

⁸⁹Y(e,e') 1990Wi13,1974Fi05,1968Pe02

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

Includes (e,e'): giant res.

[1990Wi13](#) (also [1983Sc01](#),[1982Sc08](#)): E=71-262 MeV, 370.9 MeV, 622.8 MeV. Measured $\sigma(\theta)$, deduced form factors and charge and current densities, DWBA analysis for first four excited states. [1983Sc01](#) presented data for 1507 and 1745 levels and [1982Sc08](#) for 909 level.

[1974Fi05](#) (also [1971FiZW](#)): E=45 to 121 MeV. FWHM \approx 0.1% of E(e), measured $\sigma(\theta)$, deduced elastic and inelastic form factors, DWBA analysis.

[1968Pe02](#): E=65 to 70 MeV. Measured $\sigma(\theta)$, deduced L-values and B(EL) values for first five excited states.

Others:

[1977Pi07](#): E=92.5 MeV. Measured $\sigma(\theta)$ for giant resonances, deduced widths and B(EL) values.

[1974Wh05](#), [1971Mo06](#): E=500 MeV.

[1967Sh12](#): E=225 MeV. Measured $\sigma(\theta)$ and L-value for a 2500 level.

(e,e) data and deduced charge distributions: [1971Si17](#) and [1973Si39](#) (25-120 MeV), [1993Wi08](#) (71-262 MeV).

[Additional information 1](#).

⁸⁹Y Levels

E(level) [†]	J π [‡]	L [#]	B(EL) [@]	Comments
0	1/2 ⁻			
909	9/2 ⁺	5	0.00056 5	E(level),L: from 1990Wi13 .
1510	3/2 ⁻	2	0.0097 11	B(E2) \uparrow : others: 0.0131 18 (1974Fi05), 0.012 5 (1968Pe02).
1740	5/2 ⁻	2	0.0164 15	B(E2) \uparrow : others: 0.0197 14 (1974Fi05), 0.014 4 (1968Pe02).
2210	5/2 ⁺	3	0.0258 23	B(E3) \uparrow : other: 0.034 3 (1968Pe02).
2520	7/2 ⁺	3	0.037 3	E(level): 2600 (1977Pi07) with $\Gamma=1.0$ MeV 2. B(E3) \uparrow : other: 0.038 3 (1968Pe02).
2860	(7/2) ⁺	3	0.051 5	B(E3) \uparrow : other: 0.032 3 (1968Pe02).
3.1 $\times 10^3$	(5/2) ⁻	2	0.0145 12	
3720 ^{&}				E(level): 3740 shown in spectrum figure (1974Fi05).
4.0 $\times 10^3$ ^{&}	3/2 ⁻	2		E(level): 4000 (1977Pi07) with $\Gamma=1.0$ MeV 2. L: from 1977Pi07 .
4160 ^{&}				
6.75 $\times 10^3$ ^a		3 ^a		$\Gamma=1.0$ MeV 2 (1977Pi07).
8.05 $\times 10^3$ ^a		3 ^a		$\Gamma=1.2$ MeV 2 (1977Pi07).
13.5 $\times 10^3$ ^a		3 ^a		$\Gamma=1.2$ MeV 2 (1977Pi07).
14.0 $\times 10^3$ ^a 2		2 ^a		$\Gamma=4.5$ MeV 4 (1977Pi07).
16.6 $\times 10^3$ ^a		1 ^a		$\Gamma=3.9$ MeV 2 (1977Pi07).
28.0 $\times 10^3$ ^a 5		2 ^a		$\Gamma=8$ MeV (1977Pi07).

[†] From [1974Fi05](#), unless otherwise stated.

[‡] From Adopted Levels.

[#] From DWBA analysis ([1974Fi05](#)).

[@] B(EL) from DWBA analysis and charge densities. Values for first three excited states are from [1990Wi13](#) and others from [1974Fi05](#).

[&] From [1968Pe02](#).

^a From [1977Pi07](#) for giant resonances.