^{18}O(^{7}Li,t),(^{7}Li,tγ) 1972Sc29,1976Fi02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 127, 69(2015)	1-Apr-2015

Others: 1983Ko01, 1969Sc07.
$J^{\pi}(^{18}O)=0^{+}$.
1972Sc29,1969Sc07: ^{18}O(^{7}Li,t), E=12 MeV. Measured σ(Et,θ).
1976FI02: ^{18}O(^{7}Li,tγ), E=13,14 MeV. Measured $\gamma(\theta)$.
1983Ko01: ^{7}Li(^{18}O,tγ) E=10-60 MeV. Measured half-life by recoil distance method, HPGe detector.

^{22}Ne Levels

E(level)†	Jπ#	$T_{1/2}$	L†	Comments
0.0	0^{+}		0	
1274.49 *8*	2^{+}	3.5 ps *2*	2	E(level): From γ-ray energy. $T_{1/2}$: From 1983Ko01, measured by recoil distance method.
3340 *25*			4‡	
4460 *25*	2^{+}		2	
5160 *25*				
5330	1^{+}			E(level),Jπ: From 1976Fi02.
5370 *25*				
5540 *25*				
5660 *25*				
5930 *25*				
6110 *25*			(3)‡	
6240 *25*	0^{+}		0	
6340 *25*			6‡	
6700 *25*				
6820 *25*	2^{+}		2	
6900 *25*	0^{+}		0	
7060 *25*	1^{-}		1	
7340 *25*	0^{+}		0	
7410 *25*				
7490 *25*	1^{-}		1	
7640 *25*	2^{+}		2	
7730 *25*	3^{-}		3	
7920 *25*				
8080 *25*				
8140 *25*	2^{+}		2	
8380 *25*				
8500 *25*				
8590 *25*			2‡	E(level): γ transitions not listed – multiple placements from different levels.

† From 1972Sc29, except otherwise noted.
‡ Quoted from Fig. 2 in 1972Sc29.
# From L values.

$^{18}O(^{7}Li,t),(^{7}Li,t\gamma)$ 1972Sc29,1976Fi02 (continued)

$\gamma(^{22}Ne)$

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Mult.[‡#]	δ[‡]	Comments
1274.49	2^+	1274.49 *8*		0.0	0^+	Q		A_2/A_0=0.00 *8*, A_4/A0=0.03 *13*. E_γ: From 1983Ko01.
5330	1^+	4055	31 *6*	1274.49	2^+	D+Q		A_2/A_0=−0.03 *11*, A_4/A0=0.01 *16*.
		5330	69 *6*	0.0	0^+	D		A_2/A_0=−0.01 *6*, A_4/A0=−0.02 *8*.
5370		4090		1274.49	2^+			
		5370		0.0	0^+			
7340	0^+	2010	83 *3*	5330	1^+	D		A_2/A_0=0.09 *9*, A_4/A0=−0.08 *13*.
		2880	17 *3*	4460	2^+			
7490	1^-	7490		0.0	0^+	D		A_2/A_0=−0.72 *5*, A_4/A0=−0.03 *8*.
7640	2^+	6360		1274.49	2^+	(M1+E2)	0.08 *5*	A_2/A_0=0.30 *6*, A_4/A0=−0.03 *8*.
		7640		0.0	0^+	Q		A_2/A_0=0.64 *16*, A_4/A0=−0.81 *24*.
7730	3^-	3270	50 *4*	4460	2^+			
		4390	23 *2*	3340				
		6450	15 *4*	1274.49	2^+	D+Q		A_2/A_0=0.09 *10*, A_4/A0=−0.14 *15*.
8140	2^+	6860		1274.49	2^+	(M1+E2)	0.48 *5*	A_2/A_0=−0.13 *5*, A_4/A0=−0.11 *7*.

[†] From level energy difference, except otherwise noted. Not corrected for recoil energy.
[‡] From 1976Fi02.
[#] From angular distribution coefficients (1976Fi02) and mixing ratios.

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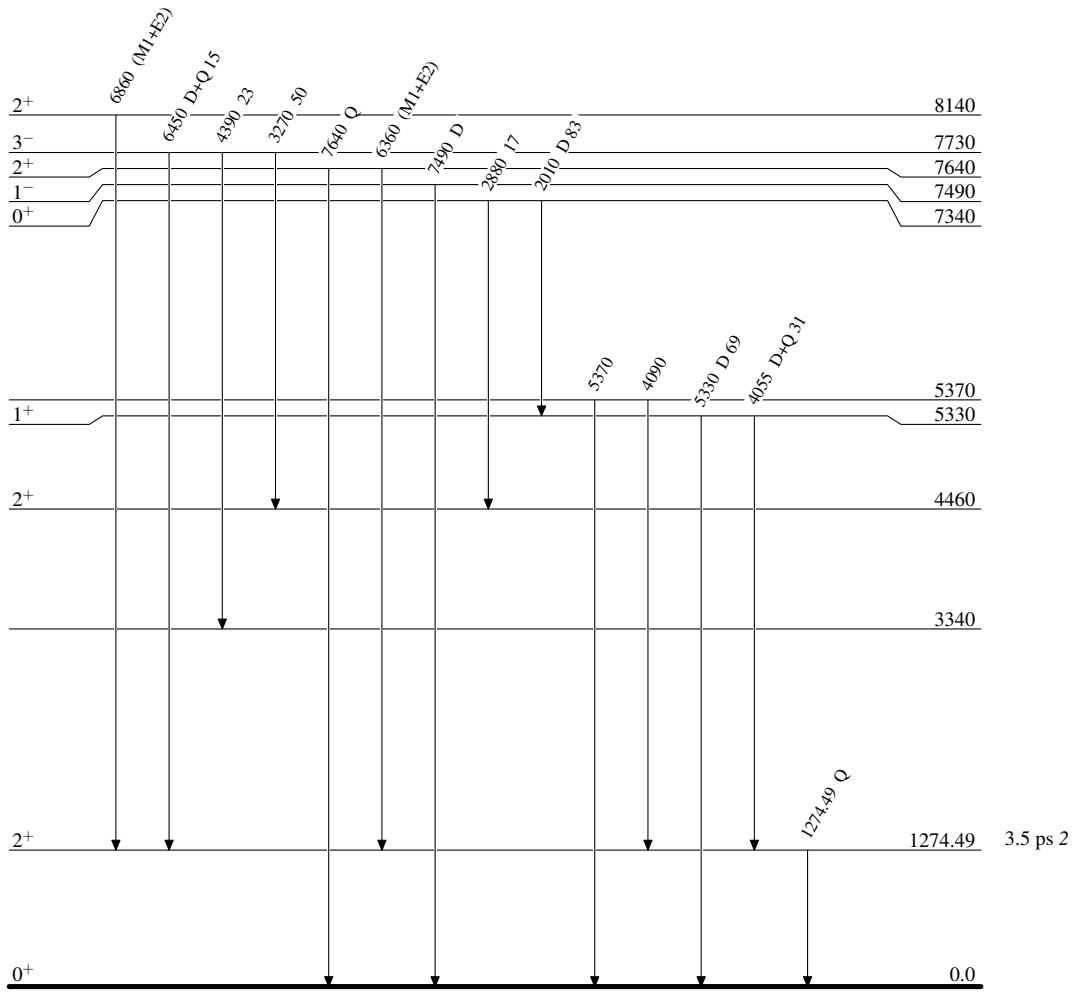
Level Scheme

Intensities: % photon branching from each level



$^{22}_{10}Ne_{12}$