^{163}Dy(d,p) 1964Sh06

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen[#]	NDS 147, 1 (2018)	30-Nov-2017

1964Sh06 (also 1963Sh08, 1966Sh14, 1967Ke14): E=12 MeV. Measured cross sections at θ=25°, 35° and 65°. See 1967Ke14 and 1966Sh14 for a comparison of experimental and theoretical cross sections (finger-print method), and assignments to bands. DWBA calculations.

^{164}Dy Levels

E(level)[†]	J$^{\pi}$[‡]	dσ/dΩ (μb/sr) At 45°[a]
0[c]	0$^+$	2.5 *5*
72[c] *2*	2$^+$	6.9 *10*
242[#c] *2*	4$^+$	5.5 *10*
501[#c] *3*	6$^+$	1.6 *4*
761[d] *2*	2$^+$	26.3 *20*
830[#d] *5*	3$^+$	7.7 *10*
839 *4*		
916[#d] *3*	4$^+$	5.2 *10*
976 *4*		
1027[#d] *4*	5$^+$	3.7 *7*
1040 *4*		
1157[d] *5*	(6$^+$)	
1680 *11*		
1726 *7*		
1853 *8*		
1938 *3*		
1983[#e] *2*	(3$^+$)	132 *10*
2055[#f] *4*	(2$^+$)	90[b]
2076[#@e] *4*	(4$^+$)	22 *10*
2127[#f] *2*	(3$^+$)	26[b] *10*
2158 *2*		
2190[#&e]	(5$^+$)	21 *5*
2213[#f]	(4$^+$)	26 *5*
2248?		
2266 *4*		
2306 *3*		
2333[e] *6*	(6$^+$)	10 *3*
2358 *6*		
2418 *5*		
2478 *4*		
2587 *4*		
2660 *2*		
2694 *4*		
2722 *3*		
2761 *4*		
2803 *3*		
2832 *3*		
2852 *6*		
2890 *5*		
2918 *6*		
3018 *5*		
3050 *4*		
3147 *4*		
3191 *3*		

Continued on next page (footnotes at end of table)

^{163}Dy(d,p) 1964Sh06 (continued)

^{164}Dy Levels (continued)

E(level)[†]
3211 *4*
3239 *3*
3354 *8*
3391 *5*
3429 *5*
3476 *9*

† From 1964Sh06, unless otherwise stated.
‡ From comparison of experimental and theoretical cross sections (1967Ke14,1966Sh14).
# From 1967Ke14 (reanalysis of 1964Sh06 data).
@ Probable doublet (1967Ke14).
& A 2202 (1964Sh06) group is ascribed to ^{165}Dy in the Table in 1964Sh06, but to ^{164}Dy in the level scheme. This group is probably analyzed as a doublet 2190+2213 in 1967Ke14.
a From 1967Ke14 (from original data of 1964Sh06). Cross sections are also listed (by 1967Ke14) at 65°, together with theoretical cross sections at both the angles.
b ≈35% contribution from ^{165}Dy subtracted (1967Ke14).
c Band(A): g.s. band.
d Band(B): γ-vibrational band.
e Band(C): $K^{\pi}=3^{+}$, $\nu 5/2[523]+\nu 1/2[521]$.
f Band(D): $K^{\pi}=2^{+}$, $\nu 5/2[523]-\nu 1/2[521]$.

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Band(C): $K^{\pi}=3^{+}$, $\nu 5/2[523]+\nu 1/2[521]$

(6^{+})	2333
(5^{+})	2190
(4^{+})	2076
(3^{+})	1983

Band(D): $K^{\pi}=2^{+}$, $\nu 5/2[523]-\nu 1/2[521]$

(4^{+})	2213
(3^{+})	2127
(2^{+})	2055

Band(B): γ-vibrational band

(6^{+})	1157
5^{+}	1027
4^{+}	916
3^{+}	830
2^{+}	761

Band(A): g.s. band

6^{+}	501
4^{+}	242
2^{+}	72
0^{+}	0

$^{164}_{66}Dy_{98}$