$^{76}\text{Ge}(p,t)$ 1977Gu12,1980Re04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Ameenah R. Farhan	NDS 107, 1923 (2006)	30-Apr-2006

1977Gu12: E(p)=26 MeV. $\sigma(\theta)$ data from 5° to 60° in steps of 5°. Resolution=10 keV. DWBA calculations. Absolute σ's accurate to 20%. See also 1978Ar27 and 1978Ar17 from the same group.

1980Re04: E(p)=35.4 MeV. $\sigma(\theta)$ data from 5° to 45°. Resolution=28 keV. DWBA calculations. Absolute σ's accurate to 15%.

Others:

1984Mo07 and 1984Ca30: analysis of ratio of cross sections for first two 0^+ levels.

1982VeZU: fitting of σ(expt.) for g.s. to calculations.

1982Be45, 1982Be13: E(p)=13 MeV. $\sigma(\theta)$ data for first two 0^+ levels. Resolution=30-50 keV. Coupled-channel and DWBA calculations.

1980Or04: E(p)=52 MeV. $\sigma(\theta)$ data for g.s.

1974Ba67: E(p)=20 MeV. $\sigma(\theta)$ data from 15° to 65°. Resolution=30-40 keV. DWBA calculations. Only 16 levels reported.

1972IsZV: E(p)=51.9 MeV. $\sigma(\theta)$ data. DWBA calculations. Only 13 levels reported.

See 1984Fo17 for theoretical analysis of two neutron transfer data.

^{74}Ge Levels

E(level)[†]	L	Comments
0	0	
597 _3_	2[‡]	
1206 _3_	2	
1461 _3_	(4)	
1481 _3_	(0)	Not resolved from 1461 level. $\sigma(\theta)$ for 1481 does not agree with L=0 DWBA calculation. See 1982Be45 for cross section of this level.
1696[#] _10_		
2165 _10_	1	L: from 1980Re04. 1977Gu12 give L=4; however, the peak is contaminated by an impurity. Moreover, the fit to L=4 DWBA curve does not agree at low angles.
2198 _3_	2	
2542 _3_	3[‡]	
2572[#] _10_	4	
2605[#] _10_	(1)	
2673 _3_	3,4	L: 1977Gu12 give L=4 and 1980Re04 give L=3. Adopted $J^\pi=4^+$.
2699[#] _10_		
2837 _3_	2[‡]	
2862 _3_	0	
2940 _3_	2	
3022 _10_	2	
3053[#] _10_	4	
3111 _10_	5,4	L: 5 (1977Gu12), 4 (1980Re04). Correspondence to L=5 level in (t,p) suggests L=5.
3147 _10_	3,2	L: 3 (1977Gu12), 2 (1980Re04).
3205 _10_	2	
3225[#] _10_	(2,5)	Unresolved doublet.
3342 _10_	3	L: from 1980Re04 for a 3350 level.
3360 _10_	5	E(level): 3380 in 1980Re04.
3388 _10_	3	L: from 1977Gu12. E(level): 3410 in 1980Re04.
3400[#] _10_	2	
3490[@]	(2,4)	
3496 _10_	4	E(level): 3510 in 1980Re04.
3575 _10_	2	Contaminated by an impurity. E=3590 in 1980Re04.

^{76}**Ge(p,t)**　　　**1977Gu12,1980Re04 (continued)**

^{74}Ge Levels (continued)

E(level)[†]	L	Comments
3613[#] _10_	0	
3630 _10_	7,6	L: 7 (1977Gu12), 6 for a 3635 level (1980Re04).
3647[#] _10_	2	
3681[#] _10_		
3706[#] _10_	(2)	
3742[#] _10_	2	
3773[#] _10_	0	
3872[#] _10_	2	
3911[#] _10_	0	
3935[@]	3	
3950[@]	3	
4023 _10_	5	E(level): 4030 in 1980Re04.
4085[@]		L: 1980Re04 quote L=5 in the table, but this assignment not clear from the text.
4138[#] _10_	2	
4164 _10_	2	E(level): 4175 in 1980Re04.
4195[@]	(2)	
4239 _10_	0	L: from 1977Gu12.
4273[#] _10_	(0)	
4292[#] _10_	2	
4311[#] _10_	4	
4385[@]	2	
4405 _10_	0,4	L: 0 (1977Gu12), 4 for a 4400 level (1980Re04).
4515[#] _10_	4	
4535[#] _10_	0	
4591[#] _10_	2	
4627[#] _10_	(2)	
4664[#] _10_	4	
4681[#] _10_	(0)	
4920[#] _10_	(2)	
4951[#] _10_	(2)	
5021[#] _10_	(2)	
5148[#] _10_	(5)	L: from 1972IsZV for a 5131 level.
5352[#] _10_		
5580[#] _10_	(0)	

[†] From 1977Gu12, unless stated otherwise. Uncertainty=3 keV for strong peaks and 10 keV for weak peaks. Above 3 MeV, evaluators assign uncertainty of 10 keV.

[‡] $\sigma(\theta)$ data do not agree well with DWBA calculations.

[#] Seen by 1977Gu12 only.

[@] Seen by 1980Re04 only. Uncertainty not given by authors.