	<u>Comments</u>
1173 4	(1)	0.030,0.026	
1188 4	(3+1)	0.028,0.022	L=1(50%)+L=3(50%). C ² S=0.013, 0.011 for L=1.
1200 4	(1)	0.036,0.031	
1243 4	1	0.011,0.010	
1261 4	1	0.020,0.018	

[†] Energy calibration procedure gives ≈ 4 keV accuracy for strongly populated levels.

[‡] The first and second values are for L(n)-1/2 and L(n)+1/2, respectively. In case of mixed L transfers, the values on the table are for the first L value while those of the second L value are given in comments.

[#] The assignments are as given in summary table 5 of 1979KI05. In some cases the parentheses are absent in authors' table 1.