^{144}Nd(p,p′),(d,d′) 1993Pi06

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	A. A. Sonzogni	NDS 93, 599 (2001)	1-Dec-2000

E_p=30.3, 51.0 MeV, E_d=51.1 MeV. Measured $\sigma(\theta)$, deduced level J, π and β_λ parameter. Magnetic spectrograph, Resolution=12-15 keV in (p,p′) and Resolution=15-22 keV in (d,d′).

See ^{144}Nd(p,p′) dataset (1991Co01) for additional (p,p′) data. Agreement with this dataset can be found for level energies lower than 2.2 MeV.

Notation: $\beta_{\lambda p}=\beta_\lambda$ for (p,p′) reactions and $\beta_{\lambda d}=\beta_\lambda$ for (d,d′).

^{144}Nd Levels

E(level)‡	Jπ†	Comments
696	2^+	$\beta_{\lambda p}$=0.1200, $\beta_{\lambda d}$=0.1180.
1314	4^+	$\beta_{\lambda p}$=0.0600, $\beta_{\lambda d}$=0.0530. $\beta_{\lambda p}(2_1^+\text{->}4^+)$=0.1450, $\beta_{\lambda d}(2_1^+\text{->}4^+)$=0.1230.
1510	3^-	$\beta_{\lambda p}$=0.1255, $\beta_{\lambda d}$=0.1180.
1561	2^+	$\beta_{\lambda p}$=0.0130, $\beta_{\lambda d}$=0.0140. $\beta_{\lambda p}(2_1^+\text{->}2^+)$=0.1600, $\beta_{\lambda d}(2_1^+\text{->}2^+)$=0.1900.
1791	6^+	$\beta_{\lambda p}$=0.0200, $\beta_{\lambda d}$=0.0190.
2073	2^+	$\beta_{\lambda p}$=0.0310, $\beta_{\lambda d}$=0.0330. $\beta_{\lambda p}(2_1^+\text{->}2^+)$=−0.0800, $\beta_{\lambda d}(2_1^+\text{->}2^+)$=−0.0800.
2093	5^-	$\beta_{\lambda p}$=0.0548, $\beta_{\lambda d}$=0.0400.
2109	4^+	$\beta_{\lambda p}$=0.0560, $\beta_{\lambda d}$=0.0520.
2185	(1^-)	$\beta_{\lambda p}$=0.0066, $\beta_{\lambda d}$=0.0066.
2217	(6^+)	$\beta_{\lambda p}$=0.0310.
2295	4^+	$\beta_{\lambda p}$=0.0097, $\beta_{\lambda d}$=0.0101.
2327	(0^+)	$\beta_{\lambda p}$=0.0028, $\beta_{\lambda d}$=0.0030.
2367	2^+	$\beta_{\lambda p}$=0.0238, $\beta_{\lambda d}$=0.0241.
2451	4^+	$\beta_{\lambda p}$=0.0232, $\beta_{\lambda d}$=0.0230.
2527	2^+	$\beta_{\lambda p}$=0.0303, $\beta_{\lambda d}$=0.0300.
2590	(1^-)	$\beta_{\lambda p}$=0.0038.
2606		
2675	(0^+)	$\beta_{\lambda p}$=0.0026, $\beta_{\lambda d}$=0.0024.
2694	2^+	$\beta_{\lambda p}$=0.0105, $\beta_{\lambda d}$=0.0098.
2717	(1^-)	$\beta_{\lambda p}$=0.0032, $\beta_{\lambda d}$=0.0030.
2779	3^-	$\beta_{\lambda p}$=0.0560, $\beta_{\lambda d}$=0.0547.
2833	3^-	$\beta_{\lambda p}$=0.0231, $\beta_{\lambda d}$=0.0218.
2898	2^+	$\beta_{\lambda p}$=0.0131, $\beta_{\lambda d}$=0.0105.
2969	3^-	$\beta_{\lambda p}$=0.0264, $\beta_{\lambda d}$=0.0200.
2987	4^+	$\beta_{\lambda p}$=0.0280, $\beta_{\lambda d}$=0.0250.
3026	5^-	$\beta_{\lambda p}$=0.0220, $\beta_{\lambda d}$=0.0200.
3049	5^-	$\beta_{\lambda p}$=0.0490, $\beta_{\lambda d}$=0.0440.
3097	$(0^+,1^-)$	
3130	1^-	$\beta_{\lambda p}$=0.0029, $\beta_{\lambda d}$=0.0028.
3180	(6^+)	$\beta_{\lambda p}$=0.0260, $\beta_{\lambda d}$=0.0170.
3214	3^-	$\beta_{\lambda p}$=0.0098, $\beta_{\lambda d}$=0.0105.
3240	(3^-)	$\beta_{\lambda p}$=0.0080, $\beta_{\lambda d}$=0.0082.
3289	(3^-)	$\beta_{\lambda p}$=0.0170, $\beta_{\lambda d}$=0.0140.
3340	4^+	$\beta_{\lambda p}$=0.0152, $\beta_{\lambda d}$=0.0158.
3382	(4^+)	$\beta_{\lambda p}$=0.0148, $\beta_{\lambda d}$=0.0148.
3401	5^-	$\beta_{\lambda p}$=0.0190.
3461	4^+	$\beta_{\lambda p}$=0.0128, $\beta_{\lambda d}$=0.0128.
3493	5^-	$\beta_{\lambda p}$=0.0224, $\beta_{\lambda d}$=0.0182.
3522	2^+	$\beta_{\lambda p}$=0.0170.
3555	2^+	$\beta_{\lambda p}$=0.0134.
3658	3^-	$\beta_{\lambda p}$=0.0164.

Continued on next page (footnotes at end of table)

^{144}Nd(p,p′),(d,d′) 1993Pi06 (continued)

^{144}Nd Levels (continued)

† As given by authors, from $\sigma(\theta)$ following coupled-channel calculations.
‡ level uncertainties are smaller than 2 keV for energies lower than 2.2 MeV and up to 4 keV for higher energies.