

⁸²Se(¹⁹F, α 3n γ) 2000Ma63

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	D. Abriola(a), A. A. Sonzogni		NDS 107, 2423 (2006)	1-Jan-2006

⁸²Se(¹⁹F, α 3n γ), E=68 MeV, measured E γ , I γ , $\gamma\gamma$ and $\gamma\gamma(\theta)$ (DCO) using 2 intrinsic Ge detectors of 20% efficiency, $\gamma\gamma$ in coincidence with known γ 's. Neutron- γ and charged particles- γ coincidence-multiplicity.

⁹⁴Nb Levels

E(level) [†]	J π [‡]	E(level) [†]	J π [‡]	E(level) [†]	J π [‡]	E(level) [†]	J π [‡]
0.0 [#]	6 ⁺	1609.6 [@]	(11)	2817.9 [@]	(12)	4550.0 [#]	(15)
78.7 [#]	(7) ⁺	1931.0?	(9)	3307.4? [#]	(12)	5331.5 [#]	(17)
948.0	(8)	2250.6 [#]	(10)	3475.1 [#]	(13)	5814.3 [#]	(18)
991.3 [#]	(9)	2449.2 [#]	(11)	4290.4 [@]		6496.3 [#]	

[†] From least-squares fit to E γ 's, assuming $\Delta(E\gamma)=0.5$ keV for each γ ray.

[‡] From Adopted Levels.

[#] Band(A): Cascade based on g.s..

[@] Band(B): Cascade based on J π =(11), E=1609.6.

γ (⁹⁴Nb)

DCO values measured with Ge detectors placed at 45° and 90°. Gating on dipole transitions, except when noted otherwise. A D transition gated on D should give DCO \approx 1 while gated on Q should give DCO \approx 0.5. A Q transition gated on D should give DCO \approx 2 while gated on Q should give DCO \approx 1.

E γ	I γ	E _i (level)	J π _i	E _f	J π _f	Mult.	Comments
78.7	32 3	78.7	(7) ⁺	0.0	6 ⁺	D	A ₂ =-0.39 17. A ₄ =-0.14 18.
167.6	6.6 13	3475.1	(13)	3307.4?	(12)	D	DCO=0.49 5. Gated on quadrupole transition.
198.8	52 4	2449.2	(11)	2250.6	(10)	D	DCO=0.88 10.
319.6	9.0 11	2250.6	(10)	1931.0?	(9)	D	DCO=1.00 20.
368.8	8.0 10	2817.9	(12)	2449.2	(11)	D	DCO=1.2 5.
482.8	13.4 19	5814.3	(18)	5331.5	(17)	D	DCO=0.94 25.
618.2	28 3	1609.6	(11)	991.3	(9)	(Q)	DCO=1.1 5. Gated on quadrupole transition.
682.0	8 3	6496.3		5814.3	(18)		
781.5	15.2 21	5331.5	(17)	4550.0	(15)	Q	DCO=2.4 8.
858.0	6.4 14	3307.4?	(12)	2449.2	(11)		
869.3	19.0 19	948.0	(8)	78.7	(7) ⁺	D	DCO=0.91 20.
912.6	100 4	991.3	(9)	78.7	(7) ⁺	Q	DCO=2.1 3. A ₂ =0.306 11. A ₄ =-0.036 10.
983.0	9.0 18	1931.0?	(9)	948.0	(8)	(D)	DCO=1.0 5.
1026.0	44 4	3475.1	(13)	2449.2	(11)	Q	DCO=1.9 3.
1074.9	32 3	4550.0	(15)	3475.1	(13)	Q	DCO=2.2 6.
1208.2	24 3	2817.9	(12)	1609.6	(11)	D	DCO=0.41 17. Gated on quadrupole transition.
1259.3	54 4	2250.6	(10)	991.3	(9)	D	DCO=0.62 13. A ₂ =-0.136 26.

Continued on next page (footnotes at end of table)

 ${}^{82}\text{Se}({}^{19}\text{F},\alpha 3n\gamma)$ **2000Ma63** (continued) $\gamma({}^{94}\text{Nb})$ (continued)

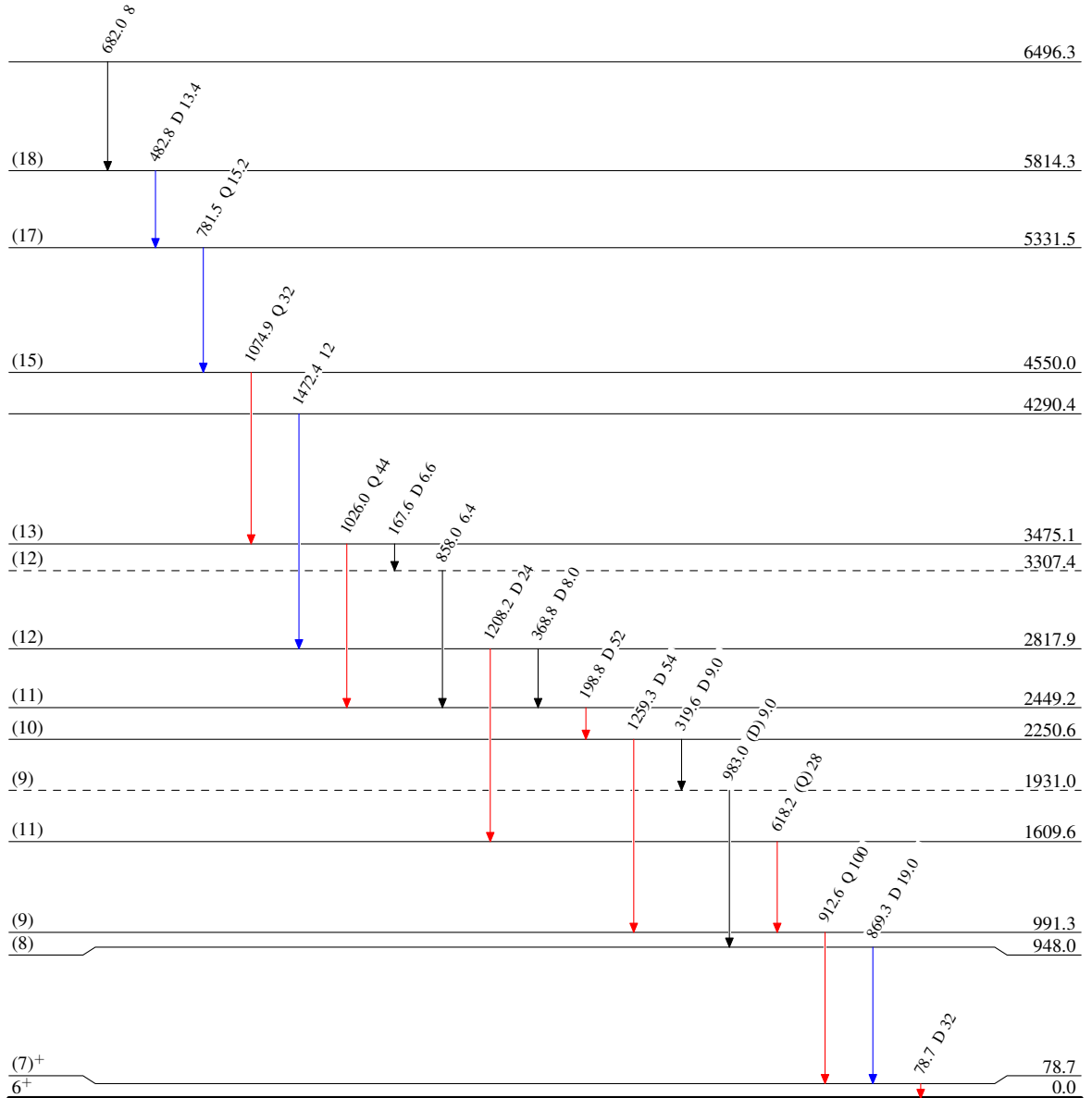
<u>E_γ</u>	<u>I_γ</u>	<u>$E_i(\text{level})$</u>	<u>E_f</u>	<u>J_f^π</u>	Comments
1472.4	12 3	4290.4	2817.9	(12)	$A_4 = -0.075$ 34. Gated on quadrupole transition.

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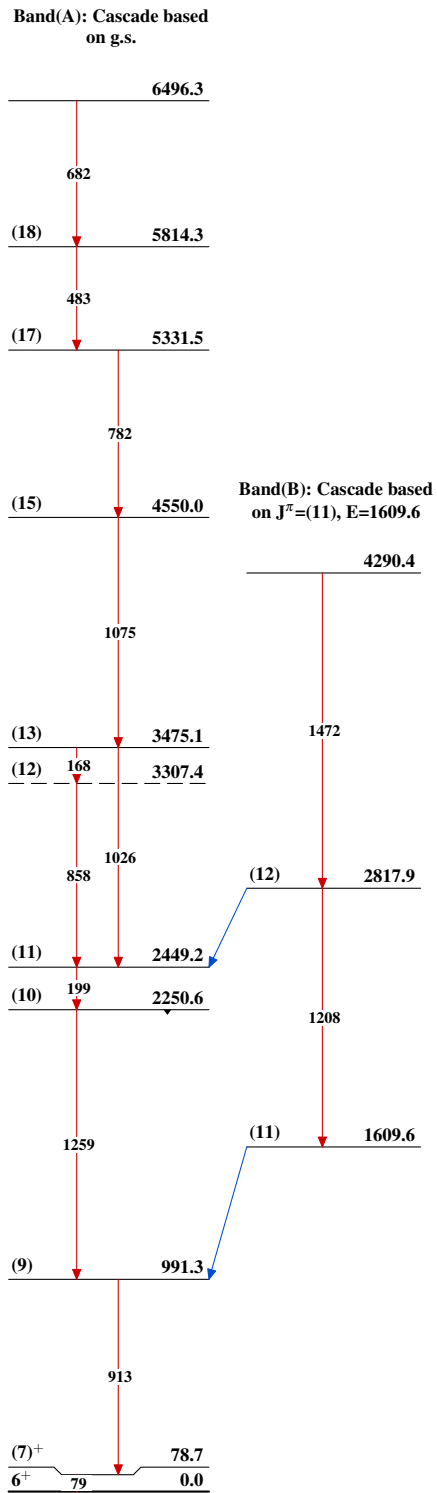
Level Scheme
Intensities: Relative I_γ

Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$



$^{94}_{41}\text{Nb}_{53}$

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