

${}^{89}\text{Y}(t,p)$ 1975Pr04,1968Ha34

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 114, 1293 (2013)	1-Sep-2013

$J^\pi(\text{target})=1/2^-$.

1975Pr04: E(t)=20 MeV (**1975Pr04**); monoisotopic target, magnetic spectrograph, FWHM=18 keV; $\theta(\text{lab})=9^\circ$ to 72° (13 angles).

DWBA analysis of $\sigma(\theta)$.

1968Ha34: E(t)=12.1 MeV; multigap magnetic spectrograph, $\theta \approx 5^\circ$ to 90° . DWBA analysis of $\sigma(\theta)$.

 ${}^{91}\text{Y}$ Levels

E(level) [†]	L [‡]	E(level) [†]	L [‡]	E(level) [†]	L [‡]	E(level) [†]	L [‡]
0	0	2470 <i>15</i>	2 [@]	3284	4	3793	5
654 <i>10</i>	2	2566 <i>15</i>	0	3320	6	3839	5
926 <i>10</i>	2	2631 [#]		3353	4	3870	2
1186 <i>10</i>	4	2689	(4)	3414	4	3938	(5)
1472 <i>10</i>	2	2822 ^b <i>15</i>	&	3445	4	3966	(2)
1547 [#] <i>10</i>	4	2960		3502	3,4	4096	(2)
1968 <i>10</i>	2	2980	(0)	3544	6	4225 [#]	(0)
2065 <i>10</i>	3	3045	0	3611	(2)	4451	(2)
2158 <i>15</i>	2 [@]	3196 [#]	(4,5)	3684	(2,3)		
2198 ^a <i>10</i>	2	3227	(5)	3751	3,4		

[†] From **1968Ha34** for $E \leq 2570$ keV and for $E=2822$ keV. All other level energies are from **1975Pr04**; authors do not state uncertainties. Data from **1968Ha34** and **1975Pr04** are in excellent agreement. **1975Pr04** scanned the proton spectrum up to 7 MeV but no significant structure corresponding to excited states could be resolved above 4.5 MeV.

[‡] From DWBA analysis and from comparison of $\sigma(\theta)$ with ${}^{90}\text{Zr}(t,p)$ measurements for which L is known (**1975Pr04**).

[#] Possible doublet.

[@] From **1968Ha34**. L=(2) from **1975Pr04**.

& L=(5) from **1975Pr04** but L=(2) from **1968Ha34**. Neither calculation fits the angular distribution well.

^a 2211 in **1975Pr04**.

^b 2832 In **1975Pr04**.