

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 135, 193 (2016)	31-May-2016

Q(β⁻)=-11300 SY; S(n)=13900 SY; S(p)=247×10¹ 45; Q(α)=-356×10¹ 45 [2012Wa38](#)

Estimated uncertainties ([2012Wa38](#)): 600 for Q(β⁻) and S(n).

S(2n)=27720 450 (syst), S(2p)=8100 450, Q(εp)=1290 450 ([2012Wa38](#)).

[1987Lo10](#): ⁷⁹Y production and identification in ²⁴Mg(⁵⁸Ni,p2n) reaction at E=177 MeV.

[1992Gr09](#): isotope produced by mass separation of fission products at ISOLDE facility ([1992Gr09](#)).

[1992Mu12](#): isotope produced in ⁵⁴Fe(²⁸Si,p2n) reaction.

Nuclear structure calculations: [2012Sh36](#), [1990Sa06](#), [1988Bu09](#): levels, J, π.

⁷⁹Y Levels

Cross Reference (XREF) Flags

A ²⁸Si(⁵⁴Fe,p2nγ),

E(level)	J ^π †	T _{1/2}	XREF	Comments
0.0‡	(5/2 ⁺)	14.8 s 6	A	%ε+%β ⁺ =100; %εp=? J ^π : probable configuration=5/2[422] (1987LeZT , 1988Bu09 , 1990Sa06). T _{1/2} : weighted average of 14.9 s 6 (1992Mu12) and 14.4 s 15 (1992Gr09).
184.0# 4	(7/2 ⁺)		A	
411.3‡ 4	(9/2 ⁺)		A	
726.9# 5	(11/2 ⁺)		A	
1042.4‡ 6	(13/2 ⁺)		A	
1509#	(15/2 ⁺)		A	
1889‡	(17/2 ⁺)		A	
2523#	(19/2 ⁺)		A	
2947‡	(21/2 ⁺)		A	
3828?#	(23/2 ⁺)		A	
4214?‡	(25/2 ⁺)		A	
5702?‡	(29/2 ⁺)		A	

† Possible 5/2[422] band member.

‡ Band(A): 5/2[422],α=+1/2 band (?).

Band(a): 5/2[422],α=-1/2 band (?).

γ(⁷⁹Y)

E _i (level)	J _i ^π	E _γ	I _γ	E _f	J _f ^π	E _i (level)	J _i ^π	E _γ	I _γ	E _f	J _f ^π
184.0	(7/2 ⁺)	184.0 5	100	0.0	(5/2 ⁺)	1042.4	(13/2 ⁺)	315.0† 5	≈68	726.9	(11/2 ⁺)
411.3	(9/2 ⁺)	227.0 5	100 8	184.0	(7/2 ⁺)			631.1 5	100 15	411.3	(9/2 ⁺)
		411.3 5	19 6	0.0	(5/2 ⁺)	1509	(15/2 ⁺)	467		1042.4	(13/2 ⁺)
726.9	(11/2 ⁺)	316.1† 5	≈115	411.3	(9/2 ⁺)			781		726.9	(11/2 ⁺)
		543.1 5	100 25	184.0	(7/2 ⁺)	1889	(17/2 ⁺)	380		1509	(15/2 ⁺)

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

 $\gamma({}^{79}\text{Y})$ (continued)

<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_γ</u>	<u>E_f</u>	<u>J_f^π</u>
1889	(17/2 ⁺)	847	1042.4	(13/2 ⁺)
2523	(19/2 ⁺)	1014	1509	(15/2 ⁺)
2947	(21/2 ⁺)	1058	1889	(17/2 ⁺)
3828?	(23/2 ⁺)	1305 [‡]	2523	(19/2 ⁺)
4214?	(25/2 ⁺)	1267 [‡]	2947	(21/2 ⁺)
5702?	(29/2 ⁺)	1488 [‡]	4214?	(25/2 ⁺)

[†] Unresolved doublet. Composite energy is 315.5 5.

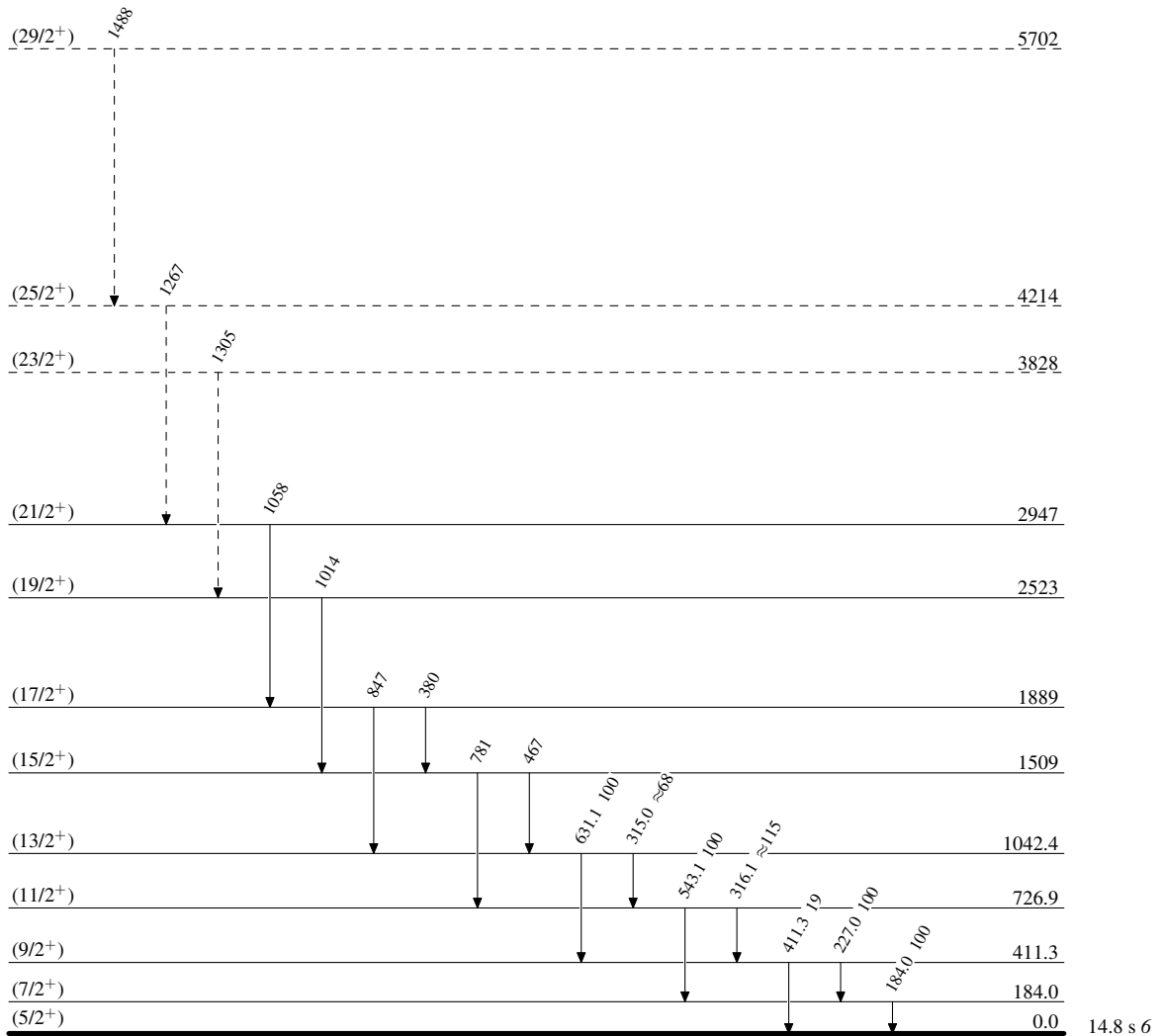
[‡] Placement of transition in the level scheme is uncertain.

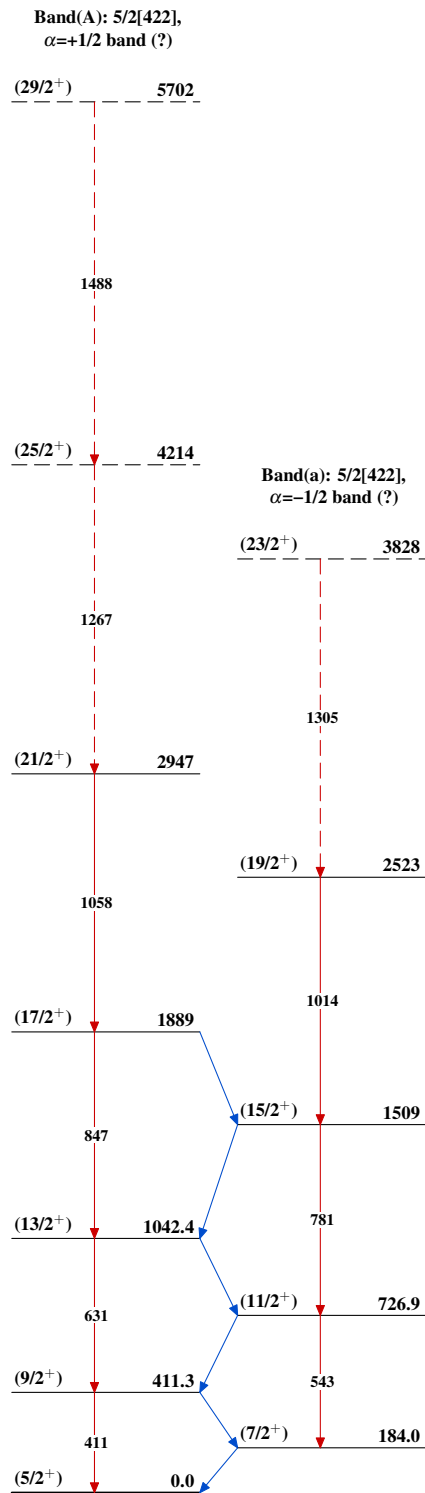
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

-----▶ γ Decay (Uncertain) ${}^{79}_{39}\text{Y}_{40}$

Adopted Levels, Gammas ${}^{79}_{39}\text{Y}_{40}$