^{7}Li(d,γ) 2004Ti06

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu, J. L. Godwin, et al.	NP A745 155 (2004)	31-Mar-2004

1965Im01: ^{7}Li(d,γ). Deduced nuclear properties.
1965Wo01: ^{7}Li(d,γ) E=0.35-0.4 MeV, measured σ(E,E$_\gamma$). ^{9}Be deduced level, isobaric spin.
1971Sc19: ^{7}Li(d,γ) E=361 keV, measured E$_\gamma$, I$_\gamma$. ^{9}Be levels deduced J, π, γ-branching, Γ.
1986Be33: ^{7}Li(d,γ) E≈0.36 MeV, measured thick target yields. ^{9}Be levels deduced Γ, Γ_d, Γ_γ, Γ_p, Γ_n, Γ_α.
1987Zi01: ^{7}Li(d,γ) E≈0.36 MeV, measured σ(E(d)). ^{9}Be deduced Γ, Γ_γ, resonance strength, T-mixing.
1993Sc19: ^{7}Li(pol. d,γ) E=6 MeV, measured $\sigma(\theta)$, vector, tensor analyzing power vs θ. Deduced angle integrated σ.

^{9}Be Levels

E(level)	J$^\pi$	T$_{1/2}$	Comments
0			
1684			
2429			
2780			
4704			
16977.1 *5*	3/2$^-$	389 eV *10*	T=3/2 E(level): from (1987Zi01) E$_{res}$=360.8 keV *3* and (1986Be33) E$_{res}$=360.7 keV *18*. These are used with the (2003Au03) mass excess tables. Also see (1966La04) who cites 16973 keV *2* based on (1965Im01) and (1965Wo01). Γ: partial widths from (1988Aj01) Table 9.4. Widths of 520 eV *90* and 470 eV *60* were measured In (1987Zi01). The weighted average of these measurements is 490 keV *50* (1988Aj01). A new resonant absorption technique was used In (1992Ki05) and the value 389 eV *10* was deduced. Γ_γ: using Γ=389 keV *10* (1992Ki05) reanalyzed the $\Gamma_{\gamma 0}$ values of (1986Zi01) and (1987Zi01) and deduced new values of 16.4 eV *17* and 16.8 eV *13*, respectively. (1992Ki05) measured $\Gamma_{\gamma 0}$=18.8 eV *27*. The weighted average of these three is 16.9 eV *10*. Other values that are not included In the weighted averages of (1992Ki05,2004Ti06) are 18.8 eV *36* (1966Cl01), 8.6 eV *9* (see comments In 1973Be19) and 11.5 eV *14* (1973Be19). Branching ratios are measured In (1971Sc19); they can Be used to deduce Γ_γ=23.8 eV *16*.

γ(^{9}Be)

E$_\gamma$[†]	I$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	Mult.	Comments
12264 *25*	12.9 *13*	16977.1	3/2$^-$	4704	E1	Γ_γ=2.2 eV *3*; B(E1)(W.u.)=4.0×10^{-3} *6*
14.19×10^3 *12*	13.3 *42*	16977.1	3/2$^-$	2780	M1	Γ_γ=2.2 eV *7*; B(M1)(W.u.)=3.7×10^{-2} *11*
14535.1 *14*	3.3 *7*	16977.1	3/2$^-$	2429	E2	Γ_γ=0.56 eV *12*; B(E2)(W.u.)=0.94 *21*
15279 *20*	11.8 *6*	16977.1	3/2$^-$	1684	E1	Γ_γ=1.99 eV *15*; B(E1)(W.u.)=1.9×10^{-3} *2*
16959.9 *5*	100 *6*	16977.1	3/2$^-$	0	M1	Γ_γ=16.9 eV *10*; B(M1)(W.u.)=0.165 *10*

[†] From level energy difference; recoil correction applied.

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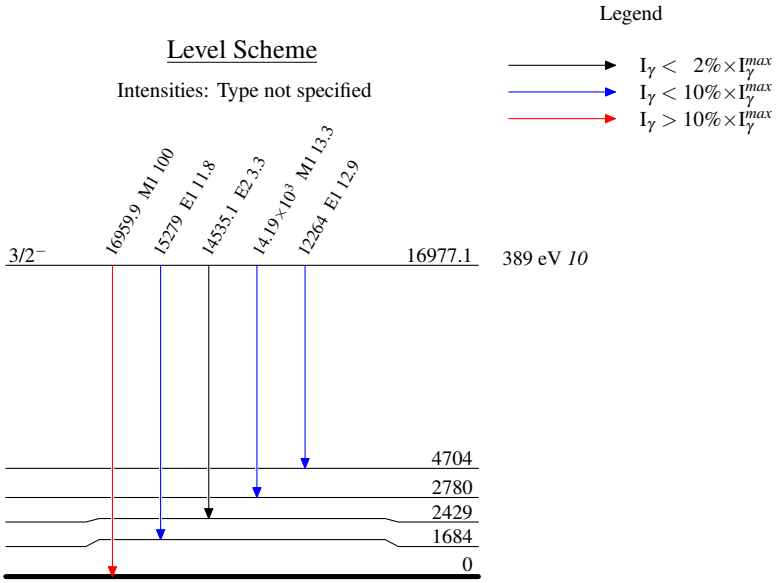
Level Scheme

Intensities: Type not specified



$^{9}_{4}Be_{5}$