1 Half-life, Q-value and Decay mode

$T_{1/2}$	:	6.749	(16)	d
Q_{β^-}	:	518.6	(6)	keV
β^-	:	100		%

2 β^- Transitions

	Energy keV	Probability × 100		Nature	log ft
$\beta^-_{0,9}$	147.7 (6)	1.3	(9)	Allowed	7.32
$\beta^-_{0,7}$	186.2 (6)	2.9	(9)	Super-allowed	7.28
$\beta^-_{0,6}$	237.2 (6)	48.2	(25)	1st forbidden	6.39
$\beta^-_{0,5}$	251.1 (6)	40.9	(31)	1st forbidden	6.54
$\beta^-_{0,2}$	459.1 (6)	7	(4)	1st forbidden unique	8.1

3 Electron Emissions

		Energy keV	Electrons per 100 disint.	Energy keV
e_{AL}	(Np)	5.04 - 13.52	58.5 (21)	
e_{AK}	(Np)		1.49 (21)	
	KLL	73.50 - 83.13	}	
	KLX	90.36 - 97.28	}	
	KXY	107.10 - 114.58	}	
$ec_{2,1}$ L	(Np)	3.918 - 8.731	14.6 (50)	
$ec_{6,5}$ M	(Np)	8.07 - 10.15	36.0 (19)	
$ec_{1,0}$ L	(Np)	10.769 - 15.586	17.0 (23)	
$ec_{6,5}$ N	(Np)	12.31 - 13.41	9.79 (43)	
$ec_{9,7}$ L	(Np)	16.11 - 20.93	0.7 (7)	
$ec_{3,1}$ L	(Np)	20.277 - 25.094	0.47	
$ec_{2,1}$ M	(Np)	20.606 - 22.681	3.9 (5)	
$ec_{4,2}$ L	(Np)	20.996 - 25.813	3.2 (5)	
$ec_{1,0}$ M	(Np)	27.457 - 29.532	4.3 (7)	
$ec_{7,6}$ L	(Np)	28.58 - 33.40	0.19 (8)	
$ec_{1,0}$ N	(Np)	31.695 - 32.793	1.16 (17)	
$ec_{9,7}$ M	(Np)	32.80 - 34.88	0.2 (2)	
$ec_{3,1}$ M	(Np)	36.965 - 39.040	0.12	
$ec_{9,7}$ N	(Np)	37.04 - 38.14	0.05 (5)	
$ec_{2,0}$ L	(Np)	37.114 - 41.931	28.6 (22)	
$ec_{4,2}$ M	(Np)	37.684 - 39.759	0.84 (14)	
$ec_{3,1}$ N	(Np)	41.203 - 42.301	0.032	
$ec_{4,2}$ N	(Np)	41.92 - 43.02	0.233 (37)	
$ec_{7,5}$ L	(Np)	42.40 - 47.22	0.387 (9)	
$ec_{7,6}$ M	(Np)	45.27 - 47.35	0.0479 (21)	
$ec_{5,4}$ K	(Np)	45.94 (2)	0.363 (9)	
$ec_{7,6}$ N	(Np)	49.51 - 50.61	0.0127 (6)	

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		Energy keV	Electrons per 100 disint.	Energy keV
$ec_{3,0}$ L	(Np)	53.4 - 58.2	0.0354 (7)	
$ec_{2,0}$ M	(Np)	53.802 - 55.877	7.7 (3)	
$ec_{2,0}$ N	(Np)	58.040 - 59.138	0.846 (24)	
$ec_{7,5}$ M	(Np)	59.09 - 61.17	0.096 (2)	
$ec_{7,5}$ N	(Np)	63.33 - 64.43	0.0255 (5)	
$ec_{5,2}$ K	(Np)	89.331 (10)	50.1 (13)	
$ec_{5,1}$ K	(Np)	115.73 (4)	0.114 (5)	
$ec_{5,4}$ L	(Np)	142.18 - 147.00	2.04 (5)	
$ec_{5,0}$ K	(Np)	148.87 (4)	0.53 (3)	
$ec_{5,4}$ M	(Np)	158.87 - 160.95	0.565 (14)	
$ec_{5,4}$ N	(Np)	163.11 - 164.21	0.1546 (33)	
$ec_{5,2}$ L	(Np)	185.573 - 190.390	10.1 (3)	
$ec_{5,2}$ M	(Np)	202.261 - 204.336	2.45 (7)	
$ec_{5,2}$ N	(Np)	206.499 - 207.597	0.662 (14)	
$ec_{5,1}$ L	(Np)	211.97 - 216.79	0.040 (2)	
$ec_{7,0}$ K	(Np)	213.69 (4)	0.0757 (18)	
$ec_{8,1}$ K	(Np)	216.71 (4)	0.052 (7)	
$ec_{5,1}$ M	(Np)	228.66 - 230.74	0.0105 (5)	
$ec_{5,0}$ L	(Np)	245.11 - 249.93	0.172 (9)	
$ec_{8,0}$ K	(Np)	249.92 (4)	0.0206 (9)	
$ec_{9,0}$ K	(Np)	252.259 (23)	0.046 (7)	
$ec_{5,0}$ M	(Np)	261.80 - 263.88	0.045 (3)	
$ec_{5,0}$ N	(Np)	266.055 - 267.153	0.0123 (7)	
$ec_{7,0}$ L	(Np)	309.93 - 314.75	0.0733 (17)	
$ec_{8,1}$ L	(Np)	312.95 - 317.77	0.0108 (3)	
$ec_{7,0}$ M	(Np)	326.62 - 328.70	0.0197 (5)	
$\beta^-_{0,9}$	max:	147.7 (6)	1.3 (9)	avg: 39.0 (2)
$\beta^-_{0,7}$	max:	186.2 (6)	2.9 (9)	avg: 49.8 (2)
$\beta^-_{0,6}$	max:	237.2 (6)	48.2 (25)	avg: 64.5 (2)
$\beta^-_{0,5}$	max:	251.1 (6)	40.9 (31)	avg: 68.6 (2)
$\beta^-_{0,2}$	max:	459.1 (6)	7 (4)	avg: 137.6 (2)

4 Photon Emissions

4.1 X-Ray Emissions

		Energy keV	Photons per 100 disint.	
XL	(Np)	11.89 — 22.2	59.0 (21)	
$XK\alpha_2$	(Np)	97.069	14.8 (4)	} Kα
$XK\alpha_1$	(Np)	101.059	23.5 (6)	}
$XK\beta_3$	(Np)	113.303 }		
$XK\beta_1$	(Np)	114.234 }	8.57 (27)	$K\beta'_1$
$XK\beta''_5$	(Np)	114.912 }		

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		Energy keV		Photons per 100 disint.	
$XK\beta_2$	(Np)	117.476	}		
$XK\beta_4$	(Np)	117.876	}	2.95 (10)	$K\beta'_2$
$XKO_{2,3}$	(Np)	118.429	}		

4.2 Gamma Transitions and Emissions

	Energy keV	$P_{\gamma+ce}$ × 100	Multipolarity	α_T	P_γ × 100
$\gamma_{6,5}$(Np)	13.81 (2)	48.8 (25)	M1+0.1%E2	492 (16)	0.099 (4)
$\gamma_{2,1}$(Np)	26.34463 (24)	22 (5)	E1	8 (2)	2.43 (6)
$\gamma_{1,0}$(Np)	33.19629 (22)	23 (3)	M1+1.66%E2	175 (24)	0.130 (5)
$\gamma_{9,7}$(Np)	38.54 (3)	0.9 (9)	M1+15%E2	280 (210)	0.0033 (20)
$\gamma_{3,1}$(Np)	42.704 (5)	0.65	M1+1.66%E2	75 (9)	0.0085
$\gamma_{4,2}$(Np)	43.420 (3)	4.3 (7)	M1+16.8%E2	180 (23)	0.024 (2)
$\gamma_{7,6}$(Np)	51.01 (3)	0.596 (25)	E1	0.753 (15)	0.340 (14)
$\gamma_{2,0}$(Np)	59.54091 (10)	73.7 (31)	E1	1.16 (7)	34.1 (9)
$\gamma_{7,5}$(Np)	64.83 (2)	1.800 (26)	E1	0.400 (8)	1.286 (17)
$\gamma_{4,1}$(Np)	69.76 (3)	0.0013 (3)	(E1)	0.330 (7)	0.00095 (19)
$\gamma_{3,0}$(Np)	75.899 (5)	0.05	(E2)	53.4 (11)	0.00091
$\gamma_{4,0}$(Np)	102.959 (3)	0.0072 (10)	E1	0.119 (3)	0.0064 (9)
$\gamma_{5,4}$(Np)	164.61 (2)	5.02 (11)	E2	1.70 (4)	1.86 (3)
$\gamma_{5,2}$(Np)	208.00 (1)	84.8 (19)	M1+2.4%E2	2.98 (7)	21.3 (3)
$\gamma_{6,2}$(Np)	221.80 (4)	0.0316 (13)	E2	0.547 (11)	0.0204 (8)
$\gamma_{5,1}$(Np)	234.40 (4)	0.189 (8)	M2	8.24 (16)	0.0205 (8)
$\gamma_{5,0}$(Np)	267.556 (12)	1.5 (4)	E1+19.4%M2	1.06 (6)	0.721 (10)
$\gamma_{8,3}$(Np)	292.77 (6)	0.0030 (9)	(E2)	0.215 (4)	0.0025 (7)
$\gamma_{8,2}$(Np)	309.1 (3)	0.00028	(E1)	0.0377 (8)	0.00027
$\gamma_{7,0}$(Np)	332.376 (16)	1.374 (19)	E2	0.146 (3)	1.199 (16)
$\gamma_{8,1}$(Np)	335.38 (4)	0.162 (9)	M1+17.5%E2	0.69 (8)	0.0958 (22)
$\gamma_{9,1}$(Np)	337.7 (2)	0.0101 (6)	(E2)	0.139 (3)	0.0089 (5)
$\gamma_{-1,2}$(Np)	340.45	0.0016 (3)			0.0016 (3)
$\gamma_{8,0}$(Np)	368.602 (20)	0.0675 (28)	M1(+E2)	0.622 (13)	0.0416 (17)
$\gamma_{9,0}$(Np)	370.928 (23)	0.167 (8)	M1+15.6%E2	0.53 (7)	0.109 (2)

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