

Target isotope:  $^{140}_{58}\text{Ce}$   $I^\pi_\circ = 0^+$  Abundance: 88.450(18) %  $S_\text{p} = 5226.9(12)$  keV

$^{141}_{59}\text{Pr}(\text{p})$

$E_\circ$	$2J^\pi$	$\Gamma_\text{p}$	$\Gamma$	$E^*_{\text{analog}}$	$S_\text{pp}$	$S_\text{dp}$	$E_\text{cm}$	$E^*$	Ref.
[keV]		[keV]	[keV]	[keV]			[keV]	[keV]	
9748(10)	$7^-$	11.6	66	0.00	0.86	0.89	9679	14906(10)	77Cl02 68Ha0A 72Se07
10406(10)	$3^-$	23	86	662	0.42	0.42	10332	15559(10)	77Cl02 68Ha0A 72Se07
10891(10)	$1^-$	17	76	1137	0.28	0.38	10814	16041(10)	77Cl02 68Ha0A 72Se07
11110(10)	$9^-$	1.0	64	1353	0.74		11031	16258(10)	77Cl02 72Se07
11262(10)	$5^-$	8.1	78	1496	0.27	0.30	11182	16409(10)	77Cl02 68Ha0A 72Se07
11490(20)	$\langle 7^- \rangle$	4.0	73	1740	0.25	0.38	11409	16635	77Cl02 68Ha0A
11590(20)	$3^-$	5.0	130	1807	0.05	0.12	11508	16735	77Cl02
11610(20)	$5^-$	7.7	91	1812	0.18	0.10	11528	16755	77Cl02
11840(20)	$\langle 5^- \rangle$	1.5	80	2123	0.03	0.10	11756	16983	77Cl02
11900(20)	$5^-$	2.4	50	2177	0.05	0.07	11816	17043	77Cl02
11980(20)	$3^-$	5.5	76	2193	0.05	0.07	11895	17122	77Cl02
12040(20)	$\langle 1^- \rangle$	6.0	120	2271	0.09		11955	17182	77Cl02
12110(20)	$7^-$	2.3	89	2323	0.04	0.02	12024	17251	77Cl02
12140(20)	$3^-$	6.0	97	2335	0.08	0.07	12054	17281	77Cl02
12180(20)	$1^-$	9.0	97	2416	0.10	0.12	12094	17321	77Cl02
12190(20)	$\langle 5^- \rangle$	1.9	104		0.03		12104	17330	77Cl02
12210(20)	$3^-$	12	96	2429	0.11	0.08	12123	17350	77Cl02
12230(20)	$\langle 1^- \rangle$	7	104	2440	0.08		12143	17370	77Cl02

Additional data on this isotope can be found in [91Pe05, 69He13, 69Ej02, 68Ej02, 68Ej03, 68Ve07, 67Ve02, 65Vo03].

Experimental Coulomb displacement energies for  $^{139}\text{La}$ ,  $^{141}\text{Pr}$ ,  $^{142}\text{Nd}$ ,  $^{143}\text{Pm}$  and  $^{145}\text{Eu}$  were compared in [72Se10].

Target isotope:  $^{142}_{58}\text{Ce}$   $I^\pi_\circ = 0^+$  Abundance: 11.114(17) %  $S_\text{p} = 5824.2(18)$  keV

$^{143}_{59}\text{Pr}(\text{p})$

$E_\circ$	$2J^\pi$	$\Gamma_\text{p}$	$\Gamma$	$E^*_{\text{analog}}$	$S_\text{pp}$	$S_\text{dp}$	$E_\text{cm}$	$E^*$	Ref.
[keV]		[keV]	[keV]	[keV]			[keV]	[keV]	
9913(10)	3	2.2(10)	86(20)	0.0	$\langle 0.07 \rangle$	0.03	9844	14144(10)	72Le17
9932(10)	$7^-$	6.5(10)	60(10)	21	0.60	0.50	9863	14162(10)	69Gr01 72Le17
10729(10)	$3^-$	19.0(10)	110(10)	818	0.45	0.50	10654	14954(10)	72Le17
10787(10)	$\langle 1^- \rangle$	10.5(10)	80(10)	869	0.30	0.32	10712	15011(10)	72Le17
11079(10)	$3^-$	2.5(10)	60(20)	1162	$\langle 0.07 \rangle$	0.07	11002	15301(10)	72Le17
11113(10)	$3^-$	1.4(10)	34(20)	1178		0.04	11035	15335(10)	72Le17
11123(10)	$\langle 5^- \rangle$	2.3(10)	102(30)	1195	$\langle 0.12 \rangle$	0.11	11045	15345(10)	72Le17
11211(10)	$\langle 5^- \rangle$	3.5(10)	95(20)	1298	$\langle 0.17 \rangle$	0.12	11133	15432(10)	72Le17

Additional data on this isotope can be found in [86Pe07].