^{162}Dy(α,t) 1977Pa23,1974Le27

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. W. Reich, Balraj Singh	NDS 111, 1211 (2010)	12-Apr-2010

1977Pa23 (also 1975Bu02 for Q-value measurement): E=27 MeV, FWHM≈12. Measured cross sections at 45° and 60°. Relative cross sections for large well resolved peaks have uncertainties of 15%, whereas absolute σ's have ≈25% uncertainty. Comparisons with DWBA calculations.
1974Le27 (also 1974BrXQ): E= 45.5 MeV; θ=10°. FWHM=15.

^{163}Ho Levels

E(level)[†]	Jπ[‡]	Cross section (μb/sr) At 45°[#]	Comments
0[&]	(7/2⁻)	2.3	
102[&] 5	(9/2⁻)	6.4	
222.2[&]	(11/2)⁻	96	E(level): from (d,2nγ) (1972Fu09), used for normalization of other energies.
293[a] 5	1/2⁺	1.4	
305[a] 5	(3/2)⁺	44	
361[b] 5	(3/2)⁺	16	
391[a] 2	(5/2)⁺	59	
439[c] 5	(7/2⁺&5/2⁺)	80	
471[d] 5	(1/2)⁻	5.0	
499[d] 2	(5/2⁻)	33	
530[b] 5	7/2⁺	3.2	
552?[c]	(9/2⁺)		E(level): from 1974Le27 only.
579[d] 5	(3/2)⁻	5.7	
588?[a]	(9/2⁺)		E(level): from 1974Le27 only.
612[d] 2	(9/2)⁻	48	
711 2	(5/2)⁺	55	
746[d] 2	(7/2)⁻	14	
806 5		2.4	E(level): 812 (1974Le27).
876 5	(5/2⁺)	2.8	
969 5		2.1	
991 5		5.2	E(level): 1000 (1974Le27).
1058 5		1.1	
1115 2	(3/2)⁺	5.1	E(level): 1127 (1974Le27).
1228 5		1.9	
1299 5		1.4	E(level): 1326 (1974Le27).
1328 5	1/2⁺	1.7	E(level): 1347 (1974Le27).
1393 5		1.3	
1437[e] 2	(11/2)⁻	29	E(level): 1465 (1974Le27).
1557 5		2.0[@]	
1636 5		4.1[@]	
1669 5		4.8[@]	

[†] From 1977Pa23. Uncertainty is quoted (1977Pa23) as 2 keV for strong well resolved peaks. Uncertainty of 5 keV is assigned (evaluators) for other peaks.
[‡] Based on L-transfers assigned from $\sigma(\theta)$ in (^{3}He,d) and $\sigma(^3\text{He,d})/\sigma(\alpha,t)$ ratios. See ^{162}Dy(^{3}He,d) for details. Except for parentheses, the values agree well with the Adopted Values.
[#] From 1977Pa23. Cross section data at 60° are also given by 1977Pa23.
[@] At 60°.

Continued on next page (footnotes at end of table)

^{162}Dy(α,t) 1977Pa23,1974Le27 (continued)

^{163}Ho Levels (continued)

[&] Band(A): π7/2[523] band.
[a] Band(B): π1/2[411] band. (1977Pa23,1974Le27). Strong mixing between the π1/2[411] and π3/2[411] orbitals. The anomalously high (^{3}He,d) σ's for the 3/2,3/2[411] and 5/2$^+$,1/2[411] levels cannot be completely accounted for by Coriolis mixing between the orbitals (1977Pa23). CCBA also do not reproduce the data for 5/2$^+$,1/2[411] (1976Br37).
[b] Band(C): π3/2[411] band. (1977Pa23). Strong mixing between π1/2[411] and π3/2[411] orbitals. See the discussion under the π1/2[411] band.
[c] Band(D): π7/2[404] band. (1977Pa23,1974Le27).
[d] Band(E): π1/2[541] band. σ's underestimated in both DWBA and CCBA calculations (1976Br37).
[e] Band(F): π9/2[514] band (?).

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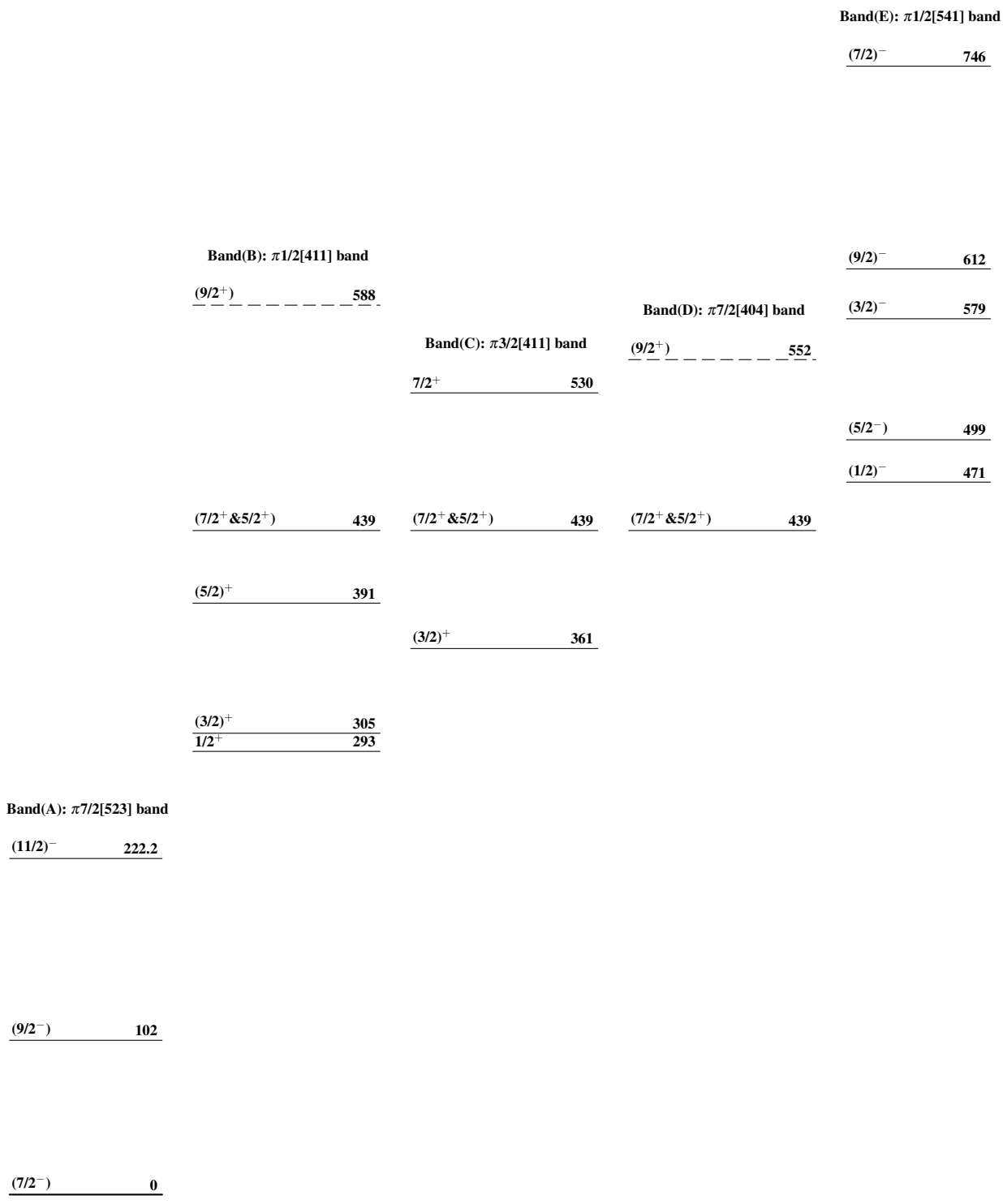

$^{163}_{67}Ho_{96}$

^{162}Dy(α,t) 1977Pa23,1974Le27 (continued)

Band(F): π9/2[514] band (?)

$(11/2)^-$ 1437

$^{163}_{67}Ho_{96}$