^{148}Gd(p,t) 1989Ma28,1983Fl05

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov, A. Rodionov and G. Shulyak	NDS 136, 163 (2016)	14-Jul-2016

1989Ma28,1986Ma40: ^{148}Gd(p,t), E(p)=34.6 MeV and E(p)=24.9 MeV; measured $\sigma(\theta)$, σ(E,t). ^{146}Gd; deduced levels, L. Q3D spectrometer (FWHM=13-15 keV), isotope separator. DWBA analysis, pairing vibrational model.

1983Fl05: ^{148}Gd(p,t), E(p)=25 MeV; measured σ(E,t), $\sigma(\theta)$. ^{146}Gd deduced levels, J^{π}. Q3D spectrometer (FWHM=8 keV), DWBA analysis.

Other: 1981WiZL.

^{146}Gd Levels

E(level)[†]	L[#]	dσ/dΩ(20°) mb/sr[&]	E(level)[†]	L[#]	dσ/dΩ(20°) mb/sr[&]
0.0	0	71	4368 *6*	(4)	12
1576 *3*	3	8.0	4394 *6*		4.8
1971 *3*	2	15	4409 *6*		5.6
2160 *3*	0	4.7	4483 *6*	(4)	5.6
2612 *3*	2,(4)	5.9	4534 *6*	0	15
2657 *3*	(5)	4.1	4596 *6*	(2,3)	32
2984 *3*	(2)	3.2	4638 *6*	(5,6)	13
3019 *3*	0	74	4656 *6*		9.4
3190 *3*	2	4.3	4686 *6*	(2,3)	19
3238 *3*	2	3.5	4726 *6*	(2,3)	94
3320 *3*			4747 *6*	(2,3)	54
3359 *3*	2	7.6	4793 *6*	(2,3)	27
3383 *3*	2	137	4825 *6*	(2,3)	43
3424 *3*	3	26	4880 *6*	(2,3)	30
3442[‡] *5*		10	4905 *6*		8.0
3463 *3*	(2)	6.1	4941 *6*	(2)	13
3485 *3*	[@]	6.6	4976 *6*	(2,3)	41
3552 *3*	2	5.9	5044 *6*	(2)	12
3642 *3*	(0)	0.4	5086 *6*	(2,3)	77
3687 *3*	(5)	13	5115 *6*		14
3743 *3*	(2,3)	19	5151 *6*		25
3765 *3*	(5)	5.6	5177 *6*		11
3855 *3*	(5)	40	5217 *6*		15
3908 *3*		2.0	5258 *6*	(2)	22
3971 *3*	(3)	35	5289 *6*		9.4
4005 *6*	(4,5)	10	5342 *6*	(4,5)	69
4121 *6*	(4,5)	10	5388 *6*		23
4215 *6*		3.0	5443 *6*		34
4230 *6*	(5)	14	5482 *6*		27
4299 *6*	(2)	8.0	5528 *6*		23
4336 *6*	(4)	43	5549 *6*		25

[†] From 1989Ma28, except as noted.
[‡] From 1983Fl05; dσ/dΩ at 25°, E(p)=25 MeV.
[#] From $\sigma(\theta)$, except L(1579)=3 from syst of L=3 shapes.
[@] $\sigma(\theta)$ consistent with L=0+6, as suggested by known 0^+ and 6^+ states at 3484.9 and 3485.
[&] At E(p)=34.6 MeV.