^{93}Nb(^{7}Li,3nγ) 1985Ch28

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 111, 525 (2010)	19-Nov-2009

E(^{7}Li)=28-34 MeV, optimum E=30 MeV. Measured Eγ, Iγ, $\gamma\gamma$, $\gamma(\theta)$, excit. Ge(Li) detector with FWHM=2.0-2.2 keV at 1.33 MeV.

^{97}Ru Levels

E(level)	J$^{\pi}$†	E(level)	J$^{\pi}$†	E(level)	J$^{\pi}$†	E(level)	J$^{\pi}$†
0.0	5/2$^+$	1846	15/2$^+$	2651‡		3671	(25/2$^+$)
422	7/2$^+$	1880	11/2$^-$	2689‡		3942	(23/2)
879	9/2$^+$	2534‡		2739	21/2$^+$	3943?‡	(23/2$^-$)
1199	11/2$^+$	2546	17/2$^+$	2759	19/2$^+$	4264	(27/2$^+$)
1652‡	13/2$^+$	2597	15/2$^-$	3270	19/2$^-$	4731	(29/2$^+$)
1826	13/2$^+$	2641		3621	23/2$^+$		

† From the authors, based on $\gamma(\theta)$, γ excit, $\gamma\gamma$, and the assumption that the main γ cascades from the high-spin states involve primarily yrast levels.
‡ Not included in Adopted Levels.

γ(^{97}Ru)

E$_\gamma$	I$_\gamma$	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Mult.‡
(98)		2739	21/2$^+$	2641		
155.1 *3*	3 *1*	2689		2534		
193.4 *3*	40 *4*	2739	21/2$^+$	2546	17/2$^+$	
214.0† *3*	6† *1*	2759	19/2$^+$	2546	17/2$^+$	
319.9 *3*	15 *2*	1199	11/2$^+$	879	9/2$^+$	D
421.5 *3*	100	422	7/2$^+$	0.0	5/2$^+$	
457.2 *3*	9 *1*	879	9/2$^+$	422	7/2$^+$	D
466.8 *3*	8 *1*	4731	(29/2$^+$)	4264	(27/2$^+$)	D
593.3† *3*	14† *2*	4264	(27/2$^+$)	3671	(25/2$^+$)	
643		4264	(27/2$^+$)	3621	23/2$^+$	(Q)
646.5 *3*	89 *9*	1846	15/2$^+$	1199	11/2$^+$	E2
673.3# *3*	13# *1*	3270	19/2$^-$	2597	15/2$^-$	E2
673.3#@ *3*	13# *1*	3943?	(23/2$^-$)	3270	19/2$^-$	E2
699.9 *3*	68 *7*	2546	17/2$^+$	1846	15/2$^+$	D
716.9 *3*	8 *1*	2597	15/2$^-$	1880	11/2$^-$	E2
772.7 *3*	44 *4*	1652	13/2$^+$	879	9/2$^+$	
777.6 *3*	89 *9*	1199	11/2$^+$	422	7/2$^+$	E2
814.5 *3*	5 *1*	2641		1826	13/2$^+$	
824.8† *3*	13† *1*	2651		1826	13/2$^+$	
862.1 *3*	9 *1*	3621	23/2$^+$	2759	19/2$^+$	E2
879.2 *3*	71 *7*	879	9/2$^+$	0.0	5/2$^+$	
882.3# *3*	19# *2*	2534		1652	13/2$^+$	
882.3# *3*	19# *2*	3621	23/2$^+$	2739	21/2$^+$	
913.7 *3*	21 *2*	2759	19/2$^+$	1846	15/2$^+$	E2
932.0 *3*	22 *2*	3671	(25/2$^+$)	2739	21/2$^+$	(E2)
947.5† *3*	44† *4*	1826	13/2$^+$	879	9/2$^+$	
1000.6 *3*	8 *1*	1880	11/2$^-$	879	9/2$^+$	
1202.9 *3*	5 *1*	3942	(23/2)	2739	21/2$^+$	D

Continued on next page (footnotes at end of table)

^{93}Nb(^{7}Li,3nγ) 1985Ch28 (continued)

$\gamma(^{97}Ru)$ (continued)

† Contains a contaminant γ from a competing channel.
‡ From $\gamma(\theta)$. The assumption is made that all stretched Q transitions are E2.
# Multiply placed with undivided intensity.
@ Placement of transition in the level scheme is uncertain.

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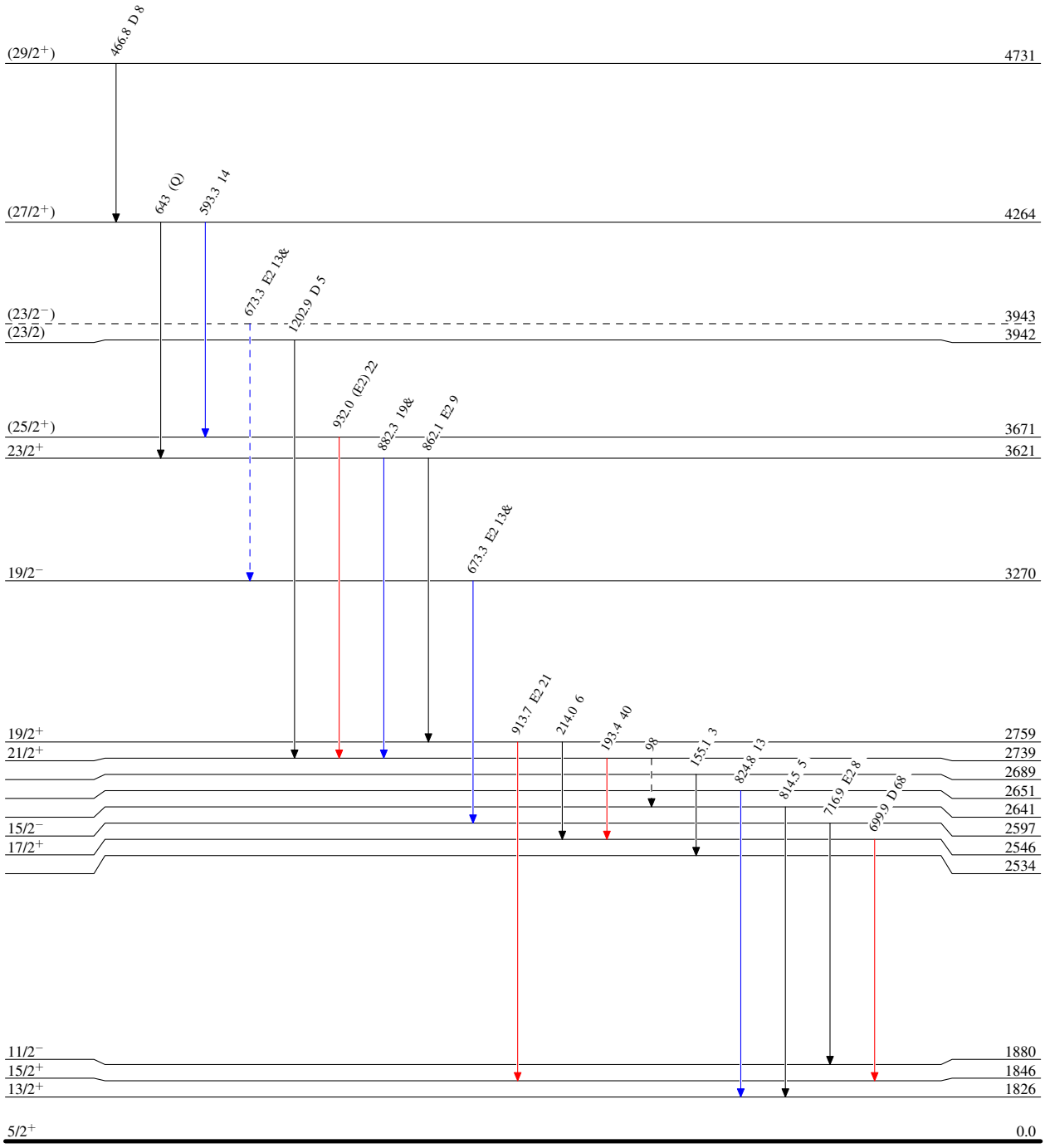
Level Scheme

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)



$^{97}_{44}Ru_{53}$

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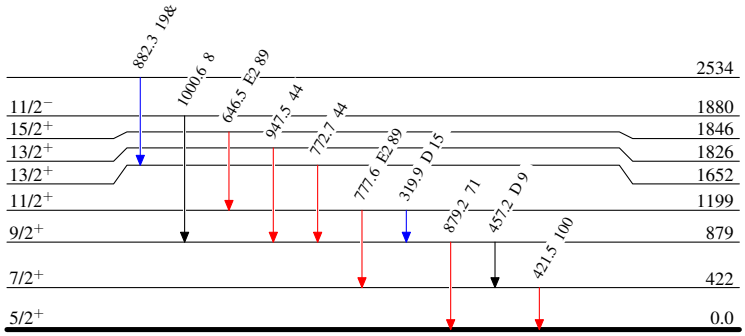
Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

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



$^{97}_{44}Ru_{53}$