¹⁴⁵**Pr** β^- decay **1976Ja01**

		History		
Туре	Author	Citation	Literature Cutoff Date	
Full Evaluation	E. Browne, J. K. Tuli	NDS 110, 507 (2009)	1-Oct-2008	

Parent: ¹⁴⁵Pr: E=0.0; $J^{\pi}=7/2^+$; $T_{1/2}=5.984$ h *10*; $Q(\beta^-)=1805$ 7; $\%\beta^-$ decay=100.0 Additional information 1.

Measured: $E\gamma$, $\gamma\gamma$ coin (1976Ja01,1975Hi03,1969Gr32,1966Bu13,1962Ho16); E,I γ (1980Ge11), β^- (1962Ho16,1954Ma07). $E\beta^-=1805 \ 10 \ (1962Ho16)$. Other: $\leq 1700 \ (1954Ma07)$.

145Nd Levels

E(level)	J^{π^+}	E(level)	$J^{\pi \dagger}$	E(level)	$J^{\pi \dagger}$	E(level)	$J^{\pi \dagger}$
0.0	7/2-	780.43 1	3/2-	1085.25 1	3/2+	1285.52 5	5/2-
67.23 1	3/2-	920.681 5	9/2-	1150.273 <i>3</i>	7/2-	1338.65 6	5/2-,7/2-
72.489 <i>4</i>	5/2-	936.94 <i>3</i>	5/2-	1161.02 <i>1</i>	3/2-,5/2,7/2-	1403.920 6	$(5/2^{-})$
657.676 4	$11/2^{-}$	1011.01 2	$11/2^{(+)}$	1162.34 6	9/2-	1527.07 2	9/2-
748.278 4	9/2-	1051.435 4	7/2-,5/2-	1249.73 2	5/2-		

[†] Adopted values.

β^{-} radiations

E(decay)	E(level)	$I\beta^{-\dagger}$	Log ft	Comments
(278 7)	1527.07	0.016 1	7.88 5	av E β =78.4 22
(401 7)	1403.920	0.092 1	7.64 3	av $E\beta = 118.2 \ 24$
(466 7)	1338.65	2.1×10 ⁻³ 3	9.50 7	av $E\beta = 140.3\ 25$
(5197)	1285.52	$20 \times 10^{-4} 4$	9.68 9	av E β =158.8 25
(555 7)	1249.73	7×10 ⁻³ 5	9.2 4	av E β =172 3
(643 7)	1162.34	0.011 1	9.25 5	av $E\beta = 203 \ 3$
(644 7)	1161.02	0.024 1	8.9 <i>3</i>	av $E\beta = 204 \ 3$
(655 7)	1150.273	0.220 6	7.98 2	av $E\beta = 208 \ \beta$
(754 7)	1051.435	0.40 1	7.93 2	av E β =245 3
(884 7)	920.681	0.221 5	8.42 2	av E β =295 3
(1057 7)	748.278	1.04 2	8.05 1	av E β =364 3
(1733 7)	72.489	0.32 7	9.37 10	av $E\beta = 651 3$
1805 10	0.0	97.6 1	6.96 7	av E β =683 3

[†] Absolute intensity per 100 decays.

$\gamma(^{145}\text{Nd})$

Iγ normalization: I(748γ)=0.525% 9 (1980Ge11).

E_{γ}^{\ddagger}	I_{γ} [‡] &	E_i (level)	\mathbf{J}_i^{π}	$E_f J_f^{\pi}$	Mult. [@]	α^{\dagger}	Comments
67.10 <i>1</i>	17 9	67.23	3/2-	0.0 7/2-	E2	9.55	$\alpha(K)=3.33 5; \ \alpha(L)=4.84 8; \ \alpha(M)=1.109 \ 18; \ \alpha(N+)=0.269 5 \\ \alpha(N)=0.239 \ 4; \ \alpha(O)=0.0302 \ 5; \ \alpha(P)=0.0001423 \ 21$
72.500 4	498 [#] 26	72.489	5/2-	0.0 7/2-	M1	3.57	$\begin{array}{l} \alpha(\mathrm{K})=3.04 \ 5; \ \alpha(\mathrm{L})=0.425 \ 6; \ \alpha(\mathrm{M})=0.0901 \ 13; \\ \alpha(\mathrm{N}+)=0.0234 \ 4 \\ \alpha(\mathrm{N})=0.0202 \ 3; \ \alpha(\mathrm{O})=0.00306 \ 5; \ \alpha(\mathrm{P})=0.000197 \ 3 \\ \mathrm{I}_{\gamma}: \ \mathrm{I}_{\gamma}=0.20\% \ 4 \ (1966\mathrm{Bu}13). \end{array}$

Continued on next page (footnotes at end of table)

¹⁴⁵Pr β^- decay 1976Ja01 (continued)

γ (¹⁴⁵Nd) (continued)

91.1 14 74.278 9/2 657.676 11/2 1305 15 0.63 101.435 7/2 - 5/2 90.081 9/2 242.91 3 3.13 1403.920 5/2 - 161.02 3/2 - 5/2 - 7/2 - 262.886 9.7 9 5 90.061 1/2 - 161.02 3/2 - 5/2 - 7/2 - 303.192 12.5 5 101.10 11/2 - 748.278 9/2 - 318.666 26.2 5 1403.920 5/2 - 1085.25 3/2 + 353.481 5 70 1 1403.920 5/2 - 1085.43 7/2 - 1/2 - 402.101.80 1.3 3 1150.273 7/2 - 748.278 9/2 - 1/2 - 475.060 24 8.1 5 1527.07 9/2 - 1051.435 7/2 - 5/2 - 1/2 - 516.071 1/2 1.3 4 1150.273 7/2 - 657.676 11/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 - 1/2 -	${\rm E_{\gamma}}^{\ddagger}$	I_{γ} [‡] &	E _i (level)	\mathbf{J}_i^π	E_f	\mathbf{J}_{f}^{π}	Comments
130.95 <i>l</i> 5 06.3 1051.435 7/2 ⁻ ,5/2 ⁻ 920.681 9/2 ⁻ 242.91 3 1.3 1403.920 (5/2 ⁻) 116.02 3/2 ⁻ ,5/2.7/2 ⁻ 262.346 5 7.9 5 920.681 9/2 ⁻ 748.278 9/2 ⁻ 318.666 6 2.62 5 1403.920 (5/2 ⁻) 148.278 9/2 ⁻ 332.841 5 70 <i>l</i> 1403.920 (5/2 ⁻) 1051.435 7/2 ⁻ ,5/2 ⁻ 1 ₇ : 1(352y+353y)=88 2 (1980Ge11). 335.344 64 7 <i>l</i> 101.01 11/2 ⁺⁰ 657.676 11/2 ⁻ 1 ₇ : 1(352y+353y)=88 2 (1980Ge11). 336.841 5 05.2 1527.07 9/2 ⁻ 1162.34 9/2 ⁻ 402.01 80 1.3 3 1150.273 7/2 ⁻ 748.278 9/2 ⁻ 4448.9' 5 40.4 467.03 3 4 9.5 1403.920 (5/2 ⁻) 976.94 5/2 ⁻ 475.062 4 8.1 5 1527.07 9/2 ⁻ 101.161 11/2 ⁻⁺ 475.062 4 8.1 5 1527.07 9/2 ⁻ 101.161 11/2 ⁻⁺ 516.071 <i>l</i> 1.4 1162.34 9/2 ⁻ 657.676 11/2 ⁻ 516.671 <i>l</i> 1.4 1 162.34 9/2 ⁻ 657.676 11/2 ⁻ 516.671 <i>l</i> 1.4 1 162.34 9/2 ⁻ 101.101 11/2 ⁺⁺ 667.668 5 122 ² <i>l</i> 2 657.676 11/2 ⁻ 516.671 <i>l</i> 1.4 1 162.34 9/2 ⁻ 72.480 5/2 ⁻ 707.949 <i>l</i> 2 190.8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 707.949 <i>l</i> 2 190.8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 703.949 <i>l</i> 2 190.8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 703.949 <i>l</i> 1.61 <i>k</i> 8 780.43 3/2 ⁻ 72.7488 5/2 ⁻ 780.453 7 7.8 8 790.641 9/2 ⁻ 72.480 5/2 ⁻ 780.453 7 7.8 8 790.641 9/2 ⁻ 780.453 7 7.8 8 790.641 9/2 ⁻ 780.453 7 7.8 8 790.641 9/2 ⁻ 780.757 5 5 <i>j</i> 900.641 9/2 ⁻ 780.757 5 5 <i>j</i> 900.641 9/2 ⁻ 780.757 11.5 1 527.07 9/2 ⁻ 74.827 8 9/2 ⁻ 74.828 5/1 ⁻ 767.946 <i>j</i> 2 100.8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 707.949 <i>l</i> 2 10.0.8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 707.949 <i>l</i> 2 10.0.8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 707.946 <i>l</i> 2 10.56 101.01 11/2 ^{-l} 10.0.72 ⁻ 78.890.15 4.88 ⁶ 9 1051.435 72 ⁻ ,572 ⁻ 0.0 7/2 ⁻ 74.890 5/2 ⁻ 101.02 1.15 5 1.15 1.577.07 9/2 ⁻ 72.480 5/2 ⁻ 101.02 1.16 6 101.01 11/2 ^{l+1} 10.0 7/2 ⁻ 72.480 5/2 ⁻ 101.02 1.16 6 101.01 11/2 ^{l+1} 10.72.480 5/2 ⁻ 103.781 <i>l</i> 6 103.31 150.233 72 ⁻ 72.480 5/2 ⁻ 103.781 <i>l</i> 6 103.31 150.233 72 ⁻ 72.480 5/2 ⁻ 103.781 <i>l</i> 6 10.33 1161.02 3/2 ⁻ ,572.7 ⁻ 72.480 5/2 ⁻ 103.781 <i>l</i> 6 10.33 1161.02 3/2 ⁻ ,572.7 ⁻ 72.480 5/2 ⁻ 103.781 <i>l</i> 6 10.33 1161.02 3/2 ⁻ ,572.	91.1 2	14 <i>I</i>	748.278	9/2-	657.676	11/2-	
242.91 <i>J</i> 3, 31.3 1403.920 (5/2) 1161.02 3/2, 5/2.7/2 ⁻ 262.386 <i>j</i> 7.9 <i>5</i> 920.681 9/2 ⁻ 657.676 11/2 ⁻ 263.94 5.3 <i>5</i> 1011.01 11/2 ⁽⁴⁾ 748.278 9/2 ⁻ 318.666 <i>6</i> 26.2 <i>5</i> 1403.920 (5/2 ⁻) 1085.25 3/2 ⁺ 352.481 <i>5</i> 70 <i>I</i> 1403.920 (5/2 ⁻) 1085.25 3/2 ⁺ 352.481 <i>5</i> 71 <i>I</i> 1011.01 11/2 ⁽⁴⁾ 657.676 11/2 ⁻ 1y: 1(352y+353y)=88 2 (1980Ge11). 353.544 <i>64</i> 7 <i>I</i> 1011.01 11/2 ⁽⁴⁾ 657.676 11/2 ⁻ 1y: 1(352y+353y)=88 2 (1980Ge11). 364.81 25 0.5 2 157.07 9/2 ⁻ 1163.44 9/2 ⁻ 442.00 1.3 3 1150.273 7/2 ⁻ 748.278 9/2 ⁻ 442.00 <i>1</i> .3 4 9.5 1403.920 (5/2 ⁻) 99.694 5/2 ⁻ 447.063 4 9.5 1403.920 (5/2 ⁻) 99.694 5/2 ⁻ 492.604 <i>4</i> 8.1 <i>5</i> 1527.07 9/2 ⁻ 1051.435 7/2 ⁻ 5/2 ⁻ 492.604 <i>4</i> 8.1 <i>5</i> 1527.07 9/2 ⁻ 1051.435 7/2 ⁻ 5/2 ⁻ 492.604 <i>5</i> 48.0 ⁴ <i>I I</i> 1150.273 7/2 ⁻ 657.676 11/2 ⁻ 504.63 <i>I 0</i> 1.1 <i>4</i> 1162.34 9/2 ⁻ 657.676 11/2 ⁻ 504.63 <i>I 0</i> 1.3 4 <i>I</i> 1527.07 9/2 ⁻ 1001.01 11/2 ⁽⁴⁺⁾ 606.42 <i>6</i> 3.3 <i>6</i> 157.07 9/2 ⁻ 292.0681 9/2 ⁻ 707.049 <i>I 2</i> 19.0 8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 707.049 <i>I 2</i> 19.0 8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 707.049 <i>I 2</i> 19.0 8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 707.491 <i>I</i> 16.1 8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 707.491 <i>I</i> 16.1 8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 707.491 <i>I</i> 16.1 8 780.43 3/2 ⁻ 67.23 3/2 ⁻ 86445 <i>G</i> 2.3 5 936.94 5/2 ⁻ 72.480 5/2 ⁻ 780.453 7.8 8 780.43 3/2 ⁻ 0.0 7/2 ⁻ 780.453 7.8 8 780.43 3/2 ⁻ 0.0 7/2 ⁻ 780.957 5 <i>S I</i> 936.94 5/2 ⁻ 72.480 5/2 ⁻ 869.38 9 1.1 6 157.07 9/2 ⁻ 67.23 3/2 ⁻ 869.38 9 1.1 6 157.07 9/2 ⁻ 67.23 3/2 ⁻ 1051.02 16.6 1011.01 11/2 ⁽⁴⁾ 0.0 7/2 ⁻ 107.997.07 1.88 ⁴ 9 3.90.681 9/2 ⁻ 0.0 7/2 ⁻ 107.480 5/2 ⁻ 107.997.07 1.88 ⁴ 9 3.90.681 9/2 ⁻ 0.0 7/2 ⁻ 107.480 5/2 ⁻ 107.997.07 1.88 ⁴ 9 3.90.681 9/2 ⁻ 0.0 7/2 ⁻ 107.480 5/2 ⁻ 108.423 370 ⁴ 8 1150.273 7/2 ⁻ 107.480 5/2 ⁻ 108.523 370 ⁴ 8 1150.273 7/	130.95 15	0.6 3	1051.435	7/2-,5/2-	920.681	9/2-	
202.286 9 7.9 3 9.20.81 9/2 05.70 101.2 202.34 3.3 5 101.01 11/2*0 748.278 9/2 303.192 9 12.5 5 1051.435 7(2 ⁻ , 5/2 ⁻ 748.278 9/2 335.344 64 7 1 101.01 11/2*0 657.676 11/2 335.344 64 7 1 101.01 11/2*0 657.676 11/2 344.84 25 0.5 2 157.07 9/2 ⁻ 1162.34 9/2 ⁻ 420.101 80 13.3 1150.273 7/2 ⁻ 748.278 9/2 ⁻ 424.82 0/5 20.4 1403.920 (5/2 ⁻) 936.94 5/2 ⁻ 475.066 24 8.1 5 157.07 9/2 ⁻ 1051.435 7/2 ⁻ , 5/2 ⁻ 424.82 0/5 20.4 1403.920 (5/2 ⁻) 936.94 5/2 ⁻ 475.066 24 8.1 5 157.07 9/2 ⁻ 101.101 11/2 ⁺ 516.071 15 14 1 152.707 9/2 ⁻ 101.101 11/2 ⁺ 516.071 15 14 1 152.707 9/2 ⁻ 101.101 11/2 ⁺ 516.071 15 14 1 152.707 9/2 ⁻ 101.101 11/2 ⁺ 516.071 15 14 1 152.707 9/2 ⁻ 101.101 11/2 ⁺ 516.071 15 14 1 152.707 9/2 ⁻ 101.01 11/2 ⁺ 516.071 15 14 1 152.707 9/2 ⁻ 101.01 11/2 ⁺ 516.071 15 14 1 152.707 9/2 ⁻ 101.01 11/2 ⁺ 516.071 15 14 7 182.73 9/2 ⁻ 72.480 5/2 ⁻ 707.949 12 19.0.8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 713.244 17 16.1 8 780.43 3/2 ⁻ 67.23 3/2 ⁻ 780.45 7 7.8 8 1000 4 788.278 9/2 ⁻ 74.480 5/2 ⁻ 780.45 3 7.8 8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 780.45 3 7.8 8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 780.45 3 7.8 8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 780.45 3 7.8 8 780.43 3/2 ⁻ 72.480 5/2 ⁻ 780.45 3 7.8 8 780.44 3/2 ⁻ 72.480 5/2 ⁻ 780.45 3 7.8 8 780.44 3/2 ⁻ 72.480 5/2 ⁻ 780.45 3 7.8 8 780.44 3/2 ⁻ 72.480 5/2 ⁻ 780.45 3 7.8 8 780.44 3/2 ⁻ 72.480 5/2 ⁻ 780.45 3 7.8 8 780.44 3/2 ⁻ 72.480 5/2 ⁻ 101.02 11.02 11.16 11.17 11/2 ⁺¹ 0.0 7/2 ⁻ 978.969 15 488 ⁷ 9 1051.435 72 ⁻ 52 ⁻ 72.480 5/2 ⁻ 101.10 2 11.6 1.16 10.23 72 ⁻ 52 ⁻ 72.480 5/2 ⁻ 101.10 2 11.6 1.16 10.23 72 ⁻ 52 ⁻ 72.480 5/2 ⁻ 101.10 2 11.6 1.16 10.23 72 ⁻ 52/2 ⁻ 72.480 5/2 ⁻ 101.10 2 11.6 1.16 10.23 72 ⁻ 52/2 ⁻ 72.480 5/2 ⁻ 101.10 2 11.6 1.16 11.10 23 ⁻ 52.57/2 ⁻ 72.480 5/2 ⁻ 101.10 2 11.2 10.5 10.13 31.16 10.2 32 ⁻ 52.57/2 ⁻ 72.480 5/2 ⁻ 103.33 70 ⁶ 8 1150.273 72 ⁻ 72.480 5/2 ⁻ 103.33 70 ⁶ 8 1150.273 72 ⁻ 72.480 5/2 ⁻ 103.33 70 ⁶ 8 1150.273 72 ⁻ 72.480 5/2 ⁻ 118.248 7 15.3 12.497.3 5/2 ⁻ 72.480 5/2	242.91 3	3.1 3	1403.920	$(5/2^{-})$	1161.02	3/2 ⁻ ,5/2,7/2 ⁻	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	262.886 9	1.9.5	920.681	9/2	05/.0/0	11/2	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	202.94	5.5 J 12 5 5	1011.01	$\frac{11}{2}$	748.278	9/2 $9/2^{-}$	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	318 666 6	26.2.5	1403 920	$(5/2^{-})$	1085 25	$3/2^+$	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	352.481 5	70 1	1403.920	$(5/2^{-})$	1051.435	$7/2^{-},5/2^{-}$	I_{γ} : I(352 γ +353 γ)=88 2 (1980Ge11).
364.81 250.5 2157.079/2-1163.449/2- $^{4}24.92$ /51.3 4 $^{4}44.92$ /51.3 4 $^{4}44.92$ /51.3 4 $^{4}44.92$ /51.3 4 $^{4}44.92$ /51.3 4 $^{4}48.5^{0}$ 55.0 4 $^{4}47.03$ 34.9 5 $^{4}25.64.2$ 81.5 $^{1}25.67.77$ 1051.435 7/2-,5/2- $^{1}45.606.24$ 81.5 $^{1}52.707$ 9/2- $^{1}56.76.76$ 11/2- $^{50.67.76}$ 11/2- $^{50.67.76}$ 11/2- $^{50.67.76}$ 11/2- $^{50.67.76}$ 15/2- $^{50.67.76}$ 11/2- $^{60.64.2}$ 3.3 6 $^{57.76.84}$ 12/2+ $^{60.64.2}$ 63.3 6 $^{57.77.79}$ 9/2- $^{77.94.91}$ 10.8 $^{78.77.79.79.79}$ 9/2- $^{77.94.91}$ 9.8 $^{78.77.87.79.79.79.79.79.79.79.79.79.79.79.79.79$	353.544 64	71	1011.01	$11/2^{(+)}$	657.676	11/2-	I_{γ} : I(352 γ +353 γ)=88 2 (1980Ge11).
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	364.81 25	0.5 2	1527.07	9/2-	1162.34	9/2-	
*424.92 / 5 1.3 4 *448.56 ± 0.4 467.00 3 40 5 100.920 $(5/2^-)$ 936.94 $5/2^-$ 475.606 24 8.1 5 1527.07 9/2 $-$ 1051.435 7/2 $-$ 5/2 $-$ 492.624 5 48.0 ⁴ / 2 1150.273 7/2 657.676 11/2 $-$ 504.65 / 6 1.1 4 1162.34 9/2 $-$ 657.676 11/2 $-$ 516.071 / 5 14 / 1162.34 9/2 $-$ 72.010.10 11/2 $^{(4)}$ 606.42 6 3.3 6 1527.07 9/2 $-$ 920.681 9/2 $-$ 623.502 6 45.4 ⁴ / 2 1403.920 $(5/2^-)$ 780.43 3/2 $-$ 657.668 5 122 44 2 657.676 11/2 $-$ 0.0 7/2 $-$ 675.795 5 979 47 / 4 748.278 9/2 $-$ 72.489 5/2 $-$ 713.224 / 7 16.1 8 780.43 3/2 $-$ 67.23 3/2 $-$ 748.278 5 1000 4 748.278 9/2 $-$ 0.0 7/2 $-$ %1y=0.525 9 (1980Ge11) 778.77 / 5 1.1 5 1527.07 9/2 $-$ 748.278 9/2 $-$ 72.489 5/2 $-$ 780.45 3 7.8 8 780.43 3/2 $-$ 0.0 7/2 $-$ 848.237 / 71 38 48 920.681 9/2 $-$ 72.489 5/2 $-$ 780.45 3 7.8 8 780.43 3/2 $-$ 0.0 7/2 $-$ 848.237 / 71 38 48 920.681 9/2 $-$ 72.489 5/2 $-$ 869.38 9 1.1 6 1527.07 9/2 $-$ 67.23 3/2 $-$ 869.38 9 1.1 6 1527.07 9/2 $-$ 67.23 3/2 $-$ 869.38 9 1.1 6 1527.07 9/2 $-$ 67.23 3/2 $-$ 869.94 % 8 1.7 6 936.94 5/2 $-$ 67.23 3/2 $-$ 869.94 % 8 1.7 6 936.94 5/2 $-$ 67.23 3/2 $-$ 869.94 % 8 1.7 6 936.94 5/2 $-$ 0.0 7/2 $-$ 937.05 5 5 / 936.94 5/2 $-$ 0.0 7/2 $-$ 937.05 5 5 / 936.94 5/2 $-$ 0.0 7/2 $-$ 937.05 5 5 / 936.94 5/2 $-$ 0.0 7/2 $-$ 978.969.15 488 49 9 1051.433 7/2 $-$ 5/2 $-$ 0.0 7/2 $-$ 1011.02 1.6 6 1011.01 11/2 $^{(4)}$ 0.0 7/2 $-$ 1012.745 2/1 10.5 6 1085.25 3/2 $^{+}$ 72.489 5/2 $-$ 1051.412 5 34 47 6 1051.435 7/2 $-$ 5/2 $-$ 0.0 7/2 $-$ 1051.412 5 34 47 6 1051.435 7/2 $-$ 5/2 $-$ 0.0 7/2 $-$ 1063.82 3 10.8 5 1161.02 3/2 $-$ 5/2/7 $-$ 0.0 7/2 $-$ 1079.91 18.2 7 1085.25 3/2 $^{+}$ 72.489 5/2 $-$ 1053.778 16 101.3 3 1161.02 3/2 $-$ 5/2/7/2 $-$ 72.489 5/2 $-$ 1053.778 16 101.3 3 1161.02 3/2 $-$ 5/2/7/2 $-$ 72.489 5/2 $-$ 1182.48 7 1.5 3 1249.73 5/2 $-$ 67.23 3/2 $-$ 1182.48 7 1.5 3 1249.73 5/2 $-$ 72.489 5/2 $-$ 1182.48 7 1.5 3 1249.73 5/2 $-$ 72.489 5/2 $-$ 1182.48 7 1.5 3 1249.73 5/2 $-$ 72.489 5/2 $-$ 1182.48 7 1.5 3 1249.73 5/2 $-$ 72.489 5/2 $-$ 1182.48 7 1.5 3 1249.73 5/2 $-$ 72.489 5/2 $-$ 1182.48 7 1.5 3 1249.73 5/2	402.101 80	1.3 <i>3</i>	1150.273	7/2-	748.278	9/2-	
*448.29' 5 204 467.03 3 49 5 1403.920 (5/2 ⁻) 936.94 5/2 ⁻ 492.624 5 48.0 [#] 12 1150.273 7/2 ⁻ 657.676 11/2 ⁻ 504.65 16 1.14 1162.34 9/2 ⁻ 657.676 11/2 ⁻ 504.65 16 1.14 1 152.107 9/2 ⁻ 1011.01 11/2 ⁽⁴⁾ 606.42 6 3.3 6 1527.07 9/2 ⁻ 202.681 9/2 ⁻ 623.502 6 45.4 [#] 12 1403.920 (5/2 ⁻) 780.43 3/2 ⁻ 657.668 5 122 [#] 2 657.676 11/2 ⁻ 0.0 7/2 ⁻ 707.949 12 190.8 780.43 3/2 ⁻ 72.489 5/2 ⁻ 713.224 17 16.18 780.43 3/2 ⁻ 67.23 3/2 ⁻ 748.278 5 1000 4 748.278 9/2 ⁻ 0.0 7/2 ⁻ 780.45 3 7.88 [#] 3 920.681 9/2 ⁻ 72.489 5/2 ⁻ 778.45 3 7.88 [#] 3 920.681 9/2 ⁻ 72.489 5/2 ⁻ 780.45 3 7.88 [#] 3 920.681 9/2 ⁻ 72.489 5/2 ⁻ 780.45 3 7.88 [#] 3 920.681 9/2 ⁻ 72.489 5/2 ⁻ 780.45 3 7.88 [#] 3 920.681 9/2 ⁻ 72.489 5/2 ⁻ 848.425 6 2.3 5 93.694 5/2 ⁻ 72.489 5/2 ⁻ 849.379 1.1 6 1527.07 9/2 ⁻ 657.676 11/2 ⁻ 869.97 [#] 8 1.76 936.94 5/2 ⁻ 0.0 7/2 ⁻ 869.93 89 1.1 6 1527.07 9/2 ⁻ 657.676 11/2 ⁻ 869.93 89 1.1 6 1527.07 9/2 ⁻ 657.676 11/2 ⁻ 869.97 [#] 8 1.76 936.94 5/2 ⁻ 0.0 7/2 ⁻ 978.969 15 488 [#] 9 1051.435 7/2 ⁻ ,5/2 ⁻ 0.0 7/2 ⁻ 978.969 15 488 [#] 9 1051.435 7/2 ⁻ ,5/2 ⁻ 72.489 5/2 ⁻ 1011.0 2 1.6.6 1011.01 11/2 ⁽⁺⁾ 0.0 7/2 ⁻ 1012.745 2/1 10.5.6 1085.25 3/2 ⁺ 72.489 5/2 ⁻ 1011.0 2 1.6.6 1018.02 3/2 ⁻ ,5/2.7/2 ⁻ 72.489 5/2 ⁻ 1011.0 2 1.6.6 1016.2 3/2 ⁻ ,5/2.7/2 ⁻ 72.489 5/2 ⁻ 1013.85 3 30.8 5 1161.02 3/2 ⁻ ,5/2.7/2 ⁻ 72.489 5/2 ⁻ 1038.52 3 30.8 5 1161.02 3/2 ⁻ ,5/2.7/2 ⁻ 72.489 5/2 ⁻ 1039.778 16 10.3 3 1161.02 3/2 ⁻ ,5/2.7/2 ⁻ 72.489 5/2 ⁻ 1039.778 16 10.3 3 1161.02 3/2 ⁻ ,5/2.7/2 ⁻ 72.489 5/2 ⁻ 1038.52 3 370 [#] 8 1150.273 7/2 ⁻ 72.489 5/2 ⁻ 1039.378 16 10.3 3 1161.02 3/2 ⁻ ,5/2.7/2 ⁻ 72.489 5/2 ⁻ 1130.285 3 370 [#] 8 1150.273 7/2 ⁻ 72.489 5/2 ⁻ 1130.285 3 370 [#] 8 1150.273 7/2 ⁻ 72.489 5/2 ⁻ 1130.285 3 370 [#] 8 1150.273 7/2 ⁻ 72.489 5/2 ⁻ 1231.82 6 1.4.4 1285.52 5/2 ⁻ 77.7 ⁻ 72.489 5/2 ⁻ 1231.82 6 1.4.4 1285.52 5/2 ⁻ 77.7 ⁻ 72.489 5/2 ⁻ 1231.82 6 1.4.4 1285.52 5/2 ⁻ 77.7 ⁻ 72.489 5/2 ⁻ 1231.82 6 1.4.4 1285.52 5/2 ⁻ 77.7 ⁻ 72.489	^x 424.92 15	1.3 4					
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	467.03 3	4.9 5	1403.920	(5/2)	936.94	5/2 7/2-5/2-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	475.000 24	0.1 J	1327.07	9/2 7/2-	1031.433	1/2 ,5/2	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	492.024 3	48.0^{-12}	1150.275	1/2 0/2-	657 676	$\frac{11/2}{11/2^{-}}$	
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$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	606.42 6	3.3 6	1527.07	9/2 ⁻	920.681	9/2-	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	623 502 6	45 4 [#] 12	1403 920	$(5/2^{-})$	780.43	3/2-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	657 668 5	$122^{\#}2$	657 676	$(3/2^{-})$	0.0	7/2-	
013.735 J 2975 14 707.949 J 2976 14 707.949 J 2906 780.43 $3/2^{-}$ 72.489 $5/2^{-}$ 713.224 17 16.1 8 780.43 $3/2^{-}$ 67.23 $3/2^{-}$ 748.278 5 1000 4 748.278 9/2 ⁻ 0.0 7/2 ⁻ 780.45 3 7.8 8 780.43 $3/2^{-}$ 0.0 7/2 ⁻ 848.237 17 138 [#] 3 920.681 9/2 ⁻ 72.489 5/2 ⁻ 869.38 9 1.1 6 1527.07 9/2 ⁻ 657.676 11/2 ⁻ 869.38 9 1.1 6 1527.07 9/2 ⁻ 657.676 11/2 ⁻ 869.474 8 1.7 6 936.94 5/2 ⁻ 0.0 7/2 ⁻ 920.710 5 278 5 920.681 9/2 ⁻ 0.0 7/2 ⁻ 937.05 5 5 1 936.94 5/2 ⁻ 0.0 7/2 ⁻ 978.969 15 488 [#] 9 1051.435 7/2 ⁻ 5/2 ⁻ 72.489 5/2 ⁻ 1011.02 1.6 6 1011.01 11/2 ⁽⁺⁾ 0.0 7/2 ⁻ 1012.745 21 10.5 6 1085.25 $3/2^{+}$ 67.23 $3/2^{-}$ 1051.412 5 $334^{\#}$ 6 1051.435 7/2 ⁻ 5/2 ⁻ 72.489 5/2 ⁻ 1051.412 5 $334^{\#}$ 6 1051.435 7/2 ⁻ 5/2.7/2 ⁻ 72.489 5/2 ⁻ 1085.92 1 108.5 1161.02 $3/2^{-}5/2.7/2^{-}$ 72.489 5/2 ⁻ 1089.9 1 3.2 4 1162.34 9/2 ⁻ 72.489 5/2 ⁻ 1088.52 3 10.8 5 1161.02 $3/2^{-}5/2.7/2^{-}$ 67.23 $3/2^{-}$ 1150.258 3 370 [#] 8 1150.273 7/2 ⁻ 0.0 7/2 ⁻ 1162.327 16.7 9 1162.34 9/2 ⁻ 72.489 5/2 ⁻ 1177.22 7.2 4 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.258 3 370 [#] 8 1150.273 7/2 ⁻ 0.0 7/2 ⁻ 1162.32 7 16.7 9 1162.34 9/2 ⁻ 72.489 5/2 ⁻ 1182.258 3 370 [#] 8 1150.273 7/2 ⁻ 0.0 7/2 ⁻ 1182.258 4 7.15 3 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.258 4 7.15 3 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.258 3 370 [#] 8 1150.273 7/2 ⁻ 0.0 7/2 ⁻ 1182.258 4 7.15 3 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.258 4 7.15 3 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.248 7 1.5 3 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.487 7 1.5 3 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.487 7 1.5 3 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.487 7 1.5 3 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.487 7 1.5 3 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.487 7 1.5 3 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.487 7 1.5 3 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.487 7 1.5 3 1249.73 5/2 ⁻ 72.489 5/2 ⁻ 1182.487 7 1.2 3 1338.65 5/2 ⁻ ,7/2 ⁻ 72.489 5/2 ⁻ 127.145 9 2.8 4 1338.65 5/2 ⁻ ,7/2 ⁻ 72.489 5/2 ⁻ 127.145 9 2.8 4 10.3 1285.52 5/2 ⁻ 0.0 7/2 ⁻ 1285.48 8 1.0 3 1285.55 5/2 ⁻ 0.0 7/2 ⁻ 1285.48	675 705 5	$070^{\#} 14$	710 270	11/2 $0/2^{-}$	72 490	5/2-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	707 949 12	1979 14	740.270	$\frac{9}{2}$ $\frac{3}{2^{-}}$	72.409	5/2	
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778.77151.151527.079/2748.2789/2780.457.87.8780.433/20.07/2848.23717138#3920.6819/272.4895/2864.452.35936.945/272.4895/2869.3891.161527.079/2657.67611/2869.4781.76936.945/272.72.333/2920.71052785920.6819/20.07/2937.05551936.945/20.07/2978.96915488#91051.4357/2.5/272.4895/21011.01.661011.0111/2(+)0.07/21012.7452110.561085.253/2+67.233/21051.4125334#61051.4357/2.5/2.7/20.07/21089.913.241160.233/2.5/2.7/272.4895/21093.7781610.31161.023/2.5/2.7/20.07/21160.2583370#81150.2737/272.4895/21182.4871.531249.735/272.772.4895/21182.4871.531249.735/272.772.4895/21213.081.441285.525/272.772.4895/21285.481.034.5/25/2 <t< td=""><td>748.278 5</td><td>1000 4</td><td>748.278</td><td>9/2-</td><td>0.0</td><td>7/2-</td><td>$%I\gamma = 0.525 \ 9 \ (1980Ge11)$</td></t<>	748.278 5	1000 4	748.278	9/2-	0.0	7/2-	$%I\gamma = 0.525 \ 9 \ (1980Ge11)$
780.45 3 7.8 8 780.43 $3/2^-$ 0.0 $7/2^-$ 848.237 17 138 # 3 920.681 $9/2^-$ 72.489 $5/2^-$ 869.38 9 1.1 6 1527.07 $9/2^-$ 657.676 $11/2^-$ 869.474 8 1.7 6 936.94 $5/2^-$ 67.23 $3/2^-$ 869y was not observed in $(n, n'y)$. 920.710 5 278 5 920.681 $9/2^-$ 0.0 $7/2^-$ 937.05 5 5 1 936.94 $5/2^-$ 72.489 $5/2^-$ 1011.0 2 1.6 6 1011.01 $11/2^{(+)}$ 0.0 $7/2^-$ 1012.745 21 10.5 6 1085.25 $3/2^+$ 67.23 $3/2^-$ 1051.412 5 334# 6 1051.435 $7/2^ 72.489$ $5/2^-$ 1085.25 $3/2^+$ 72.489 $5/2^-$ 1089.9 $3.2.4$ 1160.23 $3/2^-$, $5/2.7/2^ 72.489$ $5/2^-$ 1093.778 16 10.3 3 1161.02 $3/2^-$, $5/2.7/2^ 0.0$ $7/2^-$ 1160.24 $9/2^ 0.0$ $7/2^ 1162.34$ $9/2^-$	778.77 15	1.1 5	1527.07	9/2-	748.278	9/2-	• • •
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869.38 9 1.1 6 1527.07 9/2 ⁻ 657.676 11/2 ⁻ 869.47 ^d 8 1.7 6 936.94 5/2 ⁻ 67.23 3/2 ⁻ 920.710 5 278 5 920.681 9/2 ⁻ 0.0 7/2 ⁻ 937.05 5 5 1 936.94 5/2 ⁻ 0.0 7/2 ⁻ 978.969 15 488 [#] 9 1051.435 7/2 ⁻ ,5/2 ⁻ 72.489 5/2 ⁻ 1011.0 2 1.6 6 1011.01 11/2 ⁽⁺⁾ 0.0 7/2 ⁻ 1012.745 21 10.5 6 1085.25 3/2 ⁺ 67.23 3/2 ⁻ 1051.412 5 334 [#] 6 1051.435 7/2 ⁻ ,5/2 ⁻ 0.0 7/2 ⁻ 1088.52 3 10.8 5 1161.02 3/2 ⁻ ,5/2,7/2 ⁻ 72.489 5/2 ⁻ 1093.778 16 10.3 3 1161.02 3/2 ⁻ ,5/2,7/2 ⁻ 0.0 7/2 ⁻ 1150.258 3 370 [#] 8 1150.273 7/2 ⁻ 0.0 7/2 ⁻ 1161.04 4 28.6 9 1161.02 3/2 ⁻ ,5/2,7/2 ⁻ 0.0 7/2 ⁻ 1162.32 7 16.7 9 1162.34 9/2 ⁻ 0.0	864.45 6	2.3 5	936.94	5/2-	72.489	5/2-	
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978.969 15 488 $\#$ 9 1051.435 7/2 ⁻ ,5/2 ⁻ 72.489 5/2 ⁻ 1011.0 1 1.6 1011.01 11/2 ⁽⁺⁾ 0.0 7/2 ⁻ 1012.745 21 10.5 6 1085.25 3/2 ⁺ 72.489 5/2 ⁻ 1017.999 11 18.2 7 1085.25 3/2 ⁺ 67.23 3/2 ⁻ 1051.412 5 334 $\#$ 6 1051.435 7/2 ⁻ ,5/2 ⁻ 0.0 7/2 ⁻ 1088.52 3 10.6 1051.435 7/2 ⁻ ,5/2 ⁻ 0.0 7/2 ⁻ 1088.52 3 10.8 5 1161.02 3/2 ⁻ ,5/2,7/2 ⁻ 72.489 5/2 ⁻ 1093.778 16 10.3 1161.02 3/2 ⁻ ,5/2,7/2 ⁻ 67.23 3/2 ⁻ 1160.23 370 $\#$ 8 1150.273 7/2 ⁻ 0.0 7/2 ⁻ 1161.04 28.6 9 1161.02 3/2 ⁻ ,5/2,7/2 ⁻ 0.0 7/2 ⁻ 1162.32 7 16.7 9 1162.34 9/2 ⁻ 0.0 7/2 ⁻ 1177.22 3 7.2	937 05 5	51	936 94	5/2 ⁻	0.0	7/2-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	978 969 15	488# 9	1051 435	7/2- 5/2-	72 489	5/2-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1011.0.2	166	1011 01	$11/2^{(+)}$	0.0	7/2-	
$1017.999 11$ $18.2 7$ 1085.25 $3/2^+$ 67.23 $3/2^ 1051.412 5$ $334^{\#} 6$ 1051.435 $7/2^-, 5/2^ 0.0$ $7/2^ 1088.52 3$ $10.8 5$ 1161.02 $3/2^-, 5/2, 7/2^ 72.489$ $5/2^ 1089.9 1$ $3.2 4$ 1162.34 $9/2^ 72.489$ $5/2^ 1093.778 16$ $10.3 3$ 1161.02 $3/2^-, 5/2, 7/2^ 67.23$ $3/2^ 1150.258 3$ $370^{\#} 8$ 1150.273 $7/2^ 0.0$ $7/2^ 1161.04 4$ $28.6 9$ 1161.02 $3/2^-, 5/2, 7/2^ 0.0$ $7/2^ 1162.32 7$ 167.9 1162.34 $9/2^ 0.0$ $7/2^ 1177.22 3$ $7.2 4$ 1249.73 $5/2^ 72.489$ $5/2^ 1182.48 7$ $1.5 3$ 1249.73 $5/2^ 72.489$ $5/2^ 1213.08 6$ $1.4 4$ 1285.52 $5/2^ 72.489$ $5/2^ 1249.73 3$ $4.5 6$ 1249.73 $5/2^ 0.0$ $7/2^ 1249.73 3$ $4.5 6$ 1249.73 $5/2^ 0.0$ $7/2^ 1249.73 3$ $4.5 6$ 1249.73 $5/2^ 0.0$ $7/2^ 1249.73 3$ $4.5 6$ 1249.73 $5/2^ 0.0$ $7/2^ 1249.73 3$ $4.5 6$ 1249.73 $5/2^ 0.0$ $7/2^ 1249.73 3$ $4.5 6$ 1249.73 $5/2^ 0.0$ $7/2^ 1249.73 3$ $4.5 6$ 1249.73 $5/2^ 0.0$ $7/2^-$ <td>1012.745 21</td> <td>10.5 6</td> <td>1085.25</td> <td>$3/2^+$</td> <td>72.489</td> <td>5/2-</td> <td></td>	1012.745 21	10.5 6	1085.25	$3/2^+$	72.489	5/2-	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1017.999 11	18.2 7	1085.25	3/2+	67.23	3/2-	
$1088.52\ 3$ $10.8\ 5$ 1161.02 $3/2^-, 5/2, 7/2^ 72.489\ 5/2^ 1089.9\ 1$ $3.2\ 4$ $1162.34\ 9/2^ 72.489\ 5/2^ 1093.778\ 16$ $10.3\ 3$ $1161.02\ 3/2^-, 5/2, 7/2^ 67.23\ 3/2^ 1150.258\ 3$ $370^{\#}\ 8$ $1150.273\ 7/2^ 0.0\ 7/2^ 1161.04\ 4$ $28.6\ 9$ $1161.02\ 3/2^-, 5/2, 7/2^ 0.0\ 7/2^ 1162.32\ 7$ $16.7\ 9$ $1162.34\ 9/2^ 0.0\ 7/2^ 1177.22\ 3$ $7.2\ 4$ $1249.73\ 5/2^ 72.489\ 5/2^ 1182.48\ 7$ $1.5\ 3$ $1249.73\ 5/2^ 67.23\ 3/2^ 1213.08\ 6$ $1.4\ 4$ $1285.52\ 5/2^ 67.23\ 3/2^ 1249.73\ 3$ $4.5\ 6$ $1249.73\ 5/2^ 72.489\ 5/2^ 1249.73\ 3$ $4.5\ 6$ $1249.73\ 5/2^ 72.489\ 5/2^ 1249.73\ 3$ $4.5\ 6$ $1249.73\ 5/2^ 0.0\ 7/2^ 72.489\ 5/2^ 72.489\ 5/2^ 72.489\ 5/2^ 1285.48\ 8$ $10.3\ 1285.52\ 5/2^ 72.489\ 5/2^ 1285.48\ 8\ 10.3\ 1285.52\ 5/2^ 72.772^ 72.489\ 5/2^-$	1051.412 5	334 [#] 6	1051.435	7/2-,5/2-	0.0	7/2-	
$1089.9 I$ $3.2 4$ 1162.34 $9/2^ 72.489 5/2^ 1093.778 I6$ $10.3 3$ 1161.02 $3/2^-, 5/2, 7/2^ 67.23 3/2^ 1150.258 3$ $370^\# 8$ $1150.273 7/2^ 0.0 7/2^ 1161.04 4$ $28.6 9$ $1161.02 3/2^-, 5/2, 7/2^ 0.0 7/2^ 1162.32 7$ $16.7 9$ $1162.34 9/2^ 0.0 7/2^ 1177.22 3$ $7.2 4$ $1249.73 5/2^ 72.489 5/2^ 1182.48 7$ $1.5 3$ $1249.73 5/2^ 67.23 3/2^ 1213.08 6$ $1.4 4$ $1285.52 5/2^ 72.489 5/2^ 1249.73 3$ $4.5 6$ $1249.73 5/2^ 0.0 7/2^ *1259.0^{4} 9$ $0.5 4$ $1338.65 5/2^-, 7/2^ 72.489 5/2^ *1259.0^{4} 9$ $0.5 4$ $1338.65 5/2^-, 7/2^ 72.489 5/2^ 1271.45 9$ $2.8 4$ $1338.65 5/2^-, 7/2^ 72.489 5/2^ 1285.48 8$ $1.0 3$ $1285.52 5/2^ 67.23 3/2^-$	1088.52 <i>3</i>	10.8 5	1161.02	3/2-,5/2,7/2-	72.489	5/2-	
1093.778 16 10.3 1161.02 $3/2^-, 5/2, 7/2^-$ 67.23 $3/2^-$ 1150.258 3 370 [#] 8 1150.273 $7/2^-$ 0.0 $7/2^-$ 1161.04 28.69 1161.02 $3/2^-, 5/2, 7/2^-$ 0.0 $7/2^-$ 1162.32 7 16.79 1162.34 $9/2^-$ 0.0 $7/2^-$ 1177.22 3 7.24 1249.73 $5/2^-$ 72.489 $5/2^-$ 1182.48 7 1.53 1249.73 $5/2^-$ 67.23 $3/2^-$ 1213.08 6 1.44 1285.52 $5/2^-$ 67.23 $3/2^-$ 1218.22 9 1.34 1285.52 $5/2^-$ 0.0 $7/2^-$ *1259.0 ^d 9 0.54 - - - - *1259.0 ^d 9 0.54 - - - - 1285.48 1.03 1285.52 $5/2^-, 7/2^-$ 67.23 $3/2^-$ 1285.48 1.03 1285.52 $5/2^-, 7/2^-$ 67.23 $3/2^-$	1089.9 <i>1</i>	3.2 4	1162.34	9/2-	72.489	5/2-	
$1150.258\ 3$ $370^{\text{#}\ 8}$ $1150.273\ 7/2^{-}$ $0.0\ 7/2^{-}$ $1161.04\ 4$ $28.6\ 9$ $1161.02\ 3/2^{-},5/2,7/2^{-}$ $0.0\ 7/2^{-}$ $1162.32\ 7$ $16.7\ 9$ $1162.34\ 9/2^{-}$ $0.0\ 7/2^{-}$ $1177.22\ 3$ $7.2\ 4$ $1249.73\ 5/2^{-}$ $72.489\ 5/2^{-}$ $1182.48\ 7$ $1.5\ 3$ $1249.73\ 5/2^{-}$ $67.23\ 3/2^{-}$ $1213.08\ 6$ $1.4\ 4$ $1285.52\ 5/2^{-}$ $72.489\ 5/2^{-}$ $1218.22\ 9$ $1.3\ 4$ $1285.52\ 5/2^{-}$ $67.23\ 3/2^{-}$ $1249.73\ 3$ $4.5\ 6$ $1249.73\ 5/2^{-}$ $0.0\ 7/2^{-}$ $^{x}1259.0^{a}\ 9$ $0.5\ 4$ $1238.65\ 5/2^{-},7/2^{-}$ $72.489\ 5/2^{-}$ $1271.45\ 9$ $2.8\ 4$ $1338.65\ 5/2^{-},7/2^{-}$ $67.23\ 3/2^{-}$ $1285.48\ 8$ $1.0\ 3$ $1285.52\ 5/2^{-}$ $72.489\ 5/2^{-}$	1093.778 16	10.3 3	1161.02	3/2-,5/2,7/2-	67.23	3/2-	
1161.04 4 28.6 9 1161.02 $3/2^-, 5/2, 7/2^ 0.0$ $7/2^-$ 1162.32 7 16.7 9 1162.34 $9/2^ 0.0$ $7/2^-$ 1177.22 3 7.2 4 1249.73 $5/2^ 72.489$ $5/2^-$ 1182.48 7 1.5 3 1249.73 $5/2^ 67.23$ $3/2^-$ 1213.08 6 1.4 4 1285.52 $5/2^ 72.489$ $5/2^-$ 1218.22 9 1.3 4 1285.52 $5/2^ 67.23$ $3/2^-$ 1249.73 3 4.5 6 1249.73 $5/2^ 0.0$ $7/2^-$ *1259.0 ^a 9 0.5 4 1 1 1249.73 $5/2^ 72/2^-$ *1266.13 7 1.2 3 1338.65 $5/2^-, 7/2^ 67.23$ $3/2^-$ 1271.45 9 2.8 4 1338.65 $5/2^-, 7/2^ 67.23$ $3/2^-$ 1285.48 8 1.0 3 1285.52 $5/2^ 0.0$ $7/2^-$	1150.258 3	370# 8	1150.273	7/2-	0.0	7/2-	
1162.32 7 16.7 9 1162.34 9/2 0.0 7/2 1177.22 3 7.2 4 1249.73 $5/2^-$ 72.489 $5/2^-$ 1182.48 7 1.5 3 1249.73 $5/2^ 67.23$ $3/2^-$ 1213.08 6 1.4 4 1285.52 $5/2^ 72.489$ $5/2^-$ 1218.22 9 1.3 4 1285.52 $5/2^ 67.23$ $3/2^-$ 1249.73 3 4.5 6 1249.73 $5/2^ 67.23$ $3/2^-$ 1249.73 3 4.5 6 1249.73 $5/2^ 0.0$ $7/2^-$ *1259.0 ^d 9 0.5 4 1286.13 7 1.2 3 1338.65 $5/2^-, 7/2^ 72.489$ $5/2^-$ 1266.13 7 1.2 3 1338.65 $5/2^-, 7/2^ 67.23$ $3/2^-$ 1271.45 9 2.8 4 1338.65 $5/2^-, 7/2^ 67.23$ $3/2^-$ 1285.48 8	1161.04 4	28.6 9	1161.02	3/2 ⁻ ,5/2,7/2 ⁻	0.0	7/2-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1102.32 /	10.79	1102.34	9/2 5/2-	0.0 72 /80	1/2 5/2-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1182.48 7	1.5.3	1249.73	5/2-	67.23	3/2-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1213.08 6	1.4 4	1285.52	5/2-	72.489	5/2-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1218.22 9	1.3 4	1285.52	5/2-	67.23	3/2-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1249.73 <i>3</i>	4.5 6	1249.73	5/2-	0.0	7/2-	
1266.13 7 1.2 1338.65 $5/2^-$, $7/2^ 72.489$ $5/2^-$ 1271.45 9 2.8 4 1338.65 $5/2^-$, $7/2^ 67.23$ $3/2^-$ 1285.48 8 1.0 3 1285.52 $5/2^ 0.0$ $7/2^-$	^x 1259.0 ^{<i>a</i>} 9	0.5 4	1000 17		56 10-	5 10-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1266.13 7	1.23	1338.65	$5/2^{-}, 1/2^{-}$	72.489	5/2-	
	1271.45 9	2.04	1285.52	$5/2^{-}$, $7/2^{-}$	0.0	$7/2^{-}$	

$^{145}\mathbf{Pr}\,\beta^{-}$ decay 1976Ja01 (continued)

γ (¹⁴⁵Nd) (continued)

E_{γ}^{\ddagger}	I_{γ} [‡] &	E _i (level)	\mathbf{J}_i^{π}	E_f	\mathbf{J}_f^{π}
1331.416 16	12.6 6	1403.920	$(5/2^{-})$	72.489	5/2-
1336.65 4	3.2 4	1403.920	$(5/2^{-})$	67.23	$3/2^{-}$
1338.6 ^a	≤0.3	1338.65	$5/2^{-},7/2^{-}$	0.0	$7/2^{-}$
1403.92 4	91	1403.920	$(5/2^{-})$	0.0	$7/2^{-}$
1527.05 4	3.0 4	1527.07	9/2-	0.0	$7/2^{-}$
^x 1532.02 1	0.8 3				

[†] Additional information 2.

* From 1976Ja01, unless otherwise specified. # From 1980Ge11. @ From ce data in 145 Pm ε decay.

[&] For absolute intensity per 100 decays, multiply by 0.000525 9.

^{*a*} Placement of transition in the level scheme is uncertain.

 $x \gamma$ ray not placed in level scheme.

