

$^{52}\text{Cr}(^{36}\text{S},2\text{p}2\text{n}\gamma)$ 1994Ga15

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	B. Singh, A. Negret, and K. Zuber		NDS 110,2815 (2009)	30-Sep-2009

1994Ga15: E=130 MeV. Measured E_γ , I_γ , $\gamma\gamma$ using an array of 18 Ge detectors.

1995Ch29: comment from authors of 1994Ch28 about discrepancies in the assignment of 707 γ to ^{84}Sr and enhanced intensity of 432 γ . These two γ rays are also in ^{84}Y .

 ^{84}Sr Levels

E(level) [†]	J π [‡]	E(level) [†]	J π [‡]	E(level) [†]	J π [‡]	E(level) [†]	J π [‡]
0.0 [@]	0 ⁺	3487.0 ^a 18	7 ⁻	5652.5 ^{&} 21	12 ⁺	8005.6 ^{&} 25	(16 ⁺)
793.0 [@] 10	2 ⁺	3679.1 ^{&} 19	8 ⁺	6068.0 ^a 25	(12)	9426 ^{&} 3	(18 ⁺)
1767.0 [@] 15	4 ⁺	4446.7 20	10 ⁺	6738.5 ^{&} 23	14 ⁺	11061 ^{&} 3	(20 ⁺)
2768.0 ^a 17	5 ⁻	4533.3 ^{&} 20	10 ⁺	6775? ^{#a} 3		12923 ^{&} 3	(22 ⁺)
2807.0 [@] 17	6 ⁺	4635.0 ^a 20	9 ⁻	7207? ^{#a} 3		15083 ^{&} 3	(24 ⁺)
3330.9 19	8 ⁺	5443.0 ^a 23	11 ⁻	7622? ^{#a} 3			

[†] From E_γ 's, assuming $\Delta(E_\gamma)=1$ keV for each γ ray.

[‡] As proposed by 1994Ga15 based on earlier assignments in literature and band extensions in their study.

[#] Level not included In Adopted Levels due to its uncertain existence In ^{84}Sr ; the γ ray can Be assigned either to another nuclide or with another level In ^{84}Sr .

[@] Band(A): g.s. band.

[&] Band(B): Band based on 8⁺.

^a Band(C): Band based on 5⁻.

 $\gamma(^{84}\text{Sr})$

E_γ	I_γ	$E_i(\text{level})$	J π_i	E_f	J π_f	Comments
348		3679.1	8 ⁺	3330.9	8 ⁺	
415	13	7622?		7207?		E_γ : γ assigned from 6484, (13 ⁻) level In Adopted Gammas. I_γ : according to comment in 1995Ch29 the intensity of this γ ray is much larger than expected and is explained by them as due to contribution from a similar energy transition in ^{84}Y which is expected to be populated in the reaction studied in 1994Ga15.
432	17	7207?		6775?		
524	50	3330.9	8 ⁺	2807.0	6 ⁺	
625	18	6068.0	(12)	5443.0	11 ⁻	E_γ : according to comment in 1995Ch29 this γ is a transition in ^{84}Y which is expected to be populated in the reaction studied in 1994Ga15.
680		3487.0	7 ⁻	2807.0	6 ⁺	
707	18	6775?		6068.0	(12)	
719	15	3487.0	7 ⁻	2768.0	5 ⁻	
793	100	793.0	2 ⁺	0.0	0 ⁺	
808	20	5443.0	11 ⁻	4635.0	9 ⁻	
854	40	4533.3	10 ⁺	3679.1	8 ⁺	
872	25	3679.1	8 ⁺	2807.0	6 ⁺	
974	100	1767.0	4 ⁺	793.0	2 ⁺	
1001	20	2768.0	5 ⁻	1767.0	4 ⁺	
1040	85	2807.0	6 ⁺	1767.0	4 ⁺	
1086	40	6738.5	14 ⁺	5652.5	12 ⁺	
1116	30	4446.7	10 ⁺	3330.9	8 ⁺	
1119	40	5652.5	12 ⁺	4533.3	10 ⁺	
1148	20	4635.0	9 ⁻	3487.0	7 ⁻	

Continued on next page (footnotes at end of table)

$^{52}\text{Cr}(^{36}\text{S},2\text{p}2\text{n}\gamma)$ **1994Ga15** (continued)

$\gamma(^{84}\text{Sr})$ (continued)

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
1206	10	5652.5	12 ⁺	4446.7	10 ⁺
1267	20	8005.6	(16 ⁺)	6738.5	14 ⁺
1420	16	9426	(18 ⁺)	8005.6	(16 ⁺)
1635	10	11061	(20 ⁺)	9426	(18 ⁺)
1862	3	12923	(22 ⁺)	11061	(20 ⁺)
2160 [†]		15083	(24 ⁺)	12923	(22 ⁺)

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

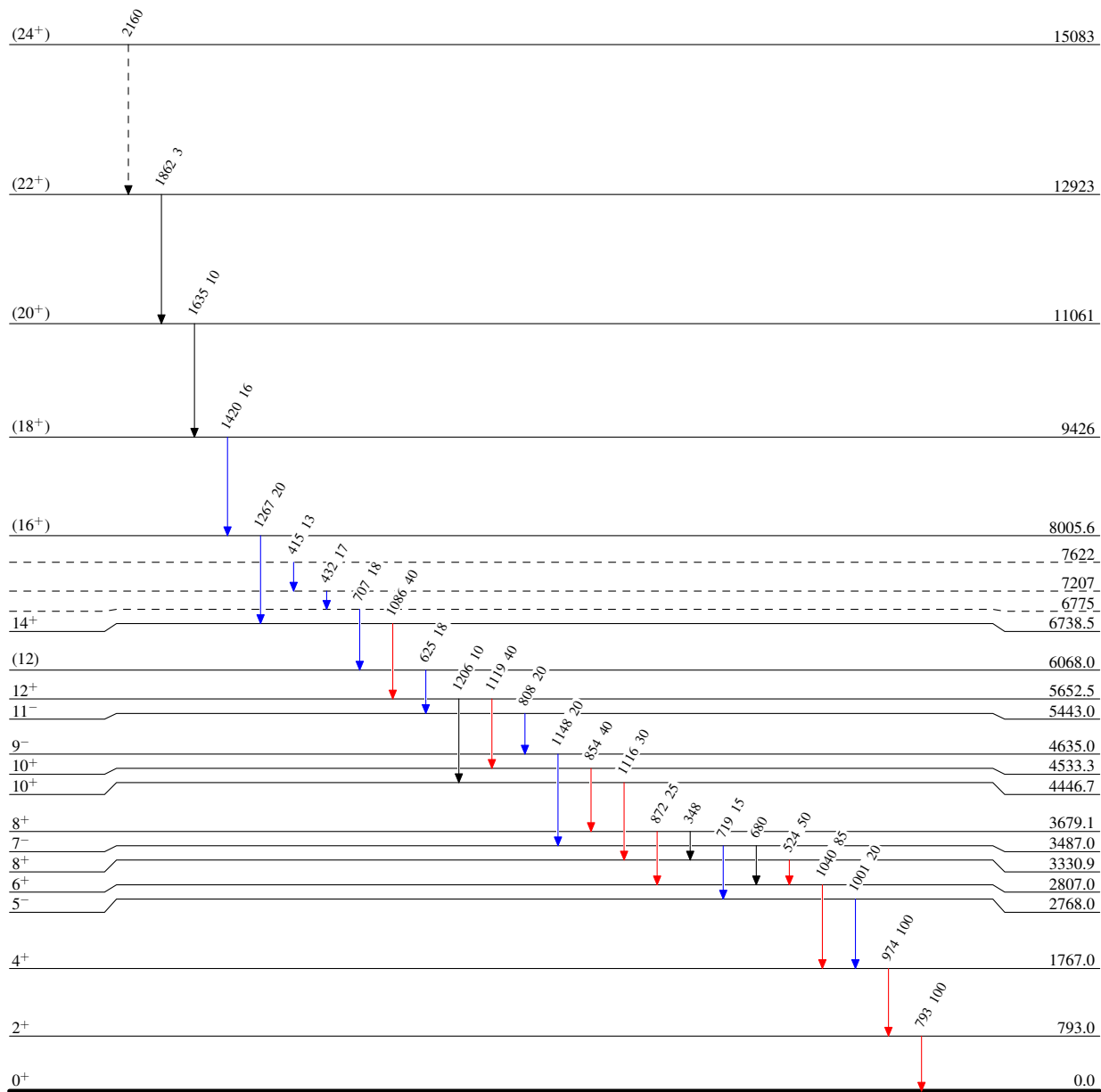
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Legend

Level Scheme

Intensities: Relative I_γ

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
 $\cdots\cdots\cdots\longrightarrow$ γ Decay (Uncertain)

 $^{84}_{38}\text{Sr}_{46}$

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