

$^{148}\text{Nd}(\text{p,t})$ **1996Po12**

Type	Author	History	Citation	Literature Cutoff Date
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1996Po12: $^{148}\text{Nd}(\text{p,t})$, $E=25$ MeV; measured $\sigma(\theta)$. ^{146}Nd ; deduced levels, J^π . Tandem, enriched targets, FWHM=7-9 keV, DWBA analysis. Comparison with microscopic calculations.

Others: **1966Ma30**, **1976LiZH**.

 ^{146}Nd Levels

E(level) [†]	J^π [#]	σ [$\mu\text{b/sr}$] at $\theta=10^\circ$	E(level) [†]	J^π [#]	σ [$\mu\text{b/sr}$] at $\theta=10^\circ$
0	0 ⁺	827 12	2885	(4 ⁺)	24 2
454	2 ⁺	98 4	2917		3.0 7
1042	4 ⁺	30 2	2930	3 ⁻	10 1
1189	3 ⁻	4.3 9	2945	0 ⁺	74 4
1303	0 ⁺	3.6 8	2970	2 ⁺	11 1
1377	(1 ⁻)	1.2 5	2993	3 ⁻	12 1
1471	2 ⁺	10 1	3028	0 ⁺	30 2
1517	5 ⁻	1.6 5	3039	(2 ⁺)	37 3
1603	0 ⁺	279 7	3047	2 ⁺	18 2
1697	0 ⁺	16 2	3093	2 ⁺	11.0 14
1745	4 ⁺	45 3	3126	1 ⁻	27 2
1777	(3 ⁺ ,4 ⁺)	10 4	3148	4 ⁺	5 1
1787	2 ⁺	25 2	3178	2 ⁺	22 2
1905	2 ⁺	3.0 7	3220	2 ⁺	23 2
1978	2 ⁺	50 3	3236	2 ⁺	22
1990	(4 ⁺)	1.5 5	3283	2 ⁺	21 2
2084	(6 ⁺)	21 2	3329	2 ⁺	40 3
2095	(4 ⁺)	2.5 7	3356	(3 ⁻)	27 2
2142	(2 ⁺)	1.6 5	3368	3 ⁻	19 2
2171	(3 ⁻)	0.3 2	3389	1 ⁻	11.0 14
2197	(2 ⁺)	1.2 5	3419	0 ⁺	33 2
2227	3 ⁻	2.9 7	3443	2 ⁺	15 1
2267		4.3 9	3455	4 ⁺	5.2 1
2286	0 ⁺	49 3	3468	3 ⁻	30 2
2335	(3 ⁻)	4.4 9	3481	2 ⁺	7 1
2357	(4 ⁺)	33 2	3496	(5 ⁻ ,6 ⁺)	6.6 12
2438	2 ⁺	6.3 1	3521	3 ⁻	3.6 2
2474	2 ⁺ ,(7 ⁻ ,8 ⁺)	4.2 1	3531	1 ⁻	30 2
2522	(4 ⁺ ,5 ⁻)	9.2 13	3546	(2 ⁺)	9 1
2529	2 ⁺	2.2 6	3558	(5 ⁻)	12.0 16
2552	(2 ⁺)	2.0 9	3569	2 ⁺	18 2
2574	2 ⁺	58 3	3601	4 ⁺	14.0 16
2587	2 ⁺	2.1 6	3610		14.0 16
2612	0 ⁺	50 3	3625	(2 ⁺)	7.2 12
2623	4 ⁺	2.0 6	3646		9.4 14
2641	(1 ⁻)	2.8 7	3667	5 ⁻	47 3
2663	(1 ⁻)	34 3	3670	(2 ⁺)	45 2
2690		3.1 7	3692	(5 ⁻)	8.0 14
2706	(4 ⁺)	7 1	3701	(2 ⁺)	5.0 19
2729	0 ⁺	143 5	3712	2 ⁺	15 2
2749	5 ⁻	3.1 7	3727	2 ⁺	7.0 12
2806		8 1	3742	3 ⁻	28.0 12
2820	0 ⁺	100 4	3754	1 ⁻	25 2
2845	(3 ⁻)	8 1	3762		3 1
2856	3 ⁻	4.3 9	3782	(2 ⁺)	4.8 1
2871	2 ⁺	63 3	3789		1.0 4

Continued on next page (footnotes at end of table)

$^{148}\text{Nd}(\text{p,t})$ **1996Po12 (continued)** ^{146}Nd Levels (continued)

<u>E(level)[†]</u>	<u>J^π#</u>	<u>σ [μb/sr] at θ=10°</u>	<u>E(level)[†]</u>	<u>J^π#</u>	<u>σ [μb/sr] at θ=10°</u>
3810	3 ⁻	29 2	4442	3 ⁻	8.2 12
3830		6.0 12	4461	(3 ⁻)	9.0 14
3847		2.0 6	4479 [‡]		21
3866	(2 ⁺)	6 1	4491	(3 ⁻)	9.0 14
3875	(5 ⁻)	6 1	4501	(3 ⁻)	7.0 12
3884	(4 ⁺)	6 1	4517	(4 ⁺)	13.0 16
3892		1.4 6	4533	(3 ⁻)	9.0 14
3913	(3 ⁻)	7.6 12	4545	4 ⁺	8.0 14
3922	3 ⁻	4.0 14	4558	(3 ⁻)	7.4 12
3931		6 2	4571	(3 ⁻)	11.0 12
3939	(2 ⁺)	9.2 14	4591	(2 ⁺ ,3 ⁻)	9.6 14
3949	(2 ⁺)	7.0 12	4601 [‡]		9
4006	(2 ⁺)	4.6 1	4637 [‡]		9
4022 [‡]		2	4649	(3 ⁻)	9.6 13
4031 [‡]		6	4669 [‡]		21
4039	(2 ⁺ ,3 ⁻)	10.0 16	4683 [‡]		10
4054	(2 ⁺)	14.0 16	4696	(3 ⁻)	9.0 16
4066	(2 ⁺)	4.2 8	4707	(3 ⁻)	8.0 12
4095 [‡]		13	4720 [‡]		20
4121	(2 ⁺)	14 2	4738	3 ⁻	12.0 16
4138	(2 ⁺ ,3 ⁻)	14.0 16	4755	3 ⁻	12.0 16
4168	2 ⁺	15.0 16	4765	2 ⁺	7.0 12
4179	3 ⁻	12.0 16	4773 [‡]		14
4196	2 ⁺	10.014	4784 [‡]		12
4212	2 ⁺	9.0 14	4794 [‡]		7
4243	1 ⁻	36 2	4802	(3 ⁻)	10.0 14
4256	2 ⁺	9.6 14	4822 [‡]		16
4269		17	4832 [‡]		15
4302	(4 ⁺)	7.0 12	4860 [‡]		6
4310	(1 ⁻)	8.4 12	4866 [‡]		10
4325	(4 ⁺)	7.6 12	4877 [‡]		7
4341	(2 ⁺ ,3 ⁻)	6.4 12	4887 [‡]		12
4360		7	4899	4 ⁺	7.5 12
4380	(3 ⁻)	7.6 12	4911 [‡]		13
4388	(2 ⁺)	8.6 12	4931 [‡]		12
4404	4 ⁺	5 1	4948	(4 ⁺)	1.2 16
4411	(4 ⁺)	5.21	4964	(3 ⁻)	10.0 14
4422	(3 ⁻)	7.0 12	4982	3 ⁻	11.0 4

[†] From 1996Po12. ΔE≤2 keV for E(level)≈2.5 MeV, increasing up to 2-7 keV at the highest energies.

[‡] The evaluators are not adopted the level because its spin is not deduced and the level is not supported by other data.

[#] From comparison experimental and calculated differential cross sections (1996Po12).