

$^{58}\text{Ni}(^{54}\text{Fe}, 2n\gamma)$ 2007Sa36

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal and F. G. Kondev		NDS 113, 1315 (2012)	1-Aug-2011

2007Sa36: $E(^{54}\text{Fe})=195$ MeV. Target: 1.0 mg/cm² self-supporting foil of 99.8% isotopically enriched in ^{58}Ni . Beam was produced with K130 Cyclotron at University of Jyvaskyla. Prompt γ -rays were detected at the target position by the JUROGAM array consisting of 43 Compton-suppressed HPGe detectors. Products were separated with RITU and implanted into double-sided silicon strip detectors of the GREAT spectrometer facility. Spatial and temporal correlations of recoil implants and their subsequent radioactive decays were performed and in-beam RDT γ -ray spectra were constructed. Measured: $E\gamma$, $I\gamma$, $\gamma\gamma$, (recoil) γ , $T_{1/2}$.

Deduced: Energy levels, J^π .

Others: [2007CeZX](#), [2008Ko04](#).

 ^{110}Xe Levels

E(level) [†]	J^π [‡]	$T_{1/2}$	Comments
0.0	0 ⁺	93 ms 3	$T_{1/2}$: From recoil- $\alpha(t)$ in 2007Sa36 . $E\alpha=3717$ 19 keV in 2007Sa36 .
469.70 20	(2 ⁺)		
1113.1 4	(4 ⁺)		
1889.7 7	(6 ⁺)		

[†] From least-squares fit to $E\gamma$'s.

[‡] Band(A): Suggested members of the g.s. band in [2007Sa36](#).

 $\gamma(^{110}\text{Xe})$

E_γ [†]	I_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.
469.7 2	100 9	469.70	(2 ⁺)	0.0	0 ⁺	[E2]
^x 531.5 5	13 3					
^x 586.3 4	39 5					
643.4 3	81 7	1113.1	(4 ⁺)	469.70	(2 ⁺)	[E2]
^x 671.7 5	36 5					
^x 691.1 5	38 5					
^x 735.4 5	13 3					
776.6 6	66 7	1889.7	(6 ⁺)	1113.1	(4 ⁺)	[E2]
^x 816.8 3	19 3					

[†] From [2007Sa36](#), correlated with $E\alpha=3717$ keV 19. I_γ are relative to $I_\gamma(469.7)=100$.

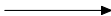


^x γ ray not placed in level scheme.

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Level Scheme

Intensities: Relative I_γ

Legend

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

