

$^{76}\text{Se}(\text{p,p}'\gamma),(\alpha,\alpha'\gamma)$ 1974MuZB

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Jun Chen and Ameenah R. Farhan		NDS 194,3 (2024)	8-Jan-2024

1974MuZB: E(p)=7 MeV, E(α)=27 MeV. $\pi\gamma$ -coincidence data. Details of $\gamma\gamma$ -coin data are not available.

Others: 1961Va25 (p,p' γ) at E=3.0-5.2 MeV; 1983Ra02 (p,p' γ).

 ^{76}Se Levels

1974MuZB give $T_{1/2}$ values for 1331, 1788, 2429 levels. Details of the method used are not given. For recommended values of $T_{1/2}$ for these levels see Adopted Levels for ^{76}Se .

E(level) [†]	J π [‡]	Comments
0.0	0 ⁺	
559.0 1	2 ⁺	
1122.0 3	0 ⁺	
1216.3 2	2 ⁺	
1330.8 2	4 ⁺	$T_{1/2}$: 1.3 ps +5-1.
1688.5 2	3 ⁺	
1787.5 [#] 3	2 ⁺	$T_{1/2}$: <0.14 ps.
1791.4 [#] 3		
2026.7 4	4 ⁺	
2126.8 [#] 3	(2) ⁺	
2170.6 [#] 5	(0 ⁺)	
2262.1 [#] 11	6 ⁺	
2429.1 5	3 ⁻	$T_{1/2}$: >1.5 ps.
2485.6 [#] 15	4 ⁺	
2514.7 [#] 4	2 ⁺	
2655.5 [#] 4	1	
2669.7 [#] 4	2 ⁻	
2814.8 15		
2868.1 [#] 9	(1 ⁺ ,2 ⁺)	
2949.6? [@] 5	1 ⁺	
3069.3 [#] 6	2 ⁺	
3159.4 [#] 6	(2 ⁺)	
3351.9? [@] 10	(2) ⁺	
3459.5? [@] 10	(2 ⁺)	
3556.0? [@] 15	(2 ⁻)	
3604.0? [@] 15	1 ⁺	

[†] From a least-squares fit to E γ values.

[‡] From Adopted Levels.

[#] Level populated in (p,p' γ) only.

[@] Uncertain population in (p,p' γ) and/or ($\alpha,\alpha'\gamma$).

$^{76}\text{Se}(\text{p,p}'\gamma),(\alpha,\alpha'\gamma)$ **1974MuZB (continued)** $\gamma(^{76}\text{Se})$

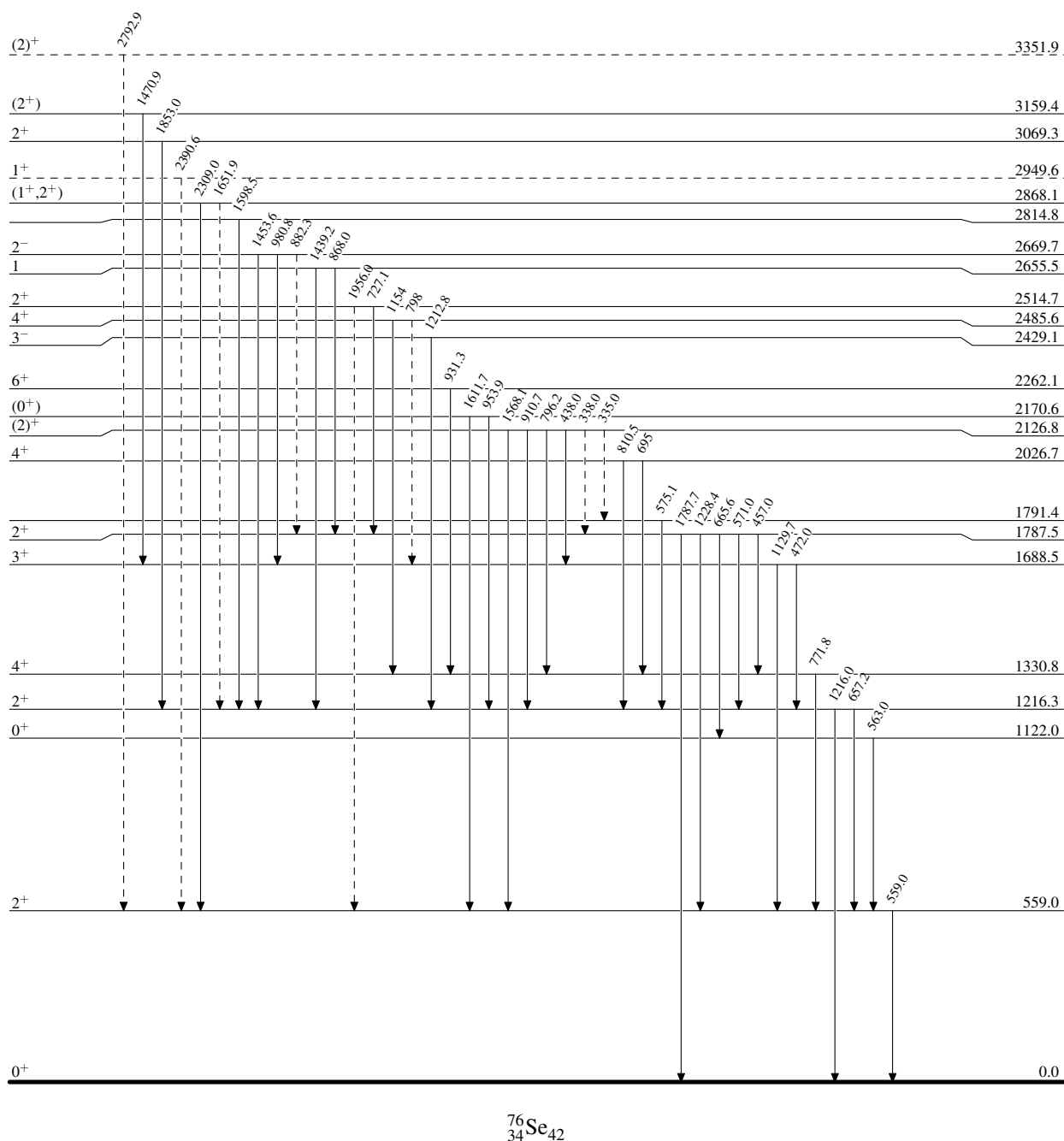
$E_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	$E_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π
335.0 ‡ 15	2126.8	(2) ⁺	1791.4		953.9 10	2170.6	(0 ⁺)	1216.3	2 ⁺
338.0 ‡ 15	2126.8	(2) ⁺	1787.5	2 ⁺	980.8 6	2669.7	2 ⁻	1688.5	3 ⁺
438.0 5	2126.8	(2) ⁺	1688.5	3 ⁺	1129.7 3	1688.5	3 ⁺	559.0	2 ⁺
457.0 10	1787.5	2 ⁺	1330.8	4 ⁺	1154 2	2485.6	4 ⁺	1330.8	4 ⁺
472.0 2	1688.5	3 ⁺	1216.3	2 ⁺	1212.8 4	2429.1	3 ⁻	1216.3	2 ⁺
559.0 1	559.0	2 ⁺	0.0	0 ⁺	1216.0 3	1216.3	2 ⁺	0.0	0 ⁺
563.0 2	1122.0	0 ⁺	559.0	2 ⁺	1228.4 3	1787.5	2 ⁺	559.0	2 ⁺
571.0 5	1787.5	2 ⁺	1216.3	2 ⁺	1439.2 5	2655.5	1	1216.3	2 ⁺
575.1 2	1791.4		1216.3	2 ⁺	1453.6 5	2669.7	2 ⁻	1216.3	2 ⁺
657.2 2	1216.3	2 ⁺	559.0	2 ⁺	1470.9 5	3159.4	(2 ⁺)	1688.5	3 ⁺
665.6 5	1787.5	2 ⁺	1122.0	0 ⁺	1568.1 5	2126.8	(2) ⁺	559.0	2 ⁺
695 2	2026.7	4 ⁺	1330.8	4 ⁺	1598.5 15	2814.8		1216.3	2 ⁺
727.1 3	2514.7	2 ⁺	1787.5	2 ⁺	1611.7 5	2170.6	(0 ⁺)	559.0	2 ⁺
771.8 2	1330.8	4 ⁺	559.0	2 ⁺	1651.9 ‡ 15	2868.1	(1 ⁺ ,2 ⁺)	1216.3	2 ⁺
796.2 3	2126.8	(2) ⁺	1330.8	4 ⁺	1787.7 5	1787.5	2 ⁺	0.0	0 ⁺
798 ‡ 2	2485.6	4 ⁺	1688.5	3 ⁺	1853.0 5	3069.3	2 ⁺	1216.3	2 ⁺
810.5 3	2026.7	4 ⁺	1216.3	2 ⁺	1956.0 ‡ 8	2514.7	2 ⁺	559.0	2 ⁺
868.0 5	2655.5	1	1787.5	2 ⁺	2309.0 10	2868.1	(1 ⁺ ,2 ⁺)	559.0	2 ⁺
882.3 ‡ 8	2669.7	2 ⁻	1787.5	2 ⁺	2390.6 ‡ 5	2949.6?	1 ⁺	559.0	2 ⁺
910.7 8	2126.8	(2) ⁺	1216.3	2 ⁺	2792.9 ‡ 10	3351.9?	(2) ⁺	559.0	2 ⁺
931.3 10	2262.1	6 ⁺	1330.8	4 ⁺					

[†] From 1974MuZB.[‡] Placement of transition in the level scheme is uncertain.

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Legend

Level Scheme

-----► γ Decay (Uncertain) $^{76}_{34}\text{Se}_{42}$