

¹²⁴Sn(⁹⁶Zr,Xγ),¹⁷⁶Yb(³⁶S,Xγ) 2010ToZY

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 114, 1 (2013)	20-Oct-2012

Deep inelastic reactions.

2010ToZY: ¹²⁴Sn(⁹⁶Zr,Xγ) E=530 MeV, and ¹⁷⁶Yb(³⁶S,Xγ) E=230 MeV at XTU-Tandem and ALPI accelerators at INFN, Legnaro. In (⁹⁶Zr,Xγ) experiment, PRISMA magnetic spectrometer and CLARA escape-suppressed Ge detector array were used in coincidence mode. Time-of-flight measurements were used to determine velocity of projectile-like fragments. In the (³⁶S,Xγ) experiment, GASP Ge detector array was used for gamma-ray measurements. Measured E_γ, I_γ, γγ, (particle)γ coin.

2010ToZY state that the results are preliminary and that detailed paper with an extended level scheme is forthcoming.

According to reply from the first author of **2010ToZY** on Sept 20, 2012, a detailed paper of this work should be forthcoming in a few weeks.

⁸⁹Rb Levels

E(level) [†]	J ^π [‡]	T _{1/2}	Comments
0.0	3/2 ⁻		
221	(5/2 ⁻)		
586	(7/2 ⁻)		
931	(7/2 ⁻)		
997	(7/2 ⁻)		
1195 [#]	(9/2 ⁺)	15.2 ns 28	T _{1/2} : measured by 2010ToZY using γ(t) method. Other: 8 ns 2 (2009Pa20). Note a large difference in the two measurements.
2005 [#]	(13/2 ⁺)		
2841 [#]	(17/2 ⁺)		
4033 [#]	(21/2 ⁺)		
5605 [#]	(25/2 ⁺)		

[†] From least-square fit to E_γ data.

[‡] As proposed in **2010ToZY**.

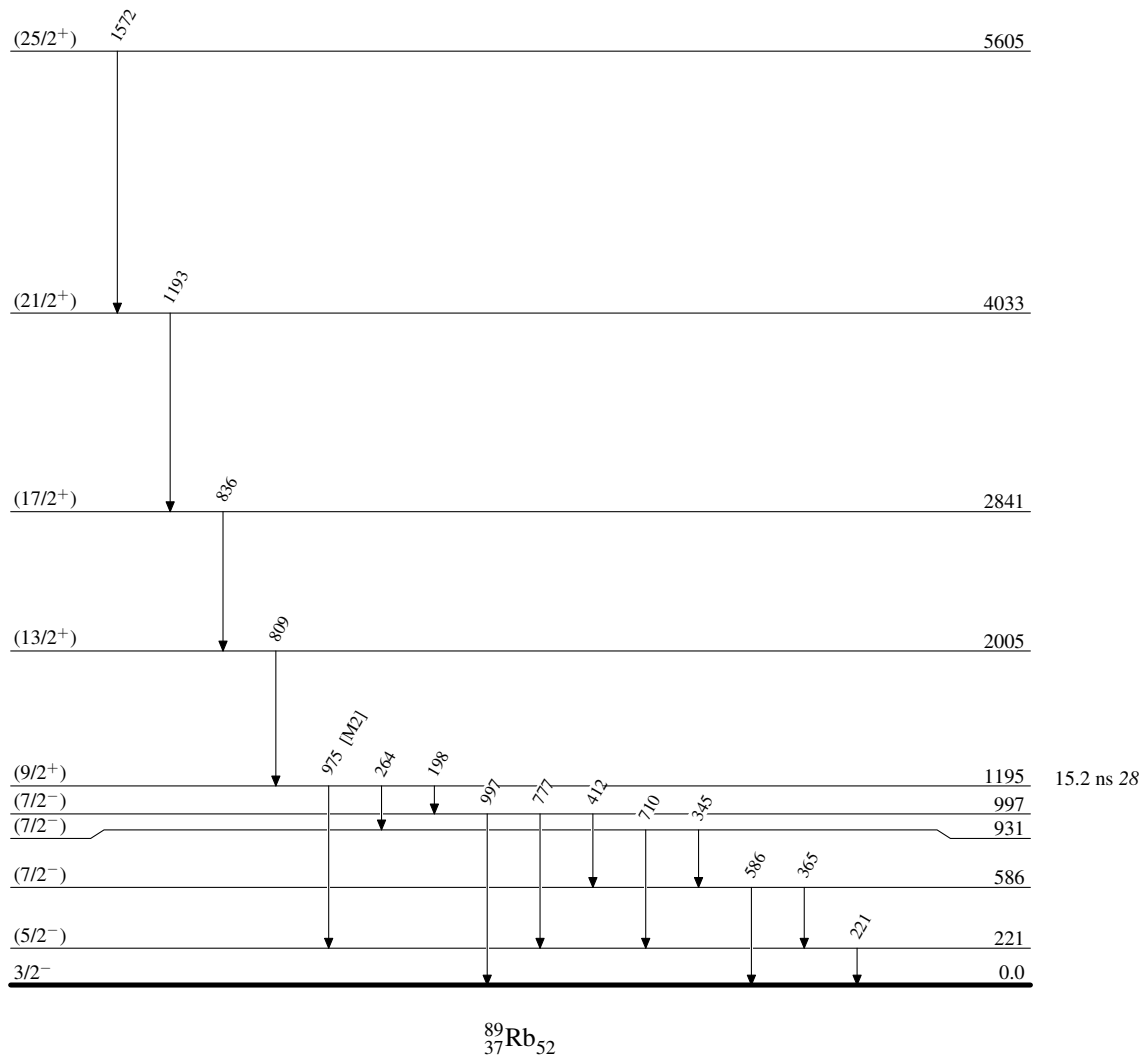
[#] Band(A): πg_{9/2}, α=+1/2.

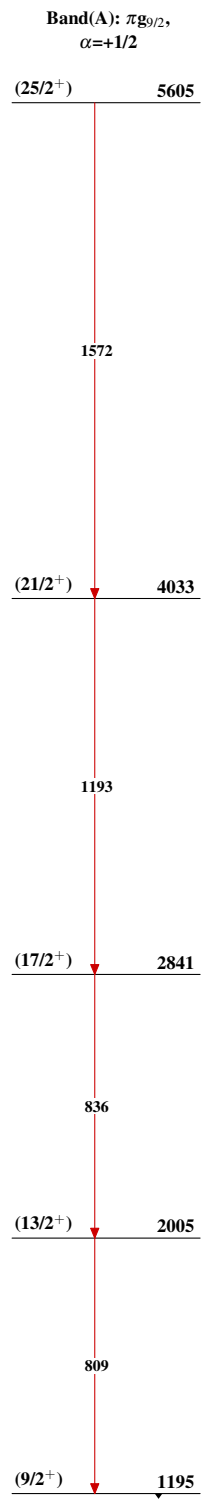
γ(⁸⁹Rb)

E _γ	E _i (level)	J _i ^π	E _f	J _f ^π	E _γ	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.
198	1195	(9/2 ⁺)	997	(7/2 ⁻)	777	997	(7/2 ⁻)	221	(5/2 ⁻)	
221	221	(5/2 ⁻)	0.0	3/2 ⁻	809	2005	(13/2 ⁺)	1195	(9/2 ⁺)	
264	1195	(9/2 ⁺)	931	(7/2 ⁻)	836	2841	(17/2 ⁺)	2005	(13/2 ⁺)	
345	931	(7/2 ⁻)	586	(7/2 ⁻)	975	1195	(9/2 ⁺)	221	(5/2 ⁻)	[M2]
365	586	(7/2 ⁻)	221	(5/2 ⁻)	997	997	(7/2 ⁻)	0.0	3/2 ⁻	
412	997	(7/2 ⁻)	586	(7/2 ⁻)	1193	4033	(21/2 ⁺)	2841	(17/2 ⁺)	
586	586	(7/2 ⁻)	0.0	3/2 ⁻	1572	5605	(25/2 ⁺)	4033	(21/2 ⁺)	
710	931	(7/2 ⁻)	221	(5/2 ⁻)						

$^{124}\text{Sn}(^{96}\text{Zr},\text{X}\gamma), ^{176}\text{Yb}(^{36}\text{S},\text{X}\gamma)$ 2010ToZY

Level Scheme



$^{124}\text{Sn}(^{96}\text{Zr}, X\gamma), ^{176}\text{Yb}(^{36}\text{S}, X\gamma)$ 2010ToZY $^{89}\text{Rb}_{37}^{52}$