

<sup>88</sup>Sr(p,n),(p,nγ) 1972Ga36

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. A. McCutchan and A. A. Sonzogni		NDS 115, 135 (2014)	1-Nov-2013

E=5.0-6.4 MeV. Measured E<sub>γ</sub>, I<sub>γ</sub>, excitation functions, p,γ(θ) using a Ge(Li) detector and a Ge(Li) low-energy photon spectrometer (FWHM=1 keV at 100 keV), n time-of-flight using a liquid scintillator; Wolfenstein-Hauser-Feshbach analysis.

Others: 1974Fi18, 1969Du02, 1967Iv04, 1962Mo19.

See also (p,n), E=134 MeV in 1984An08 and E=100,200,300,400 MeV in 1991Po05.

<sup>88</sup>Y Levels

E(level) <sup>†</sup>	J <sup>π</sup> <sup>‡</sup>	T <sub>1/2</sub>	Comments
0	4 <sup>-</sup>		
232.2 9	5 <sup>-</sup>		
393.1 8	1 <sup>+</sup>		
675.2 17	8 <sup>+</sup>	13.5 ms 5	T <sub>1/2</sub> : from γ(t) in 1974Fi18. Others: 13.8 ms 14 (1967Iv04) and 14.5 ms 7 (1962Mo19) both from γ(t).
706.0 8	2 <sup>-</sup>		
766.1 12	(0) <sup>+</sup>		
842.3 11	(5) <sup>+</sup>		
984.3 10	(4) <sup>+</sup>		
1089.0 20	(4,5,6) <sup>-</sup>		
1219.9 12	(0,1) <sup>+</sup>		
1234.0 20			
1262.0 20	(2,3,4) <sup>-</sup>		
1275.1 14	(1,2) <sup>+</sup>		
1282.8 12	(3,4,5) <sup>+</sup>		
1569.7 14			
1594.6 15	3 <sup>-</sup> ,4 <sup>-</sup>		
1701.0 12	3 <sup>+</sup> ,4 <sup>+</sup>		
1732.0 20	(-)		
1761.0 20	(4,5,6) <sup>-</sup>		
1832.0 20	3 <sup>-</sup> ,4 <sup>-</sup>		

<sup>†</sup> From a least-squares fit to E<sub>γ</sub> by evaluators.

<sup>‡</sup> From the Adopted Levels.

γ(<sup>88</sup>Y)

E <sub>γ</sub>	I <sub>γ</sub> <sup>†</sup>	E <sub>i</sub> (level)	J <sub>i</sub> <sup>π</sup>	E <sub>f</sub>	J <sub>f</sub> <sup>π</sup>	Mult. <sup>‡</sup>	δ <sup>‡</sup>	Comments
141 1	5	984.3	(4) <sup>+</sup>	842.3	(5) <sup>+</sup>			
232 1	14	232.2	5 <sup>-</sup>	0	4 <sup>-</sup>	D+Q	3.7 16	Mult.: A <sub>2</sub> =-0.34 5, A <sub>4</sub> =+0.06 6 for E(p)=5.45 MeV.
298 1	8	1282.8	(3,4,5) <sup>+</sup>	984.3	(4) <sup>+</sup>			
313 1	17	706.0	2 <sup>-</sup>	393.1	1 <sup>+</sup>	D+Q	1.2 6	Mult.: A <sub>2</sub> =-0.38 3, A <sub>4</sub> =+0.16 4 for E(p)=5.45 MeV and A <sub>2</sub> =-0.247 13, A <sub>4</sub> =+0.009 16 for E(p)=5.60 MeV.
350 1	5	1569.7		1219.9	(0,1) <sup>+</sup>			
373 1	27	766.1	(0) <sup>+</sup>	393.1	1 <sup>+</sup>			
393 1	100	393.1	1 <sup>+</sup>	0	4 <sup>-</sup>			
443.0 <sup>#</sup> 14		675.2	8 <sup>+</sup>	232.2	5 <sup>-</sup>			
481 1	≤1	1701.0	3 <sup>+</sup> ,4 <sup>+</sup>	1219.9	(0,1) <sup>+</sup>			
509 1	10	1275.1	(1,2) <sup>+</sup>	766.1	(0) <sup>+</sup>			
610 1	3	842.3	(5) <sup>+</sup>	232.2	5 <sup>-</sup>			
706 1	3	706.0	2 <sup>-</sup>	0	4 <sup>-</sup>	Q(+0)	1.0 13	Mult.: A <sub>2</sub> =+0.14 5 for E(p)=5.60 MeV.

Continued on next page (footnotes at end of table)

$^{88}\text{Sr}(\text{p,n}),(\text{p,n}\gamma)$  1972Ga36 (continued) $\gamma(^{88}\text{Y})$  (continued)

$E_\gamma$	$I_\gamma^\dagger$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	$E_\gamma$	$I_\gamma^\dagger$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$
716 1	4	1701.0	$3^+,4^+$	984.3	$(4)^+$	1262 2	7	1262.0	$(2,3,4)^-$	0	$4^-$
827 2	22	1219.9	$(0,1)^+$	393.1	$1^+$	1285 2	2	1282.8	$(3,4,5)^+$	0	$4^-$
862 2	$\leq 1$	1701.0	$3^+,4^+$	842.3	$(5)^+$	1362 2	$\leq 1$	1594.6	$3^-,4^-$	232.2	$5^-$
882 2	3	1275.1	$(1,2)^+$	393.1	$1^+$	1595 2	3	1594.6	$3^-,4^-$	0	$4^-$
983 2	14	984.3	$(4)^+$	0	$4^-$	1732 2	$\leq 1$	1732.0	$(-)$	0	$4^-$
1089 2	3	1089.0	$(4,5,6)^-$	0	$4^-$	1761 2	3	1761.0	$(4,5,6)^-$	0	$4^-$
1176 2	2	1569.7		393.1	$1^+$	1832 2	1	1832.0	$3^-,4^-$	0	$4^-$
1234 2	1.5	1234.0		0	$4^-$						

$^\dagger$  Relative intensity at  $E_p=6.4$  MeV (1972Ga36).

$^\ddagger$  From  $p,\gamma(\theta)$ .  $\delta$ 's not adopted by the evaluators.

$^\#$  Observed by 1974Fi18, 1967Iv04, and 1962Mo19.  $E_\gamma$  from 1974Fi18.

$^{88}\text{Sr}(\text{p,n})$ ,  $(\text{p,n}\gamma)$  1972Ga36

Level Scheme

Intensities: Type not specified

Legend

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

