Target isotope: $^{46}_{22}$Ti $I^{\pi}_{\circ} = 0^+$ *Abundance:* 8.25(3) % $S_{\rm p} = 5167.56(7)$ keV

$^{47}_{23}$V(p)

$E_\circ$ [keV]	$2J^\pi$	$\Gamma_{\rm p}$ [eV]	$\gamma^2_{\rm p}$ [keV]	ℓ'	$2s'$	$\Gamma_{\rm p_1}$ [eV]	$S_{\rm p\gamma}$ [meV]	Rel.int. γ_i	Rel.int. γ_j	$E_{\rm cm}$ [keV]	E^* [keV]	Ref.		
478.5(3)	3^-						0.8(2)			468	5635.9(3)	86De13	86Bu04	77Ha45
583(3)	1,3						1.5(3)			570	5738(3)	86De13		
700.72(9)	1						27(4)			686	5853.4(1)	86De13	86Bu04	
733.2(2)	3						8(2)			717	5885.2(2)	86De13	86Bu04	
735.38(9)	1						124(17)			720	5887.3(1)	86De13	86Bu04	
742.80(11)	1						47(7)			727	5894.6(1)	86De13	86Bu04	
810.9(4)	1						28(4)			793	5961.2(4)	86De13	86Bu04	
844.7(4)	3						13(3)			827	5994.3(4)	86De13	86Bu04	
875.02(6)	1^-						240(30)*	540		856	6023.9(1)	86De13	61Du03	86Bu04
939.83(6)	5						30(4)	135		920	6087.4(1)	86De13	61Du03	86Bu04
952.11(9)							15(5)	70		932	6099.4(1)	86De13	61Du03	
975.22(6)	1						89(11)	70		954	6122.0(1)	86De13	61Du03	86Bu04
985.98(5)	1^+						180(20)	300		965	6132.6(1)	86De13	61Du03	86Bu04
1007.6(2)								35		986	6153.7(2)	86De13	61Du03	
1011.4(1)	5,3^+						38(5)	50		990	6157.4(1)	86De13	61Du03	86Bu04
1020.3(1)	3						460(60)	500		998	6166.2(1)	86De13	61Du03	86Bu04
1045.2(1)	3,5^-						240(30)	240		1023	6190.5(1)	86De13	61Du03	86Bu04
1062.42(8)							34(11)			1040	6207.4(1)	86De13		
1085.0(1)	5^+						200(30)	270		1062	6229.0(1)	86De13	61Du03	86Bu04
1095.66(6)	3						710(100)	700		1072	6239.9(1)	86De13	61Du03	70Wi06
1127.31(7)	1^-,3,5						122(150)	1350		1103	6270.9(1)	86De13	61Du03	70Wi06
1153.5(1)	3^-						510(60)	750		1129	6296.5(1)	86De13	61Du03	86Bu04
1183.3(2)							11(4)	670		1158	6325.7(2)	86De13	61Du03	
1209.11(7)							980(130)	1000		1183	6350.9(1)	86De13	61Du03	
1210.04(9)							100(50)			1184	6351.8(1)	86De13		
1222.94(7)							70(20)	100		1197	6364.5(1)	86De13	61Du03	
1225.09(11)							20(7)			1199	6366.6(1)	86De13		
1232.4(1)	1,3						116(14)	135		1206	6373.7(1)	86De13	61Du03	86Bu04
1246.2(1)	5,7^+						170(20)	470		1219	6387.2(1)	86De13	61Du03	86Bu04
1253.0(1)	5^+						440(60)	800		1226	6394.0(1)	86De13	61Du03	86Bu04
1268.30(7)							360(120)	400		1241	6408.9(1)	86De13	61Du03	
1285.6(1)	3						470(60)	880		1258	6425.8(1)	86De13	61Du03	70Wi06
1287.2(1)	5						480(60)			1260	6427.4(1)	86De13	86Bu04	
1336.1(1)	5						510(60)	670		1307	6475.2(1)	86De13	61Du03	86Bu04
1343.4(10)								200		1315	6482.4(10)	61Du03		
1346.3(10)								400		1317	6485.2(10)	61Du03		
1357.9(10)								950	310	1329	6496.6(10)	61Du03	71Ka23	
1364.5(10)	3^-							2100	450	1335	6503.0(10)	61Du03	70Mc24	71Ka23
1390.7(10)								250	50	1361	6528.7(10)	61Du03	71Ka23	77Ha45
1396.6(16)									25	1367	6534.4(16)	71Ka23	77Ha45	
1401.5(16)									170	1371	6539.2(16)	71Ka23	77Ha45	
1416.9(16)									40	1386	6554.3(16)	71Ka23	77Ha45	
1429.1(16)									210	1399	6566.3(16)	71Ka23	77Ha45	
1430.4(16)									200	1400	6567.5(16)	71Ka23	77Ha45	
1462.2(16)									205	1431	6598.6(16)	71Ka23	77Ha45	

(continued) $^{47}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	Γ_p [eV]	γ^2_p [keV]	ℓ'	$2s'$	Γ_{p_1} [eV]	$\gamma^2_{\mathrm{p}_1}$ [keV]	$S_{\mathrm{p}\gamma}$ [meV]	Rel.int. γ_j	E_cm [keV]	E^* [keV]	Ref.		
1467.0(16)									70	1436	6603.0(16)	71Ka23	77Ha45	
1482.6(16)									105	1451	6618.6(16)	71Ka23	77Ha45	
1494.5(16)									150	1463	6630.3(16)	71Ka23	77Ha45	
1508.0(16)									145	1476	6643.0(16)	71Ka23	77Ha45	
1510.9(16)									50	1479	6646.3(16)	71Ka23	77Ha45	
1514.5(16)									55	1482	6649.8(16)	71Ka23	77Ha45	
1517.8(16)									56	1486	6653.1(16)	71Ka23	77Ha45	
1524.3(16)									⟨60⟩	1492	6659.4(16)	71Ka23	77Ha45	
1539.0(16)									58	1506	6674.0(16)	71Ka23	77Ha45	
1545.0(2)	7							620(90)	195	1512	6680.0(2)	86De13	86Bu04	
1548.5(1)	3^-							1500(200)	620	1516	6683.1(1)	86De13	73Sc29	
1558.8(2)								290(50)		1526	6693.2(2)	86De13	71Ka23	
1559.3(30)	1^+	90(15)	12.3						192	1526	6693.7(30)	73Pr02	71Ka23	
1564.7(30)	$\langle 1^- \rangle$	100(10)	35.4						1000	1531	6699.0(30)	73Pr02	71Ka23	
1570.4(16)									25	1537	6704.5(16)	71Ka23	77Ha45	
1572.5(16)									305	1539	6706.6(16)	71Ka23	77Ha45	doublt
1588.2(16)									105	1554	6722.0(16)	71Ka23	77Ha45	
1599.3(16)									185	1565	6732.8(16)	71Ka23	77Ha45	
1604.4(16)									⟨40⟩	1570	6737.8(16)	71Ka23	77Ha45	
1607.1(30)	$\langle 1^- \rangle$	25(10)	7.13						135	1573	6740.5(30)	73Pr02	71Ka23	doublt
1613.3(30)	$\langle 1^- \rangle$	10(5)	2.76						310	1579	6746.5(30)	73Pr02	71Ka23	
1623.4(16)									320	1589	6756.4(16)	71Ka23	77Ha45	
1630.2(16)									105	1596	6763.1(16)	71Ka23	77Ha45	
1634.4(16)									80	1600	6767.2(16)	71Ka23	77Ha45	
1653.4(16)									105	1618	6785.8(16)	71Ka23	77Ha45	
1663.1(16)									150	1628	6795.3(16)	71Ka23	77Ha45	
1667.0(16)									110	1632	6799.0(16)	71Ka23	77Ha45	
1686.1(16)									50	1650	6817.8(16)	71Ka23	77Ha45	
1685.3(30)	$\langle 1^- \rangle$	20(10)	3.88						315	1649	6817.0(30)	73Pr02	71Ka23	
1708.4(16)									100	1672	6839.6(16)	71Ka23	77Ha45	
1721.1(16)									65	1685	6852.0(16)	71Ka23	77Ha45	
1725.1(16)									95	1688	6856.0(16)	71Ka23	77Ha45	
1742.0(16)									190	1705	6872.0(16)	71Ka23	77Ha45	
1749.6(16)									140	1712	6879.9(16)	71Ka23	77Ha45	
1771.3(30)	$\langle 1^- \rangle$	20(10)	2.65						230	1734	6901.2(30)	73Pr02	71Ka23	
1786.4(16)									65	1748	6916.0(16)	71Ka23	77Ha45	
1804.6(16)									⟨55⟩	1766	6933.8(16)	71Ka23	77Ha45	
1813.5(30)	1^-	155(25)	16.96						430	1775	6942.5(30)	73Pr02	71Ka23	doublt
1818.4(16)									195	1780	6947.3(16)	71Ka23	77Ha45	
1821.8(30)	1^-	90(10)	9.54						170	1783	6950.6(30)	73Pr02	86De13	
1825.0(3)										1786	6954.0(3)	86De13	71Ka23	
1825.9(3)									150	1787	6954.6(3)	86De13	71Ka23	
1829.8(30)	1^-	60(10)	6.10						120	1791	6958.4(30)	73Pr02	71Ka23	
1841.9(16)									70	1803	6970.3(16)	71Ka23	77Ha45	
1845.2(16)									40	1806	6973.5(16)	71Ka23	77Ha45	

(continued) $^{47}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	Γ_p [eV]	γ^2_p [keV]	ℓ'	$2s'$	Γ_{p_1} [eV]	$\gamma^2_{\mathrm{p}_1}$ [keV]	$S_{\mathrm{p}\gamma}$ [meV]	Rel.int. γ_i	Rel.int. γ_j	E_cm [keV]	E^* [keV]	Ref.		
1849.8(30)	1^-	55(20)	5.24								1810	6978.0(30)	73Pr02	71Ka23	
1850.8(30)	1^-	50(15)	4.74							395	1811	6979.0(30)	73Pr02	71Ka23	
1855.7(16)										280	1816	6983.8(16)	71Ka23	77Ha45	
1859.2(16)										230	1819	6987.2(16)	71Ka23	77Ha45	
1864.3(16)										345	1824	6992.2(16)	71Ka23	77Ha45	
1869.3(16)										490	1829	6997.1(16)	71Ka23	77Ha45	
1872.3(16)										⟨170⟩	1832	7000.0(16)	71Ka23	77Ha45	
1876.0(16)										105	1836	7004.0(16)	71Ka23	77Ha45	
1885.6(16)										200	1845	7013.0(16)	71Ka23	77Ha45	
1887.0(30)	3^-	40(15)	3.30							195	1847	7014.0(30)	73Pr02	71Ka23	
1909.7(16)										625	1869	7036.6(16)	71Ka23	77Ha45	
1916.3(30)	1^-	40(10)	2.95							55	1875	7043.1(30)	73Pr02	71Ka23	
1926.2(16)										260	1885	7052.8(16)	71Ka23	77Ha45	
1929.2(16)										120	1888	7055.7(16)	71Ka23	77Ha45	
1939.9(16)										220	1898	7066.2(16)	71Ka23	77Ha45	
1963.1(30)	1^-	50(5)	3.09							390	1921	7088.9(30)	73Pr02	71Ka23	
1972.1(30)	$\langle 1^- \rangle$	10(5)	0.60							370	1930	7097.7(30)	73Pr02	71Ka23	
1978.5(16)										145	1936	7104.0(16)		71Ka23	
1983.5(16)										220	1941	7108.9(16)	71Ka23	77Ha45	
1993.9(30)	$\langle 1^- \rangle$	5(3)	0.28							195	1951	7119.0(30)	73Pr02	71Ka23	
2004.9(16)										180	1962	7129.8(16)	71Ka23	77Ha45	
2009.2(16)										70	1966	7134.0(16)	71Ka23	77Ha45	
2012.6(16)										160	1969	7137.3(16)	71Ka23	77Ha45	
2017.2(16)										95	1974	7141.8(16)	71Ka23	77Ha45	
2023.8(30)	1^-	30(5)	1.49								1980	7148.3(30)	73Pr02	71Ka23	
2026.9(30)	$\langle 1^- \rangle$	15(5)	0.74							310	1983	7151.3(30)	73Pr02	71Ka23	
2032.6(16)										⟨135⟩	1989	7156.9(16)	71Ka23	77Ha45	
2038.3(16)										95	1995	7162.5(16)	71Ka23	77Ha45	
2041.5(16)										145	1998	7165.6(16)	71Ka23	77Ha45	
2049.6(16)										⟨65⟩	2006	7173.6(16)	71Ka23	77Ha45	
2066.1(16)										155	2022	7189.7(16)	71Ka23	77Ha45	
2068.6(16)										125	2024	7192.1(16)	71Ka23	77Ha45	
2072.4(16)										310	2028	7195.9(16)	71Ka23	77Ha45	
2082.0(16)										150	2037	7205.0(16)	71Ka23	77Ha45	doublt
2087.8(30)	1^+	40(5)	0.67							215	2043	7210.9(30)	73Pr02	71Ka23	
2094.5(16)										90	2050	7217.5(16)	71Ka23	77Ha45	
2099.2(16)										165	2054	7222.1(16)	71Ka23	77Ha45	
2101.7(16)										80	2057	7224.5(16)	71Ka23	77Ha45	
2103.5(30)	1^-	325(50)	12.4								2058	7226.3(30)	73Pr02	71Ka23	
2103.8(30)	1^-	100(25)	3.81							95	2059	7226.6(30)	73Pr02	71Ka23	
2112.0(16)										65	2067	7235.0(16)	71Ka23	77Ha45	
2114.1(16)										180	2069	7236.7(16)	71Ka23	77Ha45	
2116.7(16)										105	2071	7239.2(16)	71Ka23	77Ha45	
2120.3(16)										95	2075	7242.7(16)	71Ka23	77Ha45	
2126.7(16)										280	2081	7249.0(16)	71Ka23	77Ha45	

(continued) $^{47}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	Γ_p [eV]	γ^2_p [keV]	ℓ'	$2s'$	Γ_{p_1} [eV]	$\gamma^2_{\mathrm{p}_1}$ [keV]	$S_{\mathrm{p}\gamma}$ [meV]	Rel.int. γ_i	Rel.int. γ_j	E_cm [keV]	E^* [keV]	Ref.	
2130.6(16)										⟨45⟩	2085	7252.8(16)	71Ka23	77Ha45
2135.7(16)										110	2090	7257.8(16)	71Ka23	77Ha45
2141.2(16)										170	2095	7263.2(16)	71Ka23	77Ha45
2148.3(16)										450	2102	7270.2(16)	71Ka23	77Ha45
2151.5(30)	⟨1$^-$⟩	5(3)	0.16							515	2105	7273.3(30)	73Pr02	71Ka23
2155.1(16)										305	2109	7276.8(16)	71Ka23	77Ha45
2157.0(16)										250	2111	7279.0(16)	71Ka23	77Ha45
2162.2(30)	1$^+$	5(3)	0.06							55	2116	7283.8(30)	73Pr02	71Ka23
2166.6(16)										100	2120	7288.1(16)	71Ka23	77Ha45
2172.1(16)										110	2125	7293.4(16)	71Ka23	77Ha45
2177.7(16)										235	2131	7298.9(16)	71Ka23	77Ha45
2181.3(30)	1$^-$	80(10)	2.41								2134	7302.4(30)	73Pr02	71Ka23
2184.2(30)	1$^+$	165(20)	2.09							305	2137	7305.3(30)	73Pr02	71Ka23
2184.7(16)										200	2138	7305.8(16)	71Ka23	77Ha45
2189.6(16)										95	2143	7310.6(16)	71Ka23	77Ha45
2193.9(16)										275	2147	7314.8(16)	71Ka23	77Ha45
2200.2(30)	⟨1$^-$⟩	5(3)	0.14							170	2153	7320.9(30)	73Pr02	71Ka23
2203.3(16)										465	2156	7324.0(16)	71Ka23	77Ha45
2211.1(16)										85	2164	7331.6(16)	71Ka23	77Ha45
2215.7(16)										355	2168	7336.1(16)	71Ka23	77Ha45
2217.9(30)	1$^-$	120(10)	3.24							235	2170	7338.3(30)	73Pr02	71Ka23
2224.2(16)										150	2176	7344.4(16)	71Ka23	77Ha45
2226.4(16)										260	2179	7346.6(16)	71Ka23	77Ha45
2333.6(16)										130	2284	7451.5(16)	71Ka23	77Ha45
2238.1(30)	1$^+$	50(5)	0.55							155	2190	7358.0(30)	73Pr02	71Ka23
2241.6(16)										180	2193	7361.5(16)	71Ka23	77Ha45
2246.5(16)										220	2198	7366.3(16)	71Ka23	77Ha45
2250.8(30)	3$^-$	40(5)	0.98			2	2.58			180	2202	7370.5(30)	85Mi0A	71Ka23
2257.4(16)										165	2209	7376.9(16)	71Ka23	77Ha45
2262.0(16)										350	2213	7381.0(16)	71Ka23	77Ha45
2265.4(16)										415	2217	7384.8(16)	71Ka23	77Ha45
2272.7(16)										190	2224	7391.9(16)	71Ka23	77Ha45
2277.3(16)										95	2228	7396.4(16)	71Ka23	77Ha45
2281.7(30)	1$^+$	175(20)	1.71								2233	7400.7(30)	73Pr02	
2290.0(30)	3$^-$	330(60)	7.27			21	21.0				2241	7409.0(30)	85Mi0A	
2305.1(30)	1$^+$	40(5)	0.37								2256	7423.6(30)	73Pr02	
2316.3(30)	3$^-$	25(5)	0.51								2267	7434.6(30)	73Pr02	
2327.1(30)	1$^+$	175(25)	1.53								2277	7445.1(30)	73Pr02	
2328.0(30)	⟨5$^+$⟩	8(3)	0.78								2278	7446.0(30)	73Pr02	
2347.5(30)	⟨5$^+$⟩	12(5)	1.11								2297	7465.1(30)	73Pr02	
2349.2(30)	3$^-$	110(10)	2.07			7	5.13				2299	7466.8(30)	85Mi0A	73Pr02
2372.0(30)	3$^-$	5(3)	0.09			3	1.88				2321	7489.0(30)	85Mi0A	73Pr02
2395.0(30)	3$^-$	50(5)	0.84								2344	7512.0(30)	73Pr02	
2425.7(30)	1$^+$	20(5)	0.14								2374	7541.6(30)	73Pr02	
2481.2(30)	1$^-$	3100(200)	41.9								2428	7596.0(30)	73Pr02	

(continued) $^{47}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	Γ_p [eV]	γ^2_p [keV]	ℓ'	$2s'$	Γ_{p_1} [eV]	$\gamma^2_{\mathrm{p}_1}$ [keV]	$S_{\mathrm{p}\gamma}$ [meV]	Rel.int. γ_i	Rel.int. γ_j	E_cm [keV]	E^* [keV]	Ref.	
2486.7(30)	1^+	60(10)	0.36								2433	7601.4(30)	73Pr02	
2498.5(30)	1^-	110(15)	1.43								2445	7612.9(30)	73Pr02	
2504.4(30)	$\langle 5^+ \rangle$	10(5)	0.60								2451	7618.7(30)	73Pr02	
2508.7(30)	3^-	250(75)	3.17								2455	7622.9(30)	73Pr02	
2515.1(30)	1^+	240(50)	1.37								2461	7629.1(30)	73Pr02	
2522.6(30)	5^+	10(5)	0.57								2468	7636.5(30)	73Pr02	
2529.7(30)	3^-	35(10)	0.42			5	1.17				2475	7643.4(30)	85Mi0A	73Pr02
2533.3(30)	1^-	2600(300)	31.1								2479	7647.0(30)	73Pr02	
2538.0(30)	1^+	400(75)	2.18								2484	7652.0(30)	73Pr02	
2539.1(30)	$\langle 5^+ \rangle$	5(3)	0.27								2485	7652.6(30)	73Pr02	
2550.6(30)	3^-	20(10)	0.23			1	0.24				2496	7663.9(30)	73Pr02	
2553.9(30)	5^-	3(1)				1	0.47				2499	7667.1(30)	73Pr02	
2558.9(30)	$\langle 3^+ \rangle$	8(4)	0.41								2504	7672.0(30)	73Pr02	
2568.0(30)	3^-	20(10)	0.22			38	8.22				2513	7681.0(30)	85Mi0A	73Pr02
2568.5(30)	3^+	25(10)	1.26	0	3	20	1.63				2513	7681.4(30)	73Pr02	
2578.7(30)	5^+	40(15)	1.97	0	5	5	0.39				2523	7691.4(30)	73Pr02	
2580.1(30)	1^-	525(50)	5.66								2525	7692.8(30)	73Pr02	
2592.9(30)	3^-	130(15)	1.36			4	0.77				2537	7705.3(30)	85Mi0A	73Pr02
2593.9(30)	3^+	30(10)	1.42			20	1.45				2538	7706.3(30)	73Pr02	
2599.4(30)	1^-	325(60)	1.56								2544	7711.7(30)	73Pr02	
2599.8(30)	3^+	5(3)	0.23	0	3	2	0.14				2544	7712.0(30)	73Pr02	
2606.8(30)	5^+	10(5)	0.46	0	5	2	0.14				2551	7718.9(30)	73Pr02	
2614.2(30)	5^+	20(10)	0.90	0	5	2	0.13				2558	7726.1(30)	73Pr02	
2632.2(30)	3^-	65(10)	0.63								2576	7743.8(30)	73Pr02	
2636.8(30)	3^-	60(10)	0.57	1	3	2	0.31				2580	7748.3(30)	85Mi0A	73Pr02
2652.9(30)	5^+	35(10)	1.43	0	5	5	0.28				2596	7764.0(30)	73Pr02	
2684.2(30)	3^-	30(10)	0.26			11	1.41				2627	7794.6(30)	85Mi0A	73Pr02
2689.9(30)	5^+	15(5)	0.56			8	0.39				2632	7800.2(30)	73Pr02	
2695.3(30)	5^-	4(2)	1.24			3	0.36				2637	7805.5(30)	73Pr02	
2699.2(30)	3^-	1450(150)	12.2			5	0.60				2641	7809.3(30)	73Pr02	
2705.6(30)	3^-	1400(150)	11.6			46	5.39				2648	7815.6(30)	85Mi0A	73Pr02
2709.6(30)	3^-	135(25)	1.11			21	2.42				2651	7819.5(30)	85Mi0A	73Pr02
2709.7(30)	5^+	40(15)	1.43			30	1.34				2652	7819.6(30)	73Pr02	
2719.0(30)	1^+	115(15)	0.44								2661	7829.0(30)	73Pr02	
2738.0(30)	1^-	215(20)	1.67			20	2.03				2679	7847.0(30)	73Pr02	
2741.1(30)	3^-	110	0.85			1	0.13				2682	7850.3(30)	85Mi0A	
2758.4(30)	1^+	1110(200)	3.95			15	8.09				2699	7867.3(30)	73Pr02	
2762.6(30)	3^-	25	0.18			19	1.77				2703	7871.4(30)	85Mi0A	
2767.0(30)	3^+	15(10)	0.47								2708	7876.0(30)	73Pr02	
2778.3(30)	1^+	20(5)	0.06								2719	7886.7(30)	73Pr02	
2785.0(30)	5^+	10(5)	0.30			2	0.06				2725	7893.0(30)	73Pr02	
2789.1(30)	1^+	800(100)	2.73			10	4.74				2729	7897.3(30)	73Pr02	
2797.2(30)	1^-	40(10)	0.28			4	0.32				2737	7905.2(30)	73Pr02	
2799.0(30)	5^+	30(5)	0.87			75	2.40				2739	7907.0(30)	73Pr02	
2801.0(30)	3^-	10	0.07			11	0.88				2741	7909.0(30)	85Mi0A	

(continued) $^{47}_{23}\mathrm{V}(\mathrm{p})$

$E_\circ$ [keV]	$2J^\pi$	Γ_p [eV]	γ^2_p [keV]	ℓ'	$2s'$	Γ_{p_1} [eV]	$\gamma^2_{\mathrm{p}_1}$ [keV]	$S_{\mathrm{p}\gamma}$ [meV]	Rel.int. γ_i	Rel.int. γ_j	E_cm [keV]	E^* [keV]	Ref.
2814.4(30)	3^+	5(3)	0.14			8	0.24				2754	7922.1(30)	73Pr02
2820.6(30)	3^-	35	0.23			28	2.08				2760	7928.1(30)	85Mi0A
2828.4(30)	3^+	15(3)	0.41			12	0.35				2768	7935.8(30)	73Pr02
2832.6(30)	3^-	55	0.36			43	3.04				2772	7939.9(30)	85Mi0A
2834.4(30)	5^+	70(10)	1.89			2	0.05				2774	7941.7(30)	73Pr02
2839.7(30)	5^-	10(5)	2.12			2	0.14				2779	7946.8(30)	73Pr02
2841.4(30)	1^+	900(100)	2.82			12	4.59				2780	7948.5(30)	73Pr02
2842.9(30)	3^+	15(5)	0.40								2782	7950.0(30)	73Pr02
2845.6(30)	1^-	1200(150)	7.58								2785	7952.6(30)	73Pr02
2845.9(30)	5^-	25(10)	5.23			3	0.20				2785	7952.9(30)	73Pr02
2855.7(30)	5^+	20(5)	0.52			1	0.02				2794	7962.5(30)	73Pr02
2863.8(30)	3^-	600	3.67			205	12.9				2802	7970.4(30)	85Mi0A
2864.3(30)	3^-	25(10)	0.15			10	0.63				2803	7970.9(30)	73Pr02
2865.8(30)	5^+	10(5)	0.25			2	0.05				2804	7972.4(30)	73Pr02
2870.8(30)	5^-	15(5)	2.95			15	0.92				2809	7977.3(30)	73Pr02
2873.2(30)	3^-	240	1.44			125	7.66				2812	7979.6(30)	85Mi0A
2873.6(30)	3^-	40(20)	0.24			15	0.91				2812	7980.0(30)	73Pr02
2880.9(30)	5^+	40(15)	0.98			5	0.12				2819	7987.2(30)	73Pr02
2881.1(30)	1^+	30(20)	0.08								2819	7987.4(30)	73Pr02
2897.7(30)	3^-	190	1.09			79	4.43				2836	8003.6(30)	85Mi0A
2898.1(30)	3^-	15(10)	0.08			15	0.83				2836	8004.0(30)	73Pr02
2901.1(30)	5^+	8(5)	0.19			5	0.11				2839	8006.9(30)	73Pr02
2905.5(30)	$\langle 5^+ \rangle$	30(15)	0.70								2843	8011.2(30)	73Pr02
2905.7(30)	3^-	1780	10.1			290	15.9				2843	8011.4(30)	85Mi0A
2911.8(30)	5^+	5(3)	0.11			3	0.06				2849	8017.4(30)	73Pr02
2923.2(30)	$\langle 5^+ \rangle$	5(3)	0.11								2860	8028.6(30)	73Pr02
2924.5(30)	1^+	25(10)	0.06								2862	8029.8(30)	73Pr02
2930.7(30)	3^-	20(10)	0.11			4	0.20				2868	8035.9(30)	73Pr02
2931.2(30)	1^+	900(100)	2.45			15	4.05				2868	8036.4(30)	73Pr02
2933.2(30)	5^+	5(3)	0.01			3	0.06				2870	8038.4(30)	73Pr02
2935.0(30)	3^-	150	0.81			58	2.87				2872	8040.0(30)	85Mi0A
2938.9(30)	$\langle 5^+ \rangle$	5(3)	0.11								2876	8043.9(30)	73Pr02
2939.5(30)	$\langle 5^+ \rangle$	5(3)	0.11			5	0.09				2876	8044.5(30)	73Pr02
2939.7(30)	1^-	1400(200)	7.49			50	2.41				2877	8044.7(30)	73Pr02
2941.2(30)	$\langle 5^+ \rangle$	45(10)	0.97			6	0.12				2878	8046.2(30)	73Pr02
2946.3(30)	$\langle 5^- \rangle$	5(3)	0.82			2	0.09				2883	8051.2(30)	73Pr02
2947.2(30)	$\langle 5^+ \rangle$	5(3)	0.11			4	0.07				2884	8052.1(30)	73Pr02
2952.6(30)	3^-	50	0.26			22	1.02				2889	8057.3(30)	85Mi0A
2956.2(30)	1^-	1800(200)	9.36			200	9.12				2893	8060.9(30)	73Pr02
2960.7(30)	3^-	110(15)	0.57			2	0.09				2897	8065.3(30)	73Pr02
2965.5(30)	1^-	175(20)	0.90								2902	8070.0(30)	73Pr02
2983.6(30)	3^-	38	0.19			10	0.42				2920	8087.7(30)	85Mi0A
2997.9(30)	$\langle 5^+ \rangle$	15(5)	0.29								2934	8101.7(30)	73Pr02
3004.7(30)	1^-	190(25)	0.91			100	3.89				2940	8108.3(30)	73Pr02
3007.7(30)	$\langle 5^+ \rangle$	35(15)	0.66			75	1.21				2943	8111.3(30)	73Pr02

(continued) $^{47}_{23}$V(p)

$E_\circ$ [keV]	$2J^\pi$	Γ_p [eV]	γ^2_p [keV]	ℓ'	$2s'$	Γ_{p_1} [eV]	$\gamma^2_{p_1}$ [keV]	$S_{p\gamma}$ [meV]	Rel.int. γ_i	Rel.int. γ_j	E_{cm} [keV]	E^* [keV]	Ref.
3021.2(30)	1^+	650(75)	1.55								2956	8124.5(30)	73Pr02
3023.1(30)	$\langle 5^+\rangle$	25(10)	0.46			15	0.23				2958	8126.3(30)	73Pr02
3027.9(30)	3^-	10	0.05			12	0.45				2963	8131.0(30)	85Mi0A
3039.2(30)	$\langle 5^+\rangle$	30(15)	0.53			30	0.44				2974	8142.1(30)	73Pr02
3047.6(30)	$\langle 3^+\rangle$	12(5)	0.21			10	0.14				2982	8150.3(30)	73Pr02
3049.0(30)	1^-	700(75)	3.12								2984	8152.0(30)	73Pr02
3052.4(30)	$\langle 5^+\rangle$	3(2)	0.05								2987	8155.0(30)	73Pr02
3059.1(30)	$\langle 5^+\rangle$	2(2)				1	0.03				2994	8161.6(30)	73Pr02
3060.5(30)	3^-	70	0.31			24	0.80				2995	8162.9(30)	85Mi0A
3065.4(30)	1^-	550(75)	2.39								3000	8167.7(30)	73Pr02
3067.8(30)	1^+	300(45)	0.67								3002	8170.1(30)	73Pr02
3069.1(30)	$\langle 3^+\rangle$	35(15)	0.59			5	0.06				3003	8171.4(30)	73Pr02

Additional data on this isotope can be found in [93Ca12, 81Ke09, 79Ch20, 69Ky01, 67Al18, 63Du09].

* $2J^\pi=1^+$ is given for the state at E^*=6040(20) keV in [77Ha45] from ^{46}Ti(^{3}He,d) reaction.

Doubtful spin assignments are listed in angular brackets. For d-wave resonances for which not even a most probable assignment could be made, a spin of $2J^\pi=5^+$ was arbitrary assigned.

Inelastic parameters (tabulated according to the exit channel orbital momentum ℓ' and spin s') are discussed in [79Ch20].

E_p=1549 (Γ_γ=0.12 eV), 1565 (Γ_γ=0.15 eV), 1572 keV (Γ_γ=0.03 eV) were reported in [73Sc29].

Parameters of inelastic proton scattering for resonances with $J^\pi=3/2^-$. $^{47}_{23}$V(p)

$E_\circ$ [keV]	$2J^\pi$	$\Gamma_{p'}$ [eV]	$\gamma^2_{p'}$ [keV]	γ^2_{s13} [keV]	γ^2_{s15} [keV]	$\gamma_{s13}\gamma_{s15}$ [keV]	Ref.
2250.8	3^-	2	2.58	0.05	2.54	–0.34	85Mi0A
2290.0	3^-	21	21.0	0.01	20.99	–0.45	85Mi0A
2349.2	3^-	7	5.13	3.42	1.72	–2.42	85Mi0A
2372.0	3^-	3	1.88	0.74	1.14	0.92	85Mi0A
2529.7	3^-	5	1.17	0.00	1.17	–0.04	85Mi0A
2568.0	3^-	38	8.22	0.02	8.20	–0.40	85Mi0A
2592.9	3^-	4	0.77	0.01	0.76	0.07	85Mi0A
2636.8	3^-	2	0.31	0.06	0.27	0.13	85Mi0A
2684.2	3^-	11	1.41	0.00	1.41	–0.04	85Mi0A
2705.6	3^-	46	5.39	2.37	3.02	2.68	85Mi0A
2709.6	3^-	21	2.42	0.54	1.88	–1.01	85Mi0A
2741.1	3^-	1	0.13	0.00	0.13	0.02	85Mi0A
2762.6	3^-	19	1.77	0.70	1.06	0.86	85Mi0A
2801.0	3^-	11	0.88	0.28	0.60	0.41	85Mi0A
2820.6	3^-	28	2.08	1.63	0.45	–0.86	85Mi0A
2832.6	3^-	43	3.04	1.34	1.70	1.51	85Mi0A

(continued) $^{47}_{23}\mathbf{V}(\mathrm{p})$

$E_\circ$ [keV]	$2J^\pi$	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$\gamma^2_{\mathrm{s}13}$ [keV]	$\gamma^2_{\mathrm{s}15}$ [keV]	$\gamma_{\mathrm{s}13}\gamma_{\mathrm{s}15}$ [keV]	Ref.
2863.8	3^-	205	12.9	11.46	1.46	4.10	85Mi0A
2873.2	3^-	125	7.66	7.47	0.19	1.18	85Mi0A
2897.7	3^-	79	4.43	4.35	0.08	0.59	85Mi0A
2905.7	3^-	290	15.9	9.19	6.70	7.85	85Mi0A
2935.0	3^-	58	2.87	0.31	2.55	0.89	85Mi0A
2952.6	3^-	22	1.02	0.94	0.08	0.28	85Mi0A
2983.6	3^-	10	0.42	0.26	0.16	–0.20	85Mi0A
3027.9	3^-	12	0.45	0.17	0.28	–0.22	85Mi0A
3060.5	3^-	24	0.80	0.69	0.11	0.28	85Mi0A
Average				1.84	2.35	0.63	85Mi0A

For notation see Table 3 in Introduction.

Branching ratios of γ-transitions [86De13, 67Al18, 70Wi06, 95Bu05]. Part 1. $^{47}_{23}\mathbf{V}(\mathrm{p})$

E^* [keV]	$2J^\pi$	$E_\circ$ [keV]	Branching ratios Percentage								Ref.	
E^*			0.0	87	146	259	660	1139	1272	1295		
$2J^\pi_{\mathrm{f}}$			3^-	5^-	7^-	3^+	5^+	7^+	9^-	11^-		
87.525	5^-		100								95Bu05	
145.821	7^-		0.6	99.4							95Bu05	
259.486	3^+		89.3	10.7							95Bu05	86De13
660.358	5^+		38.0	14.1	18.1	29.9					86De13	
1138.55	7^+		38.0		4.4	32.5	25.0				86De13	
1271.80	9^-			18.2	81.8						86De13	
1294.96	11^-		<2	<2	100	<2	<2				86De13	
1660.62	1^+		25.3	<0.1	<0.1	73.4	1.3	<0.1	<0.1	<0.1	86De13	
1746.96	9^+				36(1)		46(1)	17(1)			86De13	
1968.92	3^+		2.9	54.9		9(1)	32(1)	0.9			86De13	
2082.72	3^-		28.1	69.8	1.7		0.3				86De13	
2175.86	5^-		76.5	21.5	1.6	0.3					86De13	
2211.75	1^-		80.7	4.3		14.5					86De13	
2416	$\langle 11^+ \rangle$											
2439.54	5^+		8(1)	2(1)	15.4	36(2)	27(1)				86De13	
2546	5^-,7^-											
2558	$\langle 13 \rangle^-$											
2614.1	$\langle 15 \rangle^-$											
2722.63	5^-		55(1)	18.4	20(1)	1.2		5.2	0.8(1)		86De13	
2747.12	9^-			7(1)	86(1)				5.3	1.8	86De13	
2767.32	$\langle 1 \rangle^-$		100								86De13	
2810.04	7^+			43(1)	0.8	2.8	23.4	2.7	10.8		86De13	

(continued) $^{47}_{23}\mathrm{V}(\mathrm{p})$

E^*	$2J^\pi$	$E_\circ$	Branching ratios								Ref.
[keV]		[keV]	Percentage								
E^*			0.0	87	146	259	660	1139	1272	1295	
$2J_f^\pi$			3^-	5^-	7^-	3^+	5^+	7^+	9^-	11^-	
2984.29	7^-		1.3	12(1)	58(1)				29.0		86De13
3005.45	3^-			35.5	64.5						86De13
3054.22	5^-			43(1)	57(1)						86De13
3247.73	7^-		18(2)	19(2)	18(2)				10(1)	12(2)	86De13
3272	$\langle 13^+ \rangle$										
3303.53	3			71(2)		7.5	9(3)				86De13
3355.49	5^+		4.1			78(1)	18(1)				86De13
3362.65	1		98.1								86De13
3370.52	1–5		64(1)			28(1)					86De13
3370.56	3		35(2)	65(2)							86De13
3517.08	5		9(2)	50(3)	33(3)						86De13
3524.60	7^+					1.6	66.7	31.8			86De13
3590.35	5		73(4)	3(2)	18(2)						86De13
3659.71	$\langle 7 \rangle$			23(1)			22(2)		35(3)		86De13
3694.4	$5,3^+$			13(2)		72(2)	16(1)				86De13
3718.0	7–9				100						86De13
3721.29	7			5.1		1.5	74(1)	19(1)			86De13
3762.7	1–5		13(7)	29(4)			17(4)				86De13
3773.4	$\langle 1 \rangle$		100								86De13
3822.6	1,3		70(3)			18(2)					86De13
3869.0	5			3(1)	86(1)	11(1)					86De13
3875.8	$5,3^-$		35(3)		38(3)						86De13
3876.0	7^-			27(3)						73(3)	86De13
3890.1	1–5					57(6)					86De13
3892.3	$3,5^+$					66(2)					86De13
3952.6	7						37(6)	24(5)	13(3)		86De13
3955	$\langle 15^+ \rangle$										
3958.7	3^+		40(1)			29(2)	24(2)				86De13
3985.0	3–7			5(1)			48(2)	4(1)			86De13
4080.6	3^+			25(2)		59(3)	9(2)				86De13
4099.1	$5^-,3^-$		35(1)	4(1)	39(1)	11(1)					86De13
4100.3	3^-		56(2)	14(1)		9(1)					86De13
4118.1	1–5		50(4)								86De13
4132.6	$\langle 19^- \rangle$										
4150.4	$5^{\langle - \rangle}$		50(1)	37(1)	13(1)						86De13
4197.3	5		43(4)								86De13
4207.1	1–5					29(8)					86De13
4222.5	5		60(2)	32(2)							86De13
4271.6	3–7					24(3)	16(3)				86De13
4271.7	$\langle 1 \rangle$		24(4)								86De13
4296	$\langle 7 \rangle^-$										
4345.2	$\langle 1^+ \rangle$		14(2)			20(3)	29(2)				86De13

(continued) $^{47}_{23}$V(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios								Ref.
[keV]		[keV]	Percentage								
E^*			0.0	87	146	259	660	1139	1272	1295	
$2J_f^\pi$			3^-	5^-	7^-	3^+	5^+	7^+	9^-	11^-	
4392.8	3,1$^-$		15(2)	24(4)							86De13
4402.6	5–9								42(15)		86De13
4406.4						30(5)					86De13
4453.7	7				24(4)			16(2)			86De13
4509.5	3–7						63(8)				86De13
4510.0	5,3$^-$		31(2)	50(9)							86De13
4514.5	1–5		<17	<17	<17	<16					86De13
4543.0	1–5		11(3)			89(3)					86De13
4568.7	5		73(4)								86De13
4613											
4694.3	5$^+$,3$^+$					51(4)					86De13
4719.2	1–5			14(4)							86De13
4733.8	9								23(9)	46(7)	86De13
4792.9	1,3		68(7)								86De13
4796.8	1–5		49(3)	9(2)							86De13
4807.3	5				26(4)		24(6)				86De13
4852.5	1–5			18(4)		31(4)					86De13
4907.6	3–7						69(5)				86De13
4955.1	1–5					78(11)					86De13
4976.5			22(2)								86De13
4998.7	5,7			49(12)	20(8)						86De13
5001	$\langle 17^+ \rangle$										
5016.0	3,5$^+$		43(6)								86De13
5108.6	1–5		54(25)								86De13
5123.9	7,5$^+$						38(12)	24(3)			86De13
5142.2	1–5		100								86De13
5222.7	3,5$^+$		64(24)								86De13
5240.0	3–7						76(3)				
5244	1$^-$,3$^-$										
5387											
5474											
5538											
5585	1$^-$,3$^-$										
5635.8	3$^-$	478.5	19	30							86De13
5711											
5738	1,3	583		4		72	11				86De13
5748											
5853.3	1	700.7	1.3			2.8					86De13
5885.0	3	733.2	21	37							86De13
5886	$\langle 19^+ \rangle$										
5887.2	1	735.4	77	0.3							86De13
5894.4	1	742.8	20			24					86De13

(continued) $^{47}_{23}\mathbf{V}$(p)

E^* [keV]	$2J^\pi$	$E_\circ$ [keV]	Branching ratios Percentage								Ref.	
E^*			0.0	87	146	259	660	1139	1272	1295		
$2J_f^\pi$			3^-	5^-	7^-	3^+	5^+	7^+	9^-	11^-		
5905.5	$\langle 23^- \rangle$											
5928												
5962.0	1	810.9	28			7.0					86De13	
5994.1	3	844.7	6			21	28				86De13	
6023.4	1^-	875.0	63	2.2		0.6					86De13	
6040	1^+											
6087.3	5	939.8	5	1.0	0.8	4	35	8			86De13	
6099.3*		952.1										
6121.86	1	975.2	1.8			18					86De13	
6132.39	1^+	986.0	35			14	11				86De13	
6153.5*		1007.6										
6157.30	$\langle 5 \rangle$	1011.4	6.3	3.5	1.9	25	17	29			86De13	
6165.97	$3^{\langle - \rangle}$	1020.3	0.8	7.7	0.0	2.2					86De13	
6190.37	$\langle 3 \rangle$	1045.2	23	3.2		47	11				86De13	
6207.2*		1062.4										
6229.46	5^+	1085.0	1.6	2.8	3.4	2.8	2.9				86De13	
6239.80	3	1095.6	4.9	35	0.1	1.2	1.2				86De13	67Al18
6270.69	$\langle 3 \rangle$	1127.3	12.7	49		4.3					86De13	67Al18
6296.35	3^-	1153.5	52	2.5							86De13	
6325.5*		1183.3										
6350.7	$\langle 3 \rangle$	1209.1	28	17	0.6	9.8	1.8				86De13	67Al18
6351.6*		1210.0										
6364.3*		1222.9										
6366.4*		1225.1										
6373.6	$\langle 1 \rangle$	1232.4	15			11					86De13	
6387.0	$\langle 5^+ \rangle$	1246.2	1.7	3.1	0.3		21	1.6			86De13	
6392.5												
6393.6	5^+	1253.0	0.3	0.5	0.7	12	0.2				86De13	67Al18
6408.7*		1268.3										
6425.6	3	1285.6	3.1	3.6	0.3	0.9	1.0				86De13	67Al18
6427.1	5	1287.2	0.9	25	0.4	3.1	26	4.5				
6475.1	5	1336.1	7.0	0.2	0.4	7.0	19	2.0			86De13	
6497**		1357.9	10	5		25					67Al18	
6503**		1364.5	35	10		5					67Al18	
6570												
6679.4	$7^{\langle - \rangle}$	1545.0	0.1	10	10		0.3		19		86De13	
6682.8		1548.5										
6692.9	1^+	1558.8	0.9			49					86De13	
6749												
6871	$\langle 21^+ \rangle$											
6895												
6951.7*		1823.3										

(continued) $^{47}_{23}$V(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios								Ref.
[keV]		[keV]	Percentage								
E^*			0.0	87	146	259	660	1139	1272	1295	
$2J_f^\pi$			3^-	5^-	7^-	3^+	5^+	7^+	9^-	11^-	
6953.4	9^+	1825.0			12				5(9)		86De13
6954.3		1825.9									
7008											

* level introduced in [86De13], not included in [02Nu0A]
** level introduced in [67Al18], not included in [02Nu0A]

Branching ratios of γ-transitions [86De13, 67Al18, 70Wi06, 95Bu05]. Part 2. $^{47}_{23}$V(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios														
[keV]		[keV]	Percentage														
E^*			1661	1747	1969	2083	2176	2212	2440	2723	2747	2767	2810	2984	3005	3054	3248
$2J_f^\pi$			1^+	9^+	3^+	3^-	5^-	1^-	5^+	5^-	9^-	$\langle 1\rangle^-$	7^+	7^-	3^-	5^-	7^-
1968.92	3^+		1.4														
2082.72	3^-																
2211.75	1^-		0.6														
2439.54	5^+		0.9(3)		11(1)												
2810.04	7^+			12.1	3.2												
3247.73	7^-						23(1)										
3303.53	3				7(1)	4.5											
3362.65	1					2.0											
3370.52	1–5				5(1)	2.9											
3822.6	1,3		6(1)			3(1)											
3875.8	$5,3^-$					27(2)											
3890.1	1–5		12(3)														
3892.3	$3,5^+$					2(1)	9(1)										
3958.7	3^+				2(1)	4.3											
4207.1	1–5				30(8)												
4271.7	$\langle 1\rangle$		13(2)														
4345.2	$\langle 1^+\rangle$					10(3)											
4719.2	1–5					20(9)											
4792.9	1,3					17(3)											
4796.8	1–5					21(2)		3(1)									
5123.9	$7,5^+$			17(3)													
5635.8	3^-	478	6			37		8									
5738	1,3	583	9				4										
5853.3	1	701	0.8		0.2	58		23							0.6		
5885.0	3	733	12			6		13	8								

(continued) $^{47}_{23}\mathrm{V}(\mathrm{p})$

E^*	$2J^\pi$	$E_\circ$	Branching ratios														
[keV]		[keV]	Percentage														
E^*			1661	1747	1969	2083	2176	2212	2440	2723	2747	2767	2810	2984	3005	3054	3248
$2J^\pi_f$			1^+	9^+	3^+	3^-	5^-	1^-	5^+	5^-	9^-	$\langle 1\rangle^-$	7^+	7^-	3^-	5^-	7^-
5887.2	1	735	3.5		0.5	14		2.1				0.4			0.4		
5894.4	1	743	37			7.4		6.2	0.4								
5962.0	1	811	20		15			20							0.7	0.2	
5994.1	3	845	4.2			2.4	17	4.3	2.0	4.9		4.9			2.3		
6023.4	1^-	875	0.4		1.5	16		5.7							0.4	0.2	
6087.3	5	940		2.0	1.0		1.0		33						1		
6121.9	1	975	45		7.6	8.1		4.4				1.4			0.4		
6132.4	1^+	986			12	0.3		3.7	4.2						0.5		
6157.3	$\langle 5\rangle$	1011	0.6		4.1				3.3								
6166.0	$3^{\langle -\rangle}$	1020	0.6		0.6	3.1	4.1	34	0.8	10		1.5			8.7	0.5	
6190.4	$\langle 3\rangle$	1045			0.2		1.3	0.3	0.8	1.9		1.8			1.9	0.5	
6229.5	5^+	1085	0.5	1.9	23	2.0	4.6		14	0.5			22		2.8	0.2	
6239.8	3	1096	0.7			0.5	29	4.9	1.3		3.2				0.5	2.8	
6270.7	$\langle 3\rangle$	1127			0.3	0.1		0.3		9.3		1.0				1.9	
6296.4	3^-	1153	5.4		1.2	5.1	1.2		1.8	0.6					0.2		
6350.7	$\langle 3\rangle$	1209	3.4		2.3	11	0.9	7.1	0.9	2.9		1.2			0.1	0.5	
6373.6	$\langle 1\rangle$	1232	32		2.0	1.4		5.5				3.6					
6387.0	$\langle 5^+\rangle$	1246		0.2	7.5		0.9		3.0				3.2	1.4	0.9	2.7	0.4
6393.6	5^+	1253		0.5	6.5	3.7	0.1		4.4	0.7			10	0.1			0.7
6425.6	3	1286	1.9		3.9	0.3	30	37				1.1				0.7	
6427.1	5	1287			21	0.4			6.7					0.9			0.4
6475.1	5	1336			20	4.2	0.5		1.6				3.3	0.5	0.3		0.5
6497		1358	20		5	5				30							
6503		1364				35	5		5								
6679.4	$7^{\langle -\rangle}$	1545		1.4			0.4		4.2	9.2	6.6			22		3.4	3.7
6692.9	1^+	1559	37		0.5	3.1		0.4	0.2								
6953.4	9^+	1825		61													

Branching ratios of γ-transitions [86De13, 67Al18, 70Wi06, 95Bu05]. Part 3. $^{47}_{23}\mathrm{V}(\mathrm{p})$

E^*	$2J^\pi$	$E_\circ$	Branching ratios														
[keV]		[keV]	Percentage														
E^*			3304	3355	3363	3370	3371	3517	3534	3590	3660	3694	3718	3722	3763	3773	3823
$2J^\pi_f$			3	5^+	1	1,3,5	3	5		5	7	5,3$^+$		7		$\langle 1\rangle$	1,3
5853.25	1	700.7			0.7		8.1								1.0	1.9	0.6
5885.0	3	733.2								3							
5887.17	1	735.4			0.7		0.6										

(continued) $^{47}_{23}$V(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios														
[keV]		[keV]	Percentage														
E^*			3304	3355	3363	3370	3371	3517	3534	3590	3660	3694	3718	3722	3763	3773	3823
$2J_f^\pi$			3	5^+	1	1,3,5	3	5		5	7	$5,3^+$		7		$\langle 1\rangle$	1,3
5894.43	1	742.8	1.1		0.3	0.2	0.5								0.9	0.7	
5962.0	1	810.9			0.6	0.5										0.1	0.5
5994.1	3	844.7					1.0									1.0	1.6
6023.4	1^-	875.0	0.1		3.1		0.4									0.4	1.2
6087.3	5	939.8								0.7	1.1						
6121.86	1	975.2	0.4		0.3		0.2									0.2	
6132.39	1^+	986.0	5.7		1.8	5.3	1.5									0.7	
6157.30	$\langle 5\rangle$	1011.4		1.0								4.8		0.4			
6165.97	$3^{\langle -\rangle}$	1020.3			2.2		4.5									0.7	
6190.37	$\langle 3\rangle$	1045.2		0.4	0.1	0.2	0.4			0.3		0.2					
6229.46	5^+	1085.0	1.2	0.3			0.9		1.5		1.0		0.6	1.7			
6239.80	3	1095.6			1.2		0.1			2.4						0.3	0.4
6270.69	$\langle 3\rangle$	1127.3			1.9		4.1	1.2		1.5					0.6	0.2	0.1
6296.35	3^-	1153.5			2.4		9.4	0.4		1.9						0.8	
6350.73	$\langle 3\rangle$	1209.1				1.2	1.4	0.6		1.1							0.3
6373.56	$\langle 1\rangle$	1232.4				1.8	1.0					0.4				4.3	
6387.01	$\langle 5^+\rangle$	1246.2		2.8					26		1.9			1.0			
6393.63	5^+	1253.0		8.4		0.2		0.2	25		3.4	1.0		6.1			
6425.60	3	1285.6	1.0		0.3		1.8	0.1		2.3							
6427.12	5	1287.2	0.3	0.6		0.6		0.4	2.1		0.4	0.3		1.0			
6475.09	5	1336.1	19			0.6			0.4		2.6	1.1	0.4	0.6			
6679.38	$7^{\langle -\rangle}$	1545.0						2.3	0.3	0.5			0.6	0.4			
6692.86	1^+	1558.8			0.4		1.5										0.2

Branching ratios of γ-transitions [86De13, 67Al18, 70Wi06, 95Bu05]. Part 4. $^{47}_{23}$V(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios													
[keV]		[keV]	Percentage													
E^*			3869	3875	3876	3890	3892	3953	3959	3985	4081	4099	4100	4118	4150	4197	4207
$2J_f^\pi$			5	$5,3^-$	7^-		$3,5^+$	7	3^+		3^+	X^-	3^-		5	5	
5853.25	1	700.7					0.4										
5887.17	1	735.4									0.3		0.2				
5894.43	1	742.8															0.4
5962.0	1	810.9					2.9		0.8				0.2	1.4			
6023.4	1^-	875.0											0.3				
6087.3	5	939.8						4.6									
6121.86	1	975.2							8.2		0.3		0.5				0.2

(continued) $^{47}_{23}$V(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios														
[keV]		[keV]	Percentage														
E^*			3869	3875	3876	3890	3892	3953	3959	3985	4081	4099	4100	4118	4150	4197	4207
$2J^\pi_f$			5	5,3$^-$	7$^-$		3,5$^+$	7	3$^+$		3$^+$	X$^-$	3$^-$		5	5	
6132.39	1^+	986.0					0.3		0.4		0.5		0.3				
6157.30	$\langle 5\rangle$	1011.4							1.5		0.8						
6165.97	$3^{\langle -\rangle}$	1020.3					0.2						1.8		7.6	1.2	
6190.37	$\langle 3\rangle$	1045.2		0.5					0.2						0.2	0.1	
6229.46	5^+	1085.0	4.1		0.3		0.3								0.3	0.3	
6239.80	3	1095.6					0.2					1.0	3.6	0.9	0.2	0.2	
6270.69	$\langle 3\rangle$	1127.3					1.4		0.3		0.4	0.3	6.0	0.9		0.8	
6296.35	3^-	1153.5		0.7							0.2	4.2		2.8	0.5	1.1	
6350.73	$\langle 3\rangle$	1209.1		0.3					0.4		1.0		1.2	0.5	0.1	0.2	
6373.56	$\langle 1\rangle$	1232.4				2.5			3.4		9		1.0				2.2
6387.01	$\langle 5^+\rangle$	1246.2	5.0					0.8	0.9	5.1				0.3			
6393.63	5^+	1253.0		0.2	0.2				1.0	3.1	1.1				0.1		
6425.60	3	1285.6		2.1									2.3	1.6	2.4	0.3	
6427.12	5	1287.2		0.6				0.7			1.1		0.6	0.3		0.3	
6475.09	5	1336.1	0.8					2.4	1.1	0.6	2.5		0.2				
6692.86	1^+	1558.8				1.7			1.0		0.3						1.4
6953.4	9^+	1825.0						13									

Branching ratios of γ-transitions [86De13, 67Al18, 70Wi06, 95Bu05]. Part 5. $^{47}_{23}$V(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios														
[keV]		[keV]	Percentage														
E^*			4222	4271	4272	4346	4393	4403	4406	4454	4509	4511	4514	4543	4569	4694	4719
$2J^\pi_f$			5		$\langle 1\rangle$	$\langle 1^+\rangle$	3,1$^-$			7					5	X$^+$	
5894.43	1	742.8			0.4		0.2		0.2								
5962.0	1	810.9			1.2	0.4											
6023.4	1^-	875.0			0.4	0.5	9,3						0.2				0.6
6121.86	1	975.2			0.4	0.5											0.5
6132.39	1^+	986.0			0.4	0.5											
6165.97	$3^{\langle -\rangle}$	1020.3			1.4	0.5					1.0				0.6		0.9
6190.37	$\langle 3\rangle$	1045.2	1.3		0.3	0.7									1.3		0.1
6229.46	5^+	1085.0							0.1							1.4	
6239.80	3	1095.6	1.1		0.1	1.1	0.4						0.3		0.8		0.4
6270.69	$\langle 3\rangle$	1127.3	1.8			0.6	2.1						0.2			0.2	
6296.35	3^-	1153.5	0.2		0.9	0.4						1.8			0.2	0.1	
6350.73	$\langle 3\rangle$	1209.1	0.9		0.6							0.4	0.1		1.0		
6373.56	$\langle 1\rangle$	1232.4												3.5			

(continued) $^{47}_{23}$V(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios														
[keV]		[keV]	Percentage														
E^*			4222	4271	4272	4346	4393	4403	4406	4454	4509	4511	4514	4543	4569	4694	4719
$2J_f^\pi$			5		$\langle 1\rangle$	$\langle 1^+\rangle$	3,1$^-$			7					5	X$^+$	
6387.01	$\langle 5^+\rangle$	1246.2	0.4	0.8				0.4	1.2	1.3	1.5						
6393.63	5^+	1253.0	0.9	0.9		0.2				1.2	0.7						
6425.60	3	1285.6	0.4			0.3									0.3		
6427.12	5	1287.2	0.6	0.3						0.3							
6475.09	5	1336.1	0.3	0.6													
6679.38	$7^{\langle -\rangle}$	1545.0	1.4					0.4							0.4		0.8
6692.86	1^+	1558.8				0.3	0.6					0.4		0.4			

Branching ratios of γ-transitions [86De13, 67Al18, 70Wi06, 95Bu05]. Part 6. $^{47}_{23}$V(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios														
[keV]		[keV]	Percentage														
E^*			4733	4793	4797	4807	4853	4908	4955	4977	5000	5016	5109	5124	5142	5223	5240
$2J_f^\pi$			9														
6023.4	1^-	875.0		0.6	1.3										0.3		
6121.86	1	975.2										0.4	0.5				
6132.39	1^+	986.0		0.1					0.6				0.8				
6157.30	$\langle 5\rangle$	1011.4														0.4	
6165.97	$3^{\langle -\rangle}$	1020.3		0.7	0.7					0.4		0.1			0.2		
6190.37	$\langle 3\rangle$	1045.2					0.2										
6229.46	5^+	1085.0										0.7				0.2	
6239.80	3	1095.6			0.2						0.3				0.3		
6270.69	$\langle 3\rangle$	1127.3		0.1							0.2						
6296.35	3^-	1153.5		0.2	0.6		0.5			0.1					0.3		
6350.73	$\langle 3\rangle$	1209.1									0.1	0.2			0.1		
6387.01	$\langle 5^+\rangle$	1246.2				0.2	0.1	0.5			0.1			0.7			1.1
6393.63	5^+	1253.0				0.4		0.7						0.8			1.2
6425.60	3	1285.6								0.3	0.2						
6475.09	5	1336.1														0.5	
6679.38	$7^{\langle -\rangle}$	1545.0									0.3						
6692.86	1^+	1558.8							0.4							0.5	

Target isotope: $^{47}_{22}$Ti $I^{\pi}_{\circ} = 5/2^-$ *Abundance:* 7.44(2) % $S_{\mathrm{p}} = 6831.9(24)$ keV

$^{48}_{23}$V(p)

$E_{\circ}$ [keV]	Rel.int. γ_i	E_{cm} [keV]	E^* [keV]	Ref.
891.7(10)	50	873.1	7705.0(30)	61Du03
895.4(10)	70	876.7	7708.6(30)	61Du03
898.4(10)	70	879.7	7711.6(30)	61Du03
901.6(10)	120	882.8	7714.7(30)	61Du03
907.1(10)	25	888.2	7720.1(30)	61Du03
913.4(10)	25	894.4	7726.3(30)	61Du03
920.2(10)	170	901.0	7732.9(30)	61Du03
936.6(10)	35	917.1	7749.0(30)	61Du03
941.3(10)	100	921.7	7753.6(30)	61Du03
945.8(10)	200	926.1	7758.0(30)	61Du03
958.4(10)	700	938.4	7770.3(30)	61Du03
963.6(10)	40	943.5	7775.4(30)	61Du03
968.9(10)	145	948.7	7780.6(30)	61Du03
972.4(10)	45	952.1	7784.0(30)	61Du03
979.8(10)	190	959.4	7791.3(30)	61Du03
982.4(10)	80	961.9	7793.8(30)	61Du03
985.5(10)	210	965.0	7796.9(30)	61Du03
988.4(10)	70	967.8	7799.7(30)	61Du03
995.6(10)	55	974.9	7806.8(30)	61Du03
997.4(10)	25	976.6	7808.5(30)	61Du03
1001.1(10)	15	980.2	7812.1(30)	61Du03
1007.4(10)	230	986.4	7818.3(30)	61Du03
1013.5(10)*	130	992.4	7824.3(30)	61Du03
1017.5(10)	190	996.3	7828.2(30)	61Du03
1023.1(10)	25	1001.8	7833.7(30)	61Du03
1026.9(10)	230	1005.5	7837.4(30)	61Du03
1030.1(10)	70	1008.6	7840.5(30)	61Du03
1032.9(10)	160	1011.4	7843.3(30)	61Du03
1035.3(10)	130	1013.7	7845.6(30)	61Du03
1038.6(10)	100	1017.0	7848.9(30)	61Du03
1042.7(10)	90	1021.0	7852.9(30)	61Du03
1044.6(10)	40	1022.8	7854.7(30)	61Du03
1049.0(10)	130	1027.0	7859.0(30)	61Du03
1050.7(10)	280	1028.8	7860.7(30)	61Du03
1055.5(10)	170	1033.5	7865.4(30)	61Du03
1056.4(10)	170	1034.4	7866.3(30)	61Du03
1066.1(10)	170	1043.9	7875.8(30)	61Du03
1068.1(10)	85	1045.8	7877.7(30)	61Du03
1072.5(10)	150	1050.2	7882.1(30)	61Du03
1076.9(10)	25	1054.5	7886.4(30)	61Du03
1079.8(10)	490	1057.3	7889.2(30)	61Du03
1087.3(10)	85	1064.6	7896.5(30)	61Du03
1088.9(10)	60	1066.2	7898.1(30)	61Du03
1092.7(10)	85	1069.9	7901.8(30)	61Du03
1098.1(10)	350	1075.2	7907.1(30)	61Du03

(continued) $^{48}_{23}\mathrm{V}(\mathrm{p})$

$E_\circ$ [keV]	Rel.int. γ_i	E_{cm} [keV]	E^* [keV]	Ref.
1102.8(10)	150	1079.8	7911.7(30)	61Du03
1105.9(10)	250	1082.9	7914.8(30)	61Du03
1110.6(10)	90	1087.5	7919.4(30)	61Du03
1114.2(10)	180	1091.0	7922.9(30)	61Du03
1118.3(10)	75	1095.0	7926.9(30)	61Du03
1120.7(10)	330	1097.4	7929.3(30)	61Du03
1122.4(10)	210	1099.0	7930.9(30)	61Du03
1125.7(10)	120	1102.2	7934.1(30)	61Du03
1128.0(10)	100	1104.0	7936.4(30)	61Du03
1132.7(10)	880	1109.1	7941.0(30)	61Du03
1136.0(10)	270	1112.0	7944.2(30)	61Du03
1138.1(10)	260	1114.4	7946.3(30)	61Du03
1143.3(10)	140	1119.5	7951.4(30)	61Du03
1146.9(10)*	270	1123.0	7954.9(30)	61Du03
1148.6(10)	400	1124.7	7956.6(30)	61Du03
1152.1(10)	270	1128.1	7960.0(30)	61Du03
1155.0(10)	320	1131.0	7962.8(30)	61Du03
1159.3(10)	200	1135.1	7967.0(30)	61Du03
1162.3(10)	250	1138.1	7970.0(30)	61Du03
1164.1(10)	160	1139.8	7971.7(30)	61Du03
1167.1(10)	370	1142.8	7974.7(30)	61Du03
1168.9(10)	290	1144.5	7976.4(30)	61Du03
1172.2(10)	180	1147.8	7979.7(30)	61Du03
1176.0(10)	160	1152.0	7983.4(30)	61Du03
1180.6(10)	130	1156.0	7987.9(30)	61Du03
1183.1(10)	490	1158.5	7990.4(30)	61Du03
1193.9(10)	200	1169.0	8000.9(30)	61Du03
1198.5(10)	280	1173.5	8005.4(30)	61Du03
1202.3(10)	280	1177.3	8009.2(30)	61Du03
1207.9(10)	220	1182.7	8014.6(30)	61Du03
1210.3(10)	330	1185.1	8017.0(30)	61Du03
1214.5(10)	290	1189.2	8021.1(30)	61Du03
1218.7(10)	330	1193.3	8025.2(30)	61Du03
1225.3(10)	310	1199.8	8031.7(30)	61Du03
1228.8(10)	250	1203.2	8035.1(30)	61Du03
1233.8(10)*	250	1208.1	8040.0(30)	61Du03
1236.2(10)	150	1210.4	8042.3(30)	61Du03
1238.6(10)	170	1212.8	8044.7(30)	61Du03
1240.4(10)	320	1214.6	8046.5(30)	61Du03
1245.1(10)	250	1219.2	8051.1(30)	61Du03
1250.6(10)	200	1224.5	8056.4(30)	61Du03
1254.8(10)	500	1228.7	8060.6(30)	61Du03
1256.6(10)	250	1230.4	8062.3(30)	61Du03
1259.0(10)	250	1233.0	8064.7(30)	61Du03
1267.8(10)	290	1241.4	8073.3(30)	61Du03

(continued) $^{48}_{23}\mathrm{V}(\mathrm{p})$

$E_\circ$ [keV]	Rel.int. γ_i	E_{cm} [keV]	E^* [keV]	Ref.
1272.1(10)	160	1245.6	8077.5(30)	61Du03
1275.4(10)	75	1248.8	8080.7(30)	61Du03
1279.1(10)	470	1252.5	8084.4(30)	61Du03
1282.0(10)	470	1255.0	8087.2(30)	61Du03
1286.6(10)	300	1259.8	8091.7(30)	61Du03
1288.6(10)	300	1261.8	8093.7(30)	61Du03
1291.2(10)	260	1264.3	8096.2(30)	61Du03
1293.7(10)	370	1266.7	8098.6(30)	61Du03
1296.2(10)	470	1269.2	8101.1(30)	61Du03
1298.7(10)	330	1271.6	8103.5(30)	61Du03
1300.6(10)	150	1273.5	8105.4(30)	61Du03
1304.8(10)	320	1277.6	8109.5(30)	61Du03
1310.2(10)	260	1282.9	8114.8(30)	61Du03
1313.4(10)	170	1286.0	8117.9(30)	61Du03
1315.9(10)	300	1288.5	8120.4(30)	61Du03

Additional data on this isotope can be found in [81Ke09, 63Du09].
* possible doublet

Branching ratios of γ-transitions [72Bb14, 02Nu0A]. $^{48}_{23}\mathrm{V}(\mathrm{p})$

E^* [keV]	J^π	Branching ratios Percentage													Com.
		0.0 4^+	308 2^+	420 1^+	428 5^+	519 1^-	613 4^+	745 2^-	765 3^+	776 3,5	1056 3^-	1099 4^-	1121 2^+4	1692	E^*,keV J^π_{f}
308.27(5)	2^+	100													
420.65(7)	1^+	100													
427.91(8)	5^+		100												
518.66(8)	1^-														
613.38(7)	4^+	100													
627.29(10)	6^+														
744.98(8)	2^-														
764.96(7)	3^+	x	x												
776.2(10)	3,5														
1055.77(12)	3^-	x			x	x									
1099.18(13)	4^-	100													
1120.8(13)	2–4	x	x												
1254.6(6)	7^+														
1264.59(16)	5^+														
1326(8)															
1521.39(10)	2^+														

(continued) $^{48}_{23}\mathbf{V}(\mathrm{p})$

E^* [keV]	J^π	Branching ratios Percentage													Com.
		0.0 4^+	308 2^+	420 1^+	428 5^+	519 1^-	613 4^+	745 2^-	765 3^+	776 3,5	1056 3^-	1099 4^-	1121 2^+4	1692	E^*,keV J^π_f
1557.55(15)	4^-														
1685.47(24)	$5^{\langle-\rangle}$														
1691.5(19)	2,3	x				x									
1730(8)	5^+–7^+														
1764(7)															
1780.98(14)	3^+														
1998.44(17)	2^-,3^-														
2062.42(24)	$5^{\langle-\rangle}$														
2098(10)															
2120(10)	1^+–3^+														
2187(10)	2^-–4^-														
2197.6(23)	2^+	x									x				
2231.8(6)	$8^{\langle+\rangle}$														
2258(7)	1^+–4^+														
2295(6)	1^+														
2337.4(14)	2–4		x				x					x	x		
2397.7(6)	$6^{\langle-\rangle}$														
2412(7)	1^+														
2447.4(17)	2^+	x				x	x				x				
2470(3)	2^-,3^-		x				x								
2493.7(19)	3–5														
2577(8)	1^+–4^+														
2604.8(23)	2–4	x	x				x							x	
2620(10)															
2626.6(6)	$9^{\langle+\rangle}$														
2708(7)	4^-–6^-														
2773(13)	1^+–4^+														
2779.4(9)	$\langle 6^-\rangle$														
2789.5(23)	3^-,4^-	x											x		
2823(3)	$\langle 4^-\rangle$		x						x						
2884(9)															
2937(8)	1^+–4^+														
2959(10)															
3013(3)	$\langle 1$–$4\rangle$														
3018(11)	$\langle 0\rangle^+$														
3043(9)	$\langle 0^+\rangle$														
3074(3)	1^+–4^+		x												
3168(15)	1^+–4^+														
3172.2(7)	$\langle 7^-\rangle$														
3243.4(22)	2^+	x				x									
3294(15)	1^+–4^+														
3322(15)	1^+–4^+														

(continued) **$^{48}_{23}$V(p)**

E^*	J^π	Branching ratios													Com.
[keV]		Percentage													
		0.0 4^+	308 2^+	420 1^+	428 5^+	519 1^-	613 4^+	745 2^-	765 3^+	776 3,5	1056 3^-	1099 4^-	1121 2^+4	1692	E^*,keV J^π_f
3371(15)	1^+–4^+														
3425	$\langle 7^- \rangle$														
3440(15)	1^+–4^+														
3523(15)	1^+–4^+														
3565(3)	2^+–4^+	x			x										
3586	$\langle 7^- \rangle$														
3699(9)	1^+														
3736(15)	1^+–4^+														
3801(15)	1^+–4^+														
3866	1^+														
3977.1(9)	$\langle 8^- \rangle$														
4017(15)	$\langle 2 \rangle^+$														
4086(15)	1^+–4^+														
4150.1															
4307.1(9)	$11^{\langle + \rangle}$														
4390.9(9)	$\langle 9^- \rangle$														
4674.6(10)															
4698(15)	1^+														
4798(15)	1^+														
4966.7(10)															
6240.2(13)	$13^{\langle + \rangle}$														

Target isotope: $^{48}_{22}$Ti $I^\pi_\circ = 0^+$ *Abundance:* 73.72(3) % $S_p = 6758.15(83)$ keV **$^{49}_{23}$V(p)**

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{p'}$	$\gamma^2_{p'}$	$2s$	ℓ	$\Gamma_{p'}$	$\gamma^2_{p'}$	$2s$	ℓ	$\Gamma_{p'}$	Rel.int.	E_{cm}	E^*	Ref.	
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	γ_i	[keV]	[keV]		
876.3(10)																170	858	7616.4	61Du03	
882.7(10)																35	864	7622.7	61Du03	
895.5(10)																70	877	7635.2	61Du03	
911.3(10)																135	892	7650.7	61Du03	
925.8(10)																100	906	7664.9	61Du03	
930.6(10)																70	911	7669.6	61Du03	
933.2(10)																135	914	7672.1	61Du03	
942.1(10)																170	922	7680.9	61Du03	
959.7(10)																470	940	7698.1	61Du03	92Di02
969.8(10)																340	950	7708.0	61Du03	
975.6(10)																340	955	7713.7	61Du03	
979.8(10)																45	959	7717.8	61Du03	

(continued) $^{49}_{23}$V(p)

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	Rel.int. γ_i	E_cm [keV]	E^* [keV]	Ref.		
991.7(10)												45	971	7729.4	61Du03	92Di02	
996.3(10)												35	976	7733.9	61Du03		
1007.0(10)	3^-		8(3)				0.88(25)*					2500	986	7744.4	61Du03	92Di02	70Ma36
1013.0(10)	3^-		6(2)				0.70(20)*					2000	992	7750.3	61Du03	92Di02	70Ma36
1023.2(10)	1^-		50(15)				2.5(7)*					500	1002	7760.3	61Du03	92Di02	70Ma36
1032.7(10)												370	1011	7769.6	61Du03	92Di02	
1035.5(10)												240	1014	7772.3	61Du03	72Ki06	92Di02
1045.8(10)												35	1024	7782.4	61Du03		
1048.4(10)												100	1027	7785.0	61Du03	92Di02	
1052.4(10)												135	1030	7788.9	61Du03	92Di02	
1059.9(10)												100	1038	7796.2	61Du03	92Di02	
1070.9(10)												100	1049	7807.0	61Du03	92Di02	
1083.1(10)												135	1061	7819.0	61Du03	92Di02	
1092(2)													1070	7828	92Di02		
1101.1(10)												370	1078	7836.6	61Du03		
1103.2(10)	$\langle 1^- \rangle$											200	1080	7838.6	61Du03	92Di02	
1118.1(10)												35	1095	7853.2	61Du03	92Di02	
1123.4(10)												70	1100	7858.4	61Du03	92Di02	
1130.6(10)												50	1107	7865.5	61Du03	92Di02	
1139.3(10)	$\langle 3^- \rangle$											470	1116	7874.0	61Du03	92Di02	
1148.6(10)												135	1125	7883.1	61Du03		
1152.8(10)												50	1129	7887.2	61Du03	92Di02	
1157.8(10)												50	1134	7892.1	61Du03		
1163.0(10)												370	1139	7897.2	61Du03	92Di02	
1170.0(10)												50	1146	7904.1	61Du03		
1175.3(10)	$\langle 1^- \rangle$											270	1151	7909.3	61Du03	92Di02	
1176.5(10)												400	1152	7910.4	61Du03		
1180.7(10)												50	1156	7914.5	61Du03		
1187.9(10)												440	1163	7921.6	61Du03	92Di02	
1195.0(10)												135	1171	7928.5	61Du03	92Di02	
1204.5(10)												300	1179	7937.9	61Du03	92Di02	
1209.5(10)	$\langle 3^- \rangle$											570**	1184	7942.8	61Du03	92Di02	
1226.5(10)												70	1201	7959.4	61Du03	92Di02	
1241.2(10)												100	1215	7973.8	61Du03	92Di02	
1250.4(10)												270	1224	7982.8	61Du03		
1253.0(10)												750	1227	7985.4	61Du03	92Di02	
1259.1(10)												70	1233	7991.3	61Du03		
1263.1(10)												370	1237	7995.2	61Du03	92Di02	
1269.3(10)												75	1243	8001.3	61Du03	92Di02	
1280.4(10)	$\langle 3^- \rangle$											570	1254	8012.2	61Du03	72Ki06	92Di02
1287.9(10)												135	1261	8019.5	61Du03	92Di02	
1293.0(10)												500	1267	8024.5	61Du03	92Di02	
1302.2(10)												75	1275	8033.5	61Du03		
1305.8(10)												300	1279	8037.1	61Du03		
1307.6(10)												570	1280	8038.8	61Du03		

(continued) $^{49}_{23}\mathrm{V}(\mathrm{p})$

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	Rel.int. γ_i	E_cm [keV]	E^* [keV]	Ref.		
1308.0(10)														135	1281	8039.2	61Du03	92Di02	
1312.8(10)														270	1286	8043.9	61Du03	92Di02	
1322.2(10)														680	1295	8053.1	61Du03	92Di02	
1326.4(10)														135	1299	8057.2	61Du03	72Ki06	92Di02
1338.9(20)	$\langle 5 \rangle$													85**	1311	8069.5	68Kl04	92Di02	
1342.2(20)														125**	1314	8072.7	68Kl04	92Di02	
1349.8(20)														40**	1322	8080.2	68Kl04	92Di02	
1354.9(20)														10	1327	8085.2	68Kl04		
1362.2(20)	1^-													1000**	1334	8092.3	68Kl04	72Ki06	
1373.9(20)	1													295**	1345	8103.8	68Kl04	72Ki06	92Di02
1383.8(20)														55	1355	8113.5	68Kl04		
1387.7(20)	3^-													460**	1359	8117.3	68Kl04	72Ki06	92Di02
1396.7(20)														40	1368	8126.1	68Kl04		
1401.9(20)	$\langle 3^- \rangle$													180	1373	8131.2	68Kl04	72Ki06	92Di02
1412.8(20)														85	1384	8141.9	68Kl04		
1416.9(20)														85	1388	8145.9	68Kl04		
1420.9(20)														40	1391	8149.8	68Kl04		
1424.2(20)														95	1395	8153.0	68Kl04		
1434.0(20)														110	1405	8162.6	68Kl04		
1442.6(20)														85	1413	8171.1	68Kl04		
1444.7(20)														125	1415	8173.1	68Kl04		
1454.3(20)														70	1424	8182.5	68Kl04		
1459.1(20)														55	1429	8187.2	68Kl04		
1462.6(20)														20	1432	8190.6	68Kl04		
1466.5(20)	$\langle 3^- \rangle$													140	1436	8194.5	68Kl04	72Ki06	92Di02
1472.0(20)														55	1442	8199.8	68Kl04		
1477.2(20)														40	1447	8204.9	68Kl04		
1484.3(20)														70	1454	8211.9	68Kl04		
1487.0(20)														85	1457	8214.5	68Kl04		
1492.5(20)														90	1462	8219.9	68Kl04		
1495.0(20)														85	1464	8222.4	68Kl04		
1501.1(20)														5	1470	8228.3	68Kl04		
1504.6(20)														125	1473	8231.8	68Kl04		
1507.5(20)														155	1476	8234.6	68Kl04		
1513.6(20)														70	1482	8240.6	68Kl04		
1517.2(20)														55	1486	8244.1	68Kl04		
1524.8(20)														180	1493	8251.6	68Kl04		
1530.5(20)														220	1499	8257.1	68Kl04		
1538.8(20)														30	1507	8265.3	68Kl04		
1542.9(20)	$\langle 3^- \rangle$													160	1511	8269.3	68Kl04	72Ki06	92Di02
1554.0(20)														110	1522	8280.2	68Kl04		
1556.6(20)														85	1524	8282.7	68Kl04		
1564.3(20)	3^-													400	1532	8290.2	68Kl04	72Ki06	92Di02
1566.2(20)														320	1534	8292.1	68Kl04		
1573.5(20)														195	1541	8299.3	68Kl04		

(continued) $^{49}_{23}\mathbf{V}(\mathrm{p})$

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	Rel.int. γ_i	E_cm [keV]	E^* [keV]	Ref.	
1576.3(20)																305	1544	8302.0	68Kl04	
1580.2(20)																140	1548	8305.8	68Kl04	
1585.2(20)																85	1552	8310.7	68Kl04	
1591.6(20)																100	1559	8317.0	68Kl04	
1595.3(20)																180	1562	8320.6	68Kl04	
1610.4(20)																195	1577	8335.4	68Kl04	
1615.9(20)																30	1582	8340.8	68Kl04	
1620.0(20)																110	1587	8344.8	68Kl04	
1626.7(20)																235	1593	8351.4	68Kl04	
1636.1(20)																95	1602	8360.6	68Kl04	
1642.6(20)																30	1609	8366.9	68Kl04	
1647.5(20)																220	1613	8371.7	68Kl04	
1654.6(20)																220	1620	8378.7	68Kl04	
1656.8(20)																180	1623	8380.8	68Kl04	
1666.2(20)																195	1632	8390.0	68Kl04	
1674.8(20)																350	1640	8398.5	68Kl04	
1679.3(20)																320	1645	8402.9	68Kl04	
1688.5(20)																155	1654	8411.9	68Kl04	
1695.4(20)																265	1660	8418.6	68Kl04	
1703.3(20)																110	1668	8426.4	68Kl04	
1706.1(20)																180	1671	8429.1	68Kl04	
1709.8(20)																290	1674	8432.8	68Kl04	
1715.1(20)																95	1680	8437.9	68Kl04	
1721.1(20)																55	1686	8443.8	68Kl04	
1725.5(20)																165	1690	8448.1	68Kl04	
1734.2(20)																415	1698	8456.6	68Kl04	
1743.3(20)																165	1707	8465.6	68Kl04	
1748.5(20)																415	1712	8470.7	68Kl04	
1751.4(20)																280	1715	8473.5	68Kl04	
1754.6(20)																280	1718	8476.6	68Kl04	
1760.9(20)																210	1725	8482.8	68Kl04	
1764.6(20)																195	1728	8486.4	68Kl04	92Di02
1768.1(20)																110	1732	8489.9	68Kl04	92Di02
1776.9(20)																220	1740	8498.5	68Kl04	92Di02
1781.8(20)																305	1745	8503.3	68Kl04	92Di02
1786.6(20)																125	1750	8508.0	68Kl04	
1789.5(20)																70	1753	8510.8	68Kl04	
1792.5(20)																210	1755	8513.7	68Kl04	92Di02
1798.4(20)																95	1761	8519.5	68Kl04	92Di02
1802.7(20)	⟨5⟩															250	1765	8523.7	68Kl04	92Di02
1807.9(20)																220	1771	8528.8	68Kl04	
1810.0(20)																195	1773	8530.9	68Kl04	92Di02
1812.5(20)																290	1775	8533.3	68Kl04	92Di02
1818.1(20)																195	1781	8538.8	68Kl04	92Di02
1828.5(20)																85	1791	8549.0	68Kl04	92Di02

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	Rel.int. γ_i	E_cm [keV]	E^* [keV]	Ref.		
1832.4(20)													30	1795	8552.8	68Kl04		
1837.4(20)													95	1799	8557.7	68Kl04		
1839.1(20)													180	1801	8559.4	68Kl04		
1843.0(20)													40	1805	8563.2	68Kl04	92Di02	
1850.3(20)													250	1812	8570.4	68Kl04	92Di02	
1854.7(20)													335	1816	8574.7	68Kl04	92Di02	
1858.8(20)													320	1820	8578.7	68Kl04		
1862.9(20)													55	1824	8582.7	68Kl04	92Di02	
1866.4(20)													210	1828	8586.1	68Kl04	92Di02	
1870.0(20)													180	1832	8589.7	68Kl04	92Di02	
1873.0(20)													95	1835	8592.6	68Kl04		
1881.5(20)													140	1843	8600.9	68Kl04	92Di02	
1885.3(20)													220	1846	8604.6	68Kl04	92Di02	
1888.1(20)													110	1849	8607.4	68Kl04		
1891.4(20)													180	1852	8610.6	68Kl04	92Di02	
1893.8(20)													85	1855	8613.0	68Kl04		
1897.6(20)													40	1858	8616.7	68Kl04		
1901.9(30)	$\langle 3^- \rangle$		15(5)	1.08									165	1863	8620.9	72Pr12	68Kl04	92Di02
1905.1(20)													85	1866	8624.0	68Kl04		
1909.3(30)	$\langle 1^- \rangle$		15(5)	1.05									265	1870	8628.1	72Pr12	68Kl04	92Di02
1914.5(20)													305	1875	8633.2	68Kl04	92Di02	
1924.0(30)	3^-		30(10)	1.99									430	1885	8642.5	72Pr12	68Kl04	92Di02
1925.5(30)	$\langle 3^- \rangle$		20(5)	1.32									610	1886	8644.0	72Pr12	68Kl04	92Di02
1935.1(20)													85	1895	8653.4	68Kl04	92Di02	
1942.1(20)													110	1902	8660.3	68Kl04	92Di02	
1946.4(20)													305	1906	8664.5	68Kl04	92Di02	
1952.8(20)													250	1912	8670.7	68Kl04	92Di02	
1956.8(20)													55	1916	8674.7	68Kl04		
1960.5(20)													125	1920	8678.3	68Kl04		
1964.6(20)													360	1924	8682.3	68Kl04	92Di02	
1971.7(20)													140	1931	8689.3	68Kl04		
1978.7(30)	$\langle 1^- \rangle$		25(5)	1.36									280	1938	8696.1	72Pr12	68Kl04	
1982.2(30)	1^+		15(5)	0.33									180	1941	8699.5	72Pr12	68Kl04	
1986.5(20)													290	1946	8703.8	68Kl04		
1989.8(20)													180	1949	8707.0	68Kl04		
1993.2(20)													110	1952	8710.3	68Kl04		
1998.7(20)													210	1957	8715.7	68Kl04		
2003.7(20)													280	1962	8720.6	68Kl04		
2012.8(30)	1^+		70(15)	1.40									335	1971	8729.5	72Pr12	68Kl04	
2016.5(20)													250	1975	8733.1	68Kl04	92Di02	
2026.7(20)													210	1985	8743.1	68Kl04	92Di02	
2032.3(30)	3^-		10(3)	0.45			0.6	9.79					305	1990	8748.6	68Kl04	80We09	92Di02
2033.6(30)	1^+		70(15)	1.31										1992	8749.9	72Pr12		
2044.8(20)													110	2003	8760.9	68Kl04	92Di02	
2050.5(20)													250	2008	8766.4	68Kl04	92Di02	

(continued) **$^{49}_{23}$V(p)**

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	Rel.int. γ_i	E_cm [keV]	E^* [keV]	Ref.		
2055(2)														2013	8771	92Di02		
2058.7(20)													155	2016	8774.5	68Kl04	92Di02	
2061.5(30)	1^+		70(20)	1.20									110	2019	8777.2	72Pr12	68Kl04	92Di02
2066.9(20)	$\langle 5\rangle$												155	2024	8782.5	68Kl04	92Di02	
2072.0(20)	$\langle 5^-\rangle$												265	2030	8787.5	68Kl04	92Di02	
2077.7(30)	3^-		130(8)	5.07		0.4	3.63						500	2035	8793.1	72Pr12	80We09	
2083.1(20)													40	2040	8798.4	68Kl04	92Di02	
2088.6(20)													140	2046	8803.8	68Kl04	92Di02	
2093.5(30)	$\langle 1^-\rangle$		25(5)	0.92									165	2050	8808.6	72Pr12	92Di02	doublt
2101.4(30)	3^-		10(3)	0.36		0.3	2.31						360	2058	8816.3	72Pr12	80We09	doublt
2114.2(30)	$\langle 1^-\rangle$		15(5)	0.52									40	2071	8828.8	72Pr12	68Kl04	92Di02
2116.3(30)	$\langle 1^-\rangle$		5(3)	0.17									85	2073	8830.9	72Pr12	68Kl04	92Di02
2120.0(20)													195	2077	8834.5	68Kl04		
2122.7(20)													110	2079	8837.2	68Kl04	92Di02	
2126.4(20)													280	2083	8840.8	68Kl04		
2129.2(20)													220	2085	8843.5	68Kl04	92Di02	
2134.9(20)													140	2091	8849.1	68Kl04	92Di02	
2141.0(20)													210	2097	8855.1	68Kl04	92Di02	
2148.9(30)	1^+		15(5)	0.20										2105	8862.8	72Pr12	68Kl04	
2149.6(30)	3^-		25	0.78		0.3	1.76						360	2105	8863.5	72Pr12	80We09	
2152.1(30)	$\langle 5^+\rangle$		5(3)	0.79									335	2108	8865.9	72Pr12	68Kl04	
2156.3(30)	1^+		10(5)	0.13									265	2112	8870.1	72Pr12	68Kl04	
2162.5(30)	1^+		125(25)	1.59									210	2118	8876.1	72Pr12	68Kl04	doublt
2170.2(30)	1^-		40(5)	1.16									235	2125	8883.7	72Pr12	68Kl04	
2180.1(30)	1^+		15(5)	0.18										2135	8893.4	72Pr12		
2180.5(30)	$\langle 1^-\rangle$		20(10)	0.55									335	2136	8893.8	72Pr12	68Kl04	doublt
2190.3(30)	1^-		60(10)	1.65									235	2145	8903.4	72Pr12	doublt	
2193.6(30)	3^-		8	0.20		0.2	0.56							2148	8906.6	72Pr12	68Kl04	80We09
2203.2(30)	$\langle 5^+\rangle$		5(3)	0.67									500	2158	8916.0	72Pr12	68Kl04	
2204.5(30)	1^+		25(5)	0.28										2159	8917.3	72Pr12		
2210.8(30)	$\langle 1^-\rangle$		10(5)	0.26										2165	8923.4	72Pr12		
2212.1(30)	$\langle 1^-\rangle$		20(5)	0.51									350	2167	8924.7	72Pr12	68Kl04	doublt
2220.2(30)	1^+		70(20)	0.76									320	2174	8932.6	72Pr12	68Kl04	
2223.9(30)	1^+		190(40)	2.05									335	2178	8936.3	72Pr12	68Kl04	
2229.6(30)	3^-		10	0.25		0.2	0.41							2184	8941.9	72Pr12	80We09	
2230.8(30)	$\langle 1^-\rangle$		25(5)	0.61									235	2185	8943.0	72Pr12	68Kl04	
2232.3(30)	$\langle 5^+\rangle$		5(3)	0.61									290	2186	8944.5	72Pr12	68Kl04	
2241.2(20)													220	2195	8953.2	68Kl04	doublt	
2248.6(20)													115	2202	8960.5	68Kl04	doublt	
2254.3(30)	1^+		15(5)	0.15										2208	8966.0	72Pr12		
2257.7(30)	$\langle 1^-\rangle$		20(5)	0.45									390	2211	8969.4	72Pr12	68Kl04	
2260.8(20)													320	2214	8972.4	68Kl04		
2263.8(30)	1^-		90(15)	2.00									235	2217	8975.3	72Pr12	68Kl04	doublt
2265.1(30)	$\langle 5^+\rangle$		2(2)	0.22										2218	8976.6	72Pr12	76Bi0A	
2266.1(30)	3^-		5(3)	0.11		0.04	0.09							2219	8977.6	72Pr12	80We09	85Mi0A

(continued) **$^{49}_{23}$V(p)**

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	Rel.int. γ_i	E_cm [keV]	E^* [keV]	Ref.		
2273.0(30)	1^+		20(5)	0.19									140	2227	8984.4	72Pr12	68Kl04	
2280.6(30)	3^-		25(5)	0.53		2	4.37						195	2234	8991.8	80We09	68Kl04	85Mi0A
2288.5(30)	1^+		40(5)	0.36										2241	8999.5	72Pr12		
2291.2(30)	1^-		30(5)	0.62										2244	9002.2	72Pr12		
2296.8(30)	3^-		25(5)	0.51		1	2.01							2249	9007.7	72Pr12	80We09	85Mi0A
2298.1(30)	5^+		10(5)	0.99		0.5	0.57							2251	9008.9	72Pr12	81Ch16	85Mi0A
2307.3(30)	$\langle 5^+ \rangle$		10(5)	0.96										2260	9018.0	72Pr12		
2313.6(30)	1^+		15(5)	0.13										2266	9024.1	72Pr12		
2318.2(30)	1^+		100(15)	0.85										2270	9028.6	72Pr12		
2319.0(30)	$\langle 5^+ \rangle$		5(3)	0.46										2272	9029.4	72Pr12		
2320.4(30)	5^+		10	0.93		0.5	0.58							2273	9030.8	72Pr12	81Ch16	85Mi0A
2322.8(30)	$\langle 1^- \rangle$		10(5)	0.19										2275	9033.1	72Pr12		
2334.0(30)	5^+		20(5)	1.78		1	0.82							2286	9044.1	72Pr12	81Ch16	85Mi0A
2340.1(30)	$\langle 1^- \rangle$		15(5)	0.27										2292	9050.1	72Pr12		
2346.4(30)	1^+		25(5)	0.20										2298	9056.2	72Pr12		
2349.3(30)	1^-		75(10)	1.32										2301	9059.1	72Pr12		
2355.0(30)	1^+		160(15)	1.24										2307	9064.7	72Pr12		
2363.7(30)	5^+		10(5)	0.82		0.5	0.43							2315	9073.2	72Pr12	81Ch16	85Mi0A
2364.4(30)	$\langle 5^+ \rangle$		7(5)	0.57										2316	9073.9	72Pr12		
2364.9(30)	1^+		230(30)	1.74										2316	9074.4	72Pr12		
2370.9(30)	3^-		70	1.17		0.1	0.08							2322	9080.2	72Pr12	80We09	85Mi0A
2373.1(30)	3^-		5(3)	0.08		3	2.93							2324	9082.4	72Pr12	80We09	85Mi0A
2375.1(30)	1^+		90(10)	0.66										2326	9084.4	72Pr12		
2378.0(30)	3^-		5(3)	0.08		1	1.23							2329	9087.2	72Pr12	80We09	85Mi0A
2389.0(30)	3^-		15	0.24		2	2.19							2340	9098.0	72Pr12	80We09	85Mi0A
2396.9(30)	3^-		10	0.16		1	0.95							2348	9105.7	72Pr12	80We09	85Mi0A
2397.7(30)	$\langle 5^+ \rangle$		20(5)	1.48										2348	9106.5	72Pr12		
2400.2(30)	1^+		20(5)	0.14										2351	9108.9	72Pr12		
2400.8(30)	3^-		15	0.23		0.3	0.26							2351	9109.5	72Pr12	80We09	85Mi0A
2402.8(30)	3^-		5	0.08		0.2	0.19							2353	9111.5	72Pr12	80We09	85Mi0A
2403.4(30)	$\langle 5^+ \rangle$		5(3)	0.36										2354	9112.1	72Pr12		
2420.3(30)	3^+		8	0.52		0.3	0.62							2370	9128.6	72Pr12	83Ra15	85Mi0A
2424.8(30)	1^-		50(15)	0.73										2375	9133.0	72Pr12		
2425.4(30)	1^+		165(15)	1.09										2375	9133.6	72Pr12		
2426.3(30)	$\langle 5^+ \rangle$		3(2)	0.20										2376	9134.5	72Pr12		
2430.2(30)	$\langle 5^+ \rangle$		10(5)	0.67										2380	9138.3	72Pr12		
2437.6(30)	3^-		30(5)	0.42		0.6	0.41							2387	9145.6	72Pr12	80We09	85Mi0A
2446.4(30)	3^+		8	0.48		0.9	0.98							2396	9154.2	72Pr12	83Ra15	85Mi0A
2447.7(30)	$\langle 1^- \rangle$		25(5)	0.34										2397	9155.5	72Pr12		
2448.7(30)	1^-		25	0.34		4	2.45							2398	9156.4	72Pr12	80We09	85Mi0A
2456.7(30)	1^+		525(59)	3.22										2406	9164.3	72Pr12		
2457.6(30)	$\langle 5^+ \rangle$		10(5)	0.62										2407	9165.2	72Pr12		
2462.4(30)	3^-		30(10)	0.40		3	1.97							2412	9169.9	72Pr12	80We09	85Mi0A
2463.1(30)	1^+		40(10)	0.24										2412	9170.5	72Pr12		
2466.0(30)	1^-		225(25)	2.96										2416	9173.4	72Pr12		

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	E_cm [keV]	E^* [keV]	Ref.		
2469.4(30)	5^+		20(5)	1.21			2	0.38							2419	9176.7	72Pr12	81Ch16	85Mi0A
2477.6(30)	3^-		20(5)	0.26			2	1.34							2427	9184.7	72Pr12	80We09	85Mi0A
2482.0(30)	3^-		55(5)	0.77			0.6	0.30							2431	9189.1	72Pr12	80We09	85Mi0A
2485.0(30)	$\langle 1^- \rangle$		15(5)	0.19											2434	9192.0	72Pr12	92Di02	
2490.3(30)	5^+		5(3)	0.29			1	0.72							2439	9197.2	72Pr12	81Ch16	92Di02
2494.9(30)	$\langle 5^+ \rangle$		3(2)	0.17											2444	9201.7	72Pr12		
2495.8(30)	1^+		130(15)	0.73											2444	9202.6	72Pr12		
2498.8(30)	1^+		20(5)	0.11											2447	9205.5	72Pr12		
2500.4(30)	3^-		15	0.18			0.2	0.10							2449	9207.1	72Pr12	80We09	85Mi0A
2503.5(30)	1^+		80(10)	0.44											2452	9210.1	72Pr12		
2517.6(30)	3^+		23	1.20			3	2.22							2466	9223.9	72Pr12	83Ra15	85Mi0A
2520.7(30)	1^+		10(5)	0.05											2469	9227.0	72Pr12		
2522.1(30)	1^-		75(10)	0.87											2470	9228.3	72Pr12		
2534.4(30)	3^-		5	0.06			7	2.65							2482	9240.4	72Pr12	80We09	85Mi0A
2537.1(30)	$\langle 5^+ \rangle$		10(5)	0.51											2485	9243.0	72Pr12		
2538.0(30)	3^-		30(15)	0.33			0.7	0.28							2486	9243.9	72Pr12	80We09	85Mi0A
2541.9(30)	1^+		10(5)	0.05											2490	9247.7	72Pr12		
2546.8(30)	5^+		3(2)	0.15			1	0.17							2494	9252.5	72Pr12	81Ch16	85Mi0A
2549.6(30)	1^+		135(15)	0.68											2497	9255.3	72Pr12		
2554.7(30)	3^+		8	0.36			2	0.85							2502	9260.3	72Pr12	83Ra15	85Mi0A
2557.5(30)	1^+		15(5)	0.07											2505	9263.0	72Pr12		
2565.7(30)	3^-		15(5)	0.16			5	1.31							2513	9271.0	72Pr12	80We09	85Mi0A
2571.3(30)	5^+		4	0.19			6	0.95							2518	9276.5	72Pr12	81Ch16	85Mi0A
2573.4(30)	3^-		80	0.82			1	0.33							2520	9278.6	72Pr12	80We09	85Mi0A
2576.3(30)	1^+		275(20)	1.32											2523	9281.4	72Pr12		
2577.3(30)	1^-		100(15)	1.02											2524	9282.4	72Pr12		
2587.0(30)	$\langle 5^+ \rangle$		5(3)	0.22											2534	9291.9	72Pr12		
2587.2(30)	3^-		150(15)	1.50			5	1.44							2534	9292.1	72Pr12	80We09	85Mi0A
2594.3(30)	5^+		12(5)	0.53			6	0.96							2541	9299.0	72Pr12	81Ch16	85Mi0A
2596.2(30)	3^+		8	0.33			0.3	0.28							2543	9300.9	72Pr12	83Ra15	85Mi0A
2598.5(30)	1^+		250(25)	1.15											2545	9303.2	72Pr12		
2600.8(30)	3^-		90(10)	0.87			1	0.38							2547	9305.4	72Pr12	80We09	85Mi0A
2608.1(30)	3^-		5(3)	0.05			5	1.32							2554	9312.6	72Pr12	80We09	85Mi0A
2610.7(30)	3^-		70(20)	0.66			10	2.46							2557	9315.1	72Pr12	80We09	85Mi0A
2618.0(30)	1^+		300(60)	1.32											2565	9322.3	72Pr12		
2618.7(30)	$\langle 5^+ \rangle$		15(10)	0.62			2	0.20							2565	9322.9	72Pr12		
2627.9(30)	$\langle 5^+ \rangle$		30(10)	1.21			3	0.28							2574	9332.0	72Pr12		
2631.3(30)	3^+		12(5)	0.48			0.6	0.22							2577	9335.3	72Pr12	83Ra15	85Mi0A
2635.8(30)	3^-		100(15)	0.90			13	3.04							2582	9339.7	72Pr12	80We09	85Mi0A
2637.1(30)	1^-		25(5)	0.22			9	2.12							2583	9341.0	72Pr12		
2643.7(30)	5^+		35(5)	1.36			6	0.78							2589	9347.4	72Pr12	81Ch16	85Mi0A
2648.0(30)	1^+		210(15)	0.88											2594	9351.6	72Pr12		
2649.9(30)	$\langle 5^+ \rangle$		10(5)	0.38											2595	9353.5	72Pr12		
2652.5(30)	1^-		75(20)	0.65											2598	9356.0	72Pr12		
2654.5(30)	1^+		300(30)	1.24											2600	9358.0	72Pr12		

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	E_cm [keV]	E^* [keV]	Ref.		
2656.0(30)	3^+		23	0.85			0.9	0.37							2602	9359.5	72Pr12	83Ra15	85Mi0A
2661.5(30)	1^+		525(75)	2.13											2607	9364.9	72Pr12		
2664.1(30)	3^-		8	0.06			0.6	0.12							2609	9367.4	72Pr12	80We09	85Mi0A
2675.6(30)	1^+		160(25)	0.63											2621	9378.7	72Pr12		
2676.4(30)	5^+		10(5)	0.36			0.7	0.41							2621	9379.5	72Pr12	81Ch16	85Mi0A
2682.4(30)	5^+		65(15)	2.30			23	2.95							2627	9385.3	72Pr12	81Ch16	85Mi0A
2684.3(30)	1^+		190(20)	0.74											2629	9387.2	72Pr12		
2685.7(30)	$\langle 5^+ \rangle$		2(2)	0.06											2630	9388.6	72Pr12		
2688.5(30)	3^+		55(10)	1.91			4	0.70							2633	9391.3	72Pr12	83Ra15	85Mi0A
2691.5(30)	1^-		290(30)	2.32											2636	9394.2	72Pr12		
2696.4(30)	3^-		50(5)	0.40			3	0.45							2641	9399.0	72Pr12	80We09	85Mi0A
2698.3(30)	3^+		6(3)	0.20			26	5.43							2643	9400.9	72Pr12	83Ra15	85Mi0A
2699.6(30)	1^+		220(20)	0.83											2644	9402.2	72Pr12		
2700.7(30)	3^-		15(7)	0.12			5	0.78							2645	9403.3	72Pr12	80We09	85Mi0A
2703.5(30)	3^-		15(5)	0.12			1	0.17							2648	9406.0	72Pr12	80We09	85Mi0A
2705.1(30)	5^+		35(10)	1.17			5	0.55							2649	9407.6	72Pr12	81Ch16	85Mi0A
2705.6(30)	3^-		150(25)	1.17			13	2.08							2650	9408.1	72Pr12	80We09	85Mi0A
2710.2(30)	1^+		875(75)	3.26			12	12.0							2654	9412.6	72Pr12		
2713.1(30)	1^+		1900(200)	7.04											2657	9415.4	72Pr12		
2715.3(30)	3^-		30(10)	0.23			10	1.53							2659	9417.6	72Pr12	80We09	85Mi0A
2717.9(30)	$\langle 5^+ \rangle$		25(5)	0.81											2662	9420.1	72Pr12		
2718.4(30)	1^-		145(20)	1.10											2662	9420.6	72Pr12		
2719.8(30)	3^-		5(3)	0.04			1	0.15							2664	9422.0	72Pr12	80We09	85Mi0A
2722.6(30)	5^+		8(4)	0.26			2	0.18							2667	9424.7	72Pr12	81Ch16	85Mi0A
2723.5(30)	3^-		60(15)	0.45			0.8	0.12							2667	9425.6	72Pr12	80We09	85Mi0A
2727.6(30)	1^+		80(20)	0.29											2671	9429.6	72Pr12		
2729.5(30)	1^-		275(30)	2.04											2673	9431.5	72Pr12		
2738.3(30)	5^+		35(5)	1.09			7	0.71							2682	9440.1	72Pr12	81Ch16	85Mi0A
2739.8(30)	1^+		150(20)	0.53											2683	9441.5	72Pr12		
2746.1(30)	$\langle 5^+ \rangle$		10(5)	0.30			2	0.11							2690	9447.7	72Pr12		
2746.2(30)	3^-		150(40)	1.08			9	1.28							2690	9447.8	72Pr12	80We09	85Mi0A
2749.0(30)	3^+		2(2)	0.06											2693	9450.6	72Pr12		
2750.3(30)	1^+		625(100)	2.17											2694	9451.8	72Pr12		
2751.3(30)	$\langle 5^+ \rangle$		5(3)	0.15											2695	9452.8	72Pr12		
2751.9(30)	$\langle 5^+ \rangle$		5(3)	0.15											2695	9453.4	72Pr12		
2756.3(30)	3^-		10(3)	0.07			4	0.49							2700	9457.7	72Pr12	80We09	85Mi0A
2759.6(30)	3^-		10(5)	0.07			0.8	0.10							2703	9460.9	72Pr12	80We09	85Mi0A
2766.9(30)	$\langle 5^+ \rangle$		5(3)	0.14											2710	9468.1	72Pr12		
2767.4(30)	5^+		85(15)	2.47			19	1.55							2710	9468.6	72Pr12	81Ch16	85Mi0A
2769.9(30)	3^-		15(5)	0.10			7	0.84							2713	9471.0	72Pr12	80We09	85Mi0A
2771.6(30)	1^+		350(60)	1.17											2715	9472.7	72Pr12		
2773.6(30)	5^+		12(5)	0.34			3	0.20							2717	9474.7	72Pr12	81Ch16	85Mi0A
2778.4(30)	1^-		175(20)	1.18											2721	9479.4	72Pr12		
2782.1(30)	1^+		950(150)	3.12											2725	9483.0	72Pr12		
2783.4(30)	5^+		5(3)	0.14			3	0.43							2726	9484.2	72Pr12	81Ch16	85Mi0A

(continued) **$^{49}_{23}$V(p)**

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	E_cm [keV]	E^* [keV]	Ref.		
2786.6(30)	3^-		15(3)	0.10			0.6	0.07							2729	9487.4	72Pr12	80We09	85Mi0A
2787.8(30)	3^+		12(5)	0.33			0.9	0.30							2730	9488.6	72Pr12	83Ra15	85Mi0A
2796.4(30)	3^+		22(5)	0.60			13	1.60							2739	9497.0	72Pr12	83Ra15	85Mi0A
2801.5(30)	1^+		75(25)	0.24			5	3.24							2744	9502.0	72Pr12		
2803.7(30)	5^+		15(5)	0.40			24	2.44							2746	9504.1	72Pr12	81Ch16	85Mi0A
2807.2(30)	5^+		15(5)	0.40			18	1.25							2749	9507.6	72Pr12	81Ch16	85Mi0A
2811.3(30)	$\langle 5^+ \rangle$		1(1)	0.02			3	0.13							2753	9511.6	72Pr12		
2811.7(30)	3^-		55(15)	0.35			18	1.92							2754	9512.0	72Pr12	80We09	85Mi0A
2816.9(30)	1^+		175(40)	0.54											2759	9517.1	72Pr12		
2817.5(30)	3^-		15	0.09			2	0.22							2760	9517.6	72Pr12	80We09	85Mi0A
2822.5(30)	3^+		10(5)	0.26			14	0.57							2764	9522.5	72Pr12		
2825.9(30)	3^-		25(5)	0.15			7	0.69							2768	9525.9	72Pr12	80We09	85Mi0A
2828.8(30)	5^+		7	0.18			7	0.49							2771	9528.7	72Pr12	81Ch16	85Mi0A
2831.7(30)	1^+		190(50)	0.57											2773	9531.6	72Pr12		
2832.2(30)	3^+		23	0.57			7	1.07							2774	9532.0	72Pr12	83Ra15	85Mi0A
2833.0(30)	3^-		30(10)	0.18			12	1.15							2775	9532.8	72Pr12	80We09	85Mi0A
2833.3(30)	$\langle 5^+ \rangle$		2(2)	0.05			5	0.20							2775	9533.1	72Pr12		
2835.5(30)	3^-		35(10)	0.21			1	0.12							2777	9535.3	72Pr12	80We09	85Mi0A
2836.9(30)	3^-		25(5)	0.15			2	0.24							2779	9536.6	72Pr12	80We09	85Mi0A
2838.1(30)	1^+		50(10)	0.15											2780	9537.8	72Pr12		
2839.0(30)	$\langle 5^+ \rangle$		5(3)	0.12											2781	9538.7	72Pr12		
2841.6(30)	3^-		110(15)	0.66			9	0.83							2783	9541.3	72Pr12	80We09	85Mi0A
2842.2(30)	5^+		20(5)	0.49			4	0.55							2784	9541.8	72Pr12	81Ch16	85Mi0A
2846.8(30)	1^-		750(75)	4.46			20	1.86							2788	9546.3	72Pr12		
2851.4(30)	1^-		250(25)	1.47											2793	9550.8	72Pr12		
2853.9(30)	3^-		20(10)	0.12			6	0.53							2795	9553.3	72Pr12	80We09	85Mi0A
2855.3(30)	1^-		1500(200)	8.78			40	3.60							2797	9554.7	72Pr12		
2861.0(30)	$\langle 5^+ \rangle$		40(20)	0.94			1	0.03							2803	9560.3	72Pr12		
2861.1(30)	1^+		525(75)	1.52											2802	9560.4	72Pr12		
2867.1(30)	5^+		15(5)	0.35			17	1.05							2808	9566.2	72Pr12	81Ch16	85Mi0A
2867.9(30)	1^-		900(150)	5.15											2809	9567.0	72Pr12		
2868.0(30)	$\langle 5^+ \rangle$		45(10)	1.05			15	0.51							2809	9567.1	72Pr12		
2868.7(30)	3^+		30(10)	0.70			2	0.06							2810	9567.8	72Pr12		
2873.7(30)	3^+		8	0.17			15	2.16							2815	9572.7	72Pr12	83Ra15	85Mi0A
2879.0(30)	1^+		2350(200)	6.60											2820	9577.9	72Pr12		
2885.9(30)	5^+		2(2)	0.04			0.7	0.08							2827	9584.6	72Pr12	81Ch16	85Mi0A
2891.3(30)	1^+		50(10)	0.14											2832	9589.9	72Pr12		
2893.8(30)	1^-		10(5)	0.05											2834	9592.4	72Pr12		
2896.4(30)	3^+		4(4)	0.09			4	0.30							2837	9594.9	72Pr12	83Ra15	85Mi0A
2898.0(30)	1^+		50(15)	0.14											2839	9596.5	72Pr12		
2899.2(30)	1^-		10(5)	0.05											2840	9597.7	72Pr12		
2900.7(30)	3^-		40(10)	0.22			15	1.08							2841	9599.1	72Pr12	80We09	85Mi0A
2906.1(30)	1^+		140(15)	0.38											2846	9604.4	72Pr12		
2908.2(30)	5^+		4	0.09			5	0.26							2848	9606.5	72Pr12	81Ch16	85Mi0A
2910.7(30)	3^-		8	0.04			8	0.53							2851	9608.9	72Pr12	80We09	85Mi0A

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	E_cm	E^*	Ref.		
[keV]			[eV]	[keV]			[eV]	[keV]							[keV]	[keV]			
2914.7(30)	3^-		100(15)	0.53			10	0.73							2855	9612.8	72Pr12	80We09	85Mi0A
2918.6(30)	5^+		15(5)	0.31			8	0.50							2859	9616.7	72Pr12	81Ch16	85Mi0A
2921.6(30)	$\langle 5^+ \rangle$		8(4)	0.17			2	0.05							2862	9619.6	72Pr12		
2922.7(30)	3^+		8(4)	0.16			4	0.59							2863	9620.7	72Pr12	83Ra15	85Mi0A
2924.4(30)	5^+		30(5)	0.62			21	1.05							2864	9622.3	72Pr12	81Ch16	85Mi0A
2928.4(30)	5^+		18(5)	0.37			9	0.40							2868	9626.3	72Pr12	81Ch16	85Mi0A
2929.2(30)	3^+		8(4)	0.15			15	1.45							2869	9627.0	72Pr12	83Ra15	85Mi0A
2931.5(30)	1^+		150(20)	0.39											2871	9629.3	72Pr12		
2933.6(30)	1^-		20(5)	0.10			2	0.13							2873	9631.4	72Pr12		
2937.8(30)	5^+		10	0.20			20	1.06							2877	9635.5	72Pr12	81Ch16	85Mi0A
2939.3(30)	3^-		85(15)	0.43			8	0.51							2879	9636.9	72Pr12	80We09	85Mi0A
2941.2(30)	1^+		285(30)	0.73											2881	9638.8	72Pr12		
2944.3(30)	3^-		300(30)	1.50			64	3.97							2884	9641.8	72Pr12	80We09	85Mi0A
2945.3(30)	3^-		275(30)	1.38			9	0.57							2885	9642.8	72Pr12	80We09	85Mi0A
2950.5(30)	3^+		10(5)	0.20			3	0.66							2890	9647.9	72Pr12	83Ra15	85Mi0A
2953.3(30)	3^-		2800(300)	13.8			270	16.3							2893	9650.7	72Pr12	80We09	85Mi0A
2955.7(30)	3^+		15(7)	0.29			6	0.62							2895	9653.0	72Pr12	83Ra15	85Mi0A
2957.8(30)	1^+		400(50)	1.00											2897	9655.1	72Pr12		
2960.2(30)	1^+		325(35)	0.81											2899	9657.4	72Pr12		
2962.2(30)	$\langle 5^+ \rangle$		8(4)	0.15			1	0.02							2901	9659.4	72Pr12		
2965.1(30)	3^-		250(30)	1.21			6	0.35							2904	9662.2	72Pr12	80We09	85Mi0A
2966.1(30)	5^+		22(5)	0.42			17	0.94							2905	9663.2	72Pr12	81Ch16	85Mi0A
2967.9(30)	3^-		70(15)	0.34			23	1.34							2907	9665.0	72Pr12	80We09	85Mi0A
2968.7(30)	5^+		40(10)	0.76			35	1.57							2908	9665.7	72Pr12	81Ch16	85Mi0A
2971.6(30)	5^+		6(3)	0.11			5	0.41							2911	9668.6	72Pr12	81Ch16	85Mi0A
2973.6(30)	3^-		40(10)	0.19			23	1.29							2912	9670.5	72Pr12	80We09	85Mi0A
2974.0(30)	1^-		15(5)												2913	9670.9	72Pr12		
2978.0(30)	5^+		6(3)	0.11			23	1.47							2917	9674.8	72Pr12	81Ch16	85Mi0A
2979.6(30)	3^+		15(7)	0.28			13	0.76							2918	9676.4	72Pr12	83Ra15	85Mi0A
2982.5(30)	3^+		30(15)	0.55			3	0.15							2921	9679.3	72Pr12	83Ra15	85Mi0A
2984.9(30)	1^-		25(10)	0.12											2924	9681.6	72Pr12		
2988.7(30)	$\langle 3^- \rangle$		3(3)	0.01											2927	9685.3	72Pr12		
2990.2(30)	1^-		35(5)	0.16			7	0.38							2929	9686.8	72Pr12		
2993.0(30)	3^+		18	0.32			13	1.03							2932	9689.5	72Pr12	83Ra15	85Mi0A
2994.9(30)	1^+		125(25)	0.30											2933	9691.4	72Pr12		
2995.0(30)	5^+		25(10)	0.45			34	1.21							2934	9691.5	72Pr12	81Ch16	85Mi0A
2998.1(30)	3^+		33	0.59			11	0.94							2936	9694.5	72Pr12	83Ra15	85Mi0A
3001.2(30)	3^+		30(7)	0.53			71	3.69							2940	9697.6	72Pr12	83Ra15	85Mi0A
3006.6(30)	1^-		75(15)	0.34											2945	9702.9	72Pr12		
3008.2(30)	1^+		225(25)	0.52											2946	9704.4	72Pr12		
3014.5(30)	3^-		40(8)	0.18			0.4	0.02							2953	9710.6	72Pr12	80We09	85Mi0A
3018.4(30)	1^+		250(50)	0.57											2956	9714.4	72Pr12		
3021.5(30)	3^+		24(10)	0.41			20	0.78							2959	9717.4	72Pr12	83Ra15	85Mi0A
3023.4(30)	5^+		5(3)	0.09			3	0.15							2961	9719.3	72Pr12	81Ch16	85Mi0A
3025.6(30)	5^+		20(10)	0.34			8	0.44							2963	9721.5	72Pr12	81Ch16	85Mi0A

(continued) $^{49}_{23}\mathrm{V}(\mathrm{p})$

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	E_cm [keV]	E^* [keV]	Ref.		
3026.2(30)	1^+		950(150)	2.15											2964	9722.1	72Pr12		
3028.9(30)	5^+		28(5)	0.47			9	0.37							2967	9724.7	72Pr12	81Ch16	85Mi0A
3029.5(30)	3^-		30(10)	0.13			34	1.56							2967	9725.3	72Pr12	80We09	85Mi0A
3030.0(30)	3^+		30(8)	0.50			63	4.07							2968	9725.8	72Pr12	83Ra15	85Mi0A
3030.6(30)	3^-		8(3)	0.03			12	0.57							2968	9726.4	72Pr12	80We09	85Mi0A
3031.1(30)	$\langle 5^+ \rangle$		3(3)	0.05											2969	9726.9	72Pr12		
3036.7(30)	3^+		12(6)	0.20			5	0.68							2974	9732.3	72Pr12	83Ra15	85Mi0A
3037.5(30)	$\langle 5^+ \rangle$		4(3)	0.06											2975	9733.1	72Pr12		
3038.0(30)	3^-		25(5)	0.11			37	1.68							2976	9733.6	72Pr12	80We09	85Mi0A
3038.3(30)	3^+		18(7)	0.30			9	1.21							2976	9733.9	72Pr12	83Ra15	85Mi0A
3039.1(30)	3^-		50(8)	0.21			0.2	0.01							2977	9734.7	72Pr12	80We09	85Mi0A
3043.5(30)	1^+		290(60)	0.64			5	1.21							2981	9739.0	72Pr12		
3044.2(30)	5^+		12(5)	0.20			8	0.60							2982	9739.7	72Pr12	81Ch16	85Mi0A
3045.4(30)	5^+		15(5)	0.24			2	0.21							2983	9740.9	72Pr12	81Ch16	85Mi0A
3048.5(30)	$\langle 5^+ \rangle$		5(3)	0.08											2986	9743.9	72Pr12		
3049.7(30)	1^-		225(20)	0.95											2987	9745.1	72Pr12		
3052.7(30)	5^+		22(5)	0.35			13	0.57							2990	9748.0	72Pr12	81Ch16	85Mi0A
3055.9(30)	3^+		12(6)	0.19			16	0.65							2993	9751.1	72Pr12	83Ra15	85Mi0A
3058.9(30)	1^+		650(100)	1.40			20	4.56							2996	9754.1	72Pr12		
3060.5(30)	5^+		12(5)	0.19			2	0.37							2998	9755.6	72Pr12	81Ch16	85Mi0A
3062.8(30)	5^+		1(1)	0.02			0.6	0.05							3000	9757.9	72Pr12	81Ch16	85Mi0A
3063.3(30)	3^-		15(10)	0.06			5	0.21							3000	9758.4	72Pr12		
3063.7(30)	1^-		25(10)	0.10			65	2.74							3001	9758.8	72Pr12		
3067.4(30)	1^-		55(20)	0.23			140	5.83							3004	9762.4	72Pr12		
3072.0(30)	3^-		20(5)	0.08			20	0.80							3009	9766.9	72Pr12	80We09	85Mi0A
3075.2(30)	1^+		40(10)	0.08											3012	9770.0	72Pr12		
3075.4(30)	3^+		8	0.12			7	0.52							3012	9770.2	72Pr12	83Ra15	85Mi0A
3078.3(30)	1^+		325(75)	0.68											3015	9773.1	72Pr12		
3078.4(30)	5^+		30(10)	0.46			19	0.67							3015	9773.2	72Pr12	81Ch16	85Mi0A
3080.2(30)	1^-		30(10)	0.121	3	1	25	1.00							3017	9774.9	72Pr12		91Li14
3081.6(30)	5^+		15(7)	0.227	5	0	20	0.33							3018	9776.3	72Pr12	83Ra15	91Li14
3084.6(30)	5^+		35(10)	0.528	5	0	25	0.41							3021	9779.2	72Pr12	81Ch16	91Li14
3085.0(30)	1^+		870(200)	1.822											3022	9779.6	72Pr12		91Li14
3087.3(30)	3^-		55(20)	0.219	3	1	25	0.96	5	1	20	0.77			3024	9781.9	72Pr12		80We09
3089.0(30)	5^+		115	1.719	5	0	100	1.62							3026	9783.6	72Pr12		80We09
3089.4(30)	3^-		15(10)	0.060	3	1	5	0.19							3026	9784.0	72Pr12		81Ch16
3090.2(30)	5^+		7(5)	0.104											3027	9784.7	72Pr12		80We09
3090.5(30)	1^+		50	0.104	5	2	20	4.00							3027	9785.0	91Li14		
3091.3(30)	3^+		8	0.119	3	0	10	0.16	5	2	10	1.99			3028	9785.8	91Li14		
3093.3(30)	3^-		8	0.032	3	1	20	0.76							3030	9787.8	91Li14		
3094.9(30)	3^+		22	0.325	3	0	5	0.08	5	2	25	4.92			3031	9789.3	91Li14		
3096.0(30)	1^+		15	0.031											3033	9790.4	91Li14		
3096.5(30)	1^-		15	0.059											3033	9790.9	91Li14		
3097.5(30)	3^-		45	0.176	3	1	30	1.12	5	1	40	1.49			3034	9791.9	91Li14		
3097.8(30)	3^+		15	0.221	3	0	50	0.79	5	2	60	11.7			3034	9792.2	91Li14		

(continued) $^{49}_{23}$V(p)

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	E_cm [keV]	E^* [keV]	Ref.	
3102.0(30)	1^+		165(25)	0.338													3039	9796.3	91Li14	72Pr12
3102.3(30)	5^+		10	0.146													3039	9796.6	91Li14	
3105.7(30)	5^+		65	0.942	5	0	55	0.85									3042	9799.9	91Li14	
3109.4(30)	5^+		32	0.461													3045	9803.5	91Li14	
3109.9(30)	3^-		6	0.023													3046	9804.0	91Li14	
3112.3(30)	1^-		185	0.709	3	1	20	0.71									3048	9806.4	91Li14	
3112.8(30)	3^+		8	0.114	3	0	10	0.15	5	2	10	1.85					3049	9806.9	91Li14	
3114.0(30)	1^+		125	0.252													3050	9808.0	91Li14	
3114.2(30)	3^+		7	0.100													3050	9808.2	91Li14	
3116.2(30)	3^-		10	0.038	3	1	20	0.70									3052	9810.2	91Li14	
3116.6(30)	3^+		55	0.781	3	0	10	0.15	5	2	10	1.82					3053	9810.6	91Li14	
3117.1(30)	3^-		25	0.095													3053	9811.1	91Li14	
3120.8(30)	1^+		125	0.250													3057	9814.7	91Li14	
3123.0(30)	3^-		40	0.151													3059	9816.9	91Li14	
3123.4(30)	5^+		12	0.168													3059	9817.3	91Li14	
3125.7(30)	3^+		5	0.070													3061	9819.5	91Li14	
3127.8(30)	3^-		65	0.243	3	1	30	1.02									3064	9821.6	91Li14	
3127.9(30)	1^+		435	0.861	3	2	40	7.01									3064	9821.7	91Li14	
3128.1(30)	3^-		70	0.262	3	1	20	0.68									3064	9821.9	91Li14	
3129.0(30)	3^+		10	0.139	3	0	5	0.07	5	2	10	1.75					3065	9822.7	91Li14	
3130.9(30)	5^+		12	0.166	5	0	12	0.17									3067	9824.6	91Li14	
3131.9(30)	1^+		95	0.187													3068	9825.6	91Li14	
3133.6(30)	3^+		5	0.069	3	0	5	0.07	5	2	25	4.30					3069	9827.2	91Li14	
3134.6(30)	3^-		17	0.063	3	1	60	1.99									3070	9828.2	91Li14	
3135.1(30)	3^-		15	0.056	3	1	40	1.33									3071	9828.7	91Li14	
3139.0(30)	3^+		5	0.068													3075	9832.5	91Li14	
3140.1(30)	3^+		10	0.136	3	0	5	0.70	5	2	15	2.52					3076	9833.6	91Li14	
3140.3(30)	1^-		15	0.055	3	1	15	0.49									3076	9833.8	91Li14	
3143.8(30)	3^+		5	0.068													3079	9837.2	91Li14	
3145.3(30)	1^+		90	0.174	5	2	50	8.25									3081	9838.7	91Li14	
3147.2(30)	5^+		60	0.806	5	0	40	0.55									3083	9840.6	91Li14	
3149.6(30)	3^-		25	0.091	3	1	35	1.11	5	1	20	0.63					3085	9842.9	91Li14	
3150.4(30)	3^+		5	0.067	3	0	10	0.14			10	0.14					3086	9843.7	91Li14	
3151.7(30)	1^-		12	0.043													3087	9845.0	91Li14	
3152.3(30)	3^+		8	0.106	3	0	5	0.67	5	2	10	1.61					3088	9845.6	91Li14	
3155.1(30)	5^+		12	0.159	5	0	35	0.47									3090	9848.3	91Li14	
3156.8(30)	3^-		25	0.090													3092	9850.0	91Li14	
3156.9(30)	1^+		110	0.210													3092	9850.1	91Li14	
3157.5(30)	3^+		78	1.028	3	0	40	0.53	5	2	30	4.75					3093	9850.6	91Li14	
3157.5(30)	1^-		50	0.179	3	1	5	0.16									3093	9850.6	91Li14	
3158.2(30)	5^+		53	0.698	5	0	30	0.40									3093	9851.3	91Li14	
3159.4(30)	3^-		50	0.178	3	1	30	0.92	5	1	10	0.31					3094	9852.5	91Li14	
3163.1(30)	3^+		60	0.783	3	0	10	0.13	5	2	5	0.78					3098	9856.1	91Li14	
3165.8(30)	1^-		40	0.141	3	1	30	0.91									3101	9858.8	91Li14	
3166.2(30)	5^+		30	0.389	5	0	8	0.10									3101	9859.2	91Li14	

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3167.6(30)	5^+		47	0.608	5	0	20	0.26										3103	9860.5	91Li14
3170.3(30)	3^-		35	0.123	3	1	25	0.74										3105	9863.2	91Li14
3173.9(30)	1^+		710	1.325	5	2	110	16.5										3109	9866.7	91Li14
3174.3(30)	3^-		15	0.052	3	1	70	2.06	5	1	60	1.76						3109	9867.1	91Li14
3175.8(30)	5^+		20	0.255	5	0	30	0.38										3111	9868.6	91Li14
3176.5(30)	3^-		8	0.028	3	1	10	0.29										3111	9869.3	91Li14
3177.1(30)	3^+		35	0.445														3112	9869.8	91Li14
3177.4(30)	1^-		245	0.851	3	1	70	2.04										3112	9870.1	91Li14
3178.3(30)	3^+		13	0.165	3	0	10	0.13	5	2	20	2.95						3113	9871.0	91Li14
3184.6(30)	3^+		6	0.075														3119	9877.2	91Li14
3185.9(30)	3^-		38	0.130	3	1	20	0.57	5	1	10	0.28						3120	9878.5	91Li14
3189.3(30)	1^-		50	0.171														3124	9881.8	91Li14
3189.6(30)	5^+		10	0.124														3124	9882.1	91Li14
3189.8(30)	1^+		235	0.430														3124	9882.3	91Li14
3193.4(30)	5^+		5	0.062	5	0	20	0.24	5	2	25	3.51	3	2	5	0.70		3128	9885.8	91Li14
3197.1(30)	3^+		5	0.061														3131	9889.4	91Li14
3198.6(30)	1^+		375	0.68	5	2	20	2.76										3133	9890.9	91Li14
3198.8(30)	3^-		18	0.061	3	1	20	0.55										3133	9891.1	91Li14
3199.3(30)	1^-		30	0.101														3134	9891.6	91Li14
3201.2(30)	3^-		10	0.034														3135	9893.4	91Li14
3201.7(30)	5^+		15	0.183														3136	9893.9	91Li14
3206.6(30)	5^+		40	0.483	5	0	60	0.69										3141	9898.7	91Li14
3210.0(30)	1^-		195	0.65														3144	9902.1	91Li14
3212.3(30)	5^+		12	0.144	5	0	70	0.80										3146	9904.3	91Li14
3213.7(30)	3^+		22	0.262	3	0	50	0.57										3148	9905.7	91Li14
3214.8(30)	1^-		390	1.28														3149	9906.8	91Li14
3218.4(30)	3^-		10	0.033														3152	9910.3	91Li14
3218.7(30)	1^+		380	0.67														3153	9910.6	91Li14
3219.6(30)	3^+		35	0.413	3	0	40	0.45	5	2	40	5.15						3153	9911.5	91Li14
3221.7(30)	1^-		65	0.212														3156	9913.5	91Li14
3222.0(30)	1^+		80	0.141	5	2	20	2.56										3156	9913.8	91Li14
3222.1(30)	3^-		30	0.098	3	1	30	0.77										3156	9913.9	91Li14
3223.2(30)	1^-		12	0.039	3	1	20	0.51										3157	9915.0	91Li14
3223.9(30)	5^+		10	0.117	5	0	10	0.11	5	2	10	1.27						3158	9915.7	91Li14
3224.4(30)	3^-		12	0.039	3	1	35	0.89										3158	9916.2	91Li14
3225.3(30)	5^+		6	0.07														3159	9917.1	91Li14
3230.7(30)	5^+		16	0.185														3164	9922.3	91Li14
3232.5(30)	3^+		65	0.75	3	0	20	0.22	5	2	20	2.47						3166	9924.1	91Li14
3233.1(30)	3^-		10	0.032														3167	9924.7	91Li14
3234.3(30)	3^+		5	0.058														3168	9925.9	91Li14
3235.2(30)	5^+		5	0.057	5	0	10	0.11	5	2	10	1.23						3169	9926.7	91Li14
3238.0(30)	3^+		5	0.057														3172	9929.5	91Li14
3238.2(30)	1^-		20	0.064														3172	9929.7	91Li14
3239.9(30)	3^-		35	0.111	3	1	20	0.49	5	1	10	0.24						3174	9931.4	91Li14
3241.9(30)	5^+		108	1.23	5	0	65	0.68										3176	9933.3	91Li14

(continued) $^{49}_{23}\mathbf{V}(\mathrm{p})$

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3242.3(30)	1^-		50	0.158														3176	9933.7	91Li14
3245.5(30)	3^-		12	0.038	3	1	20	0.48										3179	9936.8	91Li14
3246.3(30)	3^+		8	0.090	3	0	30	0.31										3180	9937.6	91Li14
3247.0(30)	3^-		43	0.135	3	1	30	0.71										3181	9938.3	91Li14
3248.2(30)	5^+		10	0.112	5	0	40	0.41										3182	9939.5	91Li14
3249.0(30)	1^+		240	0.41	3	2	40	4.69										3183	9940.3	91Li14
3249.2(30)	5^+		33	0.37	5	0	7	0.07										3183	9940.5	91Li14
3252.7(30)	1^+		330	0.56														3186	9943.9	91Li14
3253.3(30)	1^-		230	0.72														3187	9944.5	91Li14
3256.0(30)	3^-		100	0.31	3	1	15	0.35										3190	9947.1	91Li14
3257.1(30)	1^-		60	0.186														3191	9948.2	91Li14
3257.9(30)	3^+		15	0.17	3	0	25	0.25	5	2	20	2.28						3191	9949.0	91Li14
3260.3(30)	3^+		23	0.25	3	0	15	0.15										3194	9951.3	91Li14
3261.0(30)	5^+		20	0.22	5	0	15	0.15										3194	9952.0	91Li14
3261.3(30)	5^+		8	0.09														3195	9952.3	91Li14
3261.5(30)	3^-		28	0.086	3	1	20	0.46										3195	9952.5	91Li14
3265.0(30)	3^+		8	0.09	3	0	10	0.10	5	2	30	3.35						3198	9955.9	91Li14
3266.9(30)	5^+		8	0.9														3200	9957.8	91Li14
3267.0(30)	1^+		65	0.108	5	2	20	2.22										3200	9957.9	91Li14
3267.1(30)	3^-		25	0.076	3	1	20	0.45										3200	9958.0	91Li14
3267.9(30)	3^+		15	0.163														3201	9958.8	91Li14
3268.7(30)	5^+		7	0.076														3202	9959.6	91Li14
3269.4(30)	3^-		28	0.085														3203	9960.2	91Li14
3272.9(30)	3^+		110	1.19	3	0	80	0.77										3206	9963.7	91Li14
3273.6(30)	1^-		60	0.182	3	1	15	0.33										3207	9964.4	91Li14
3274.1(30)	3^+		52	0.56	3	0	45	0.43	5	2	10	1.08						3207	9964.8	91Li14
3274.6(30)	3^-		8	0.024	3	1	15	0.33										3208	9965.3	91Li14
3275.2(30)	1^-		20	0.061														3208	9965.9	91Li14
3275.7(30)	5^+		58	0.622	5	0	15	0.14	3	2	15	1.62	5	2	30	3.24		3209	9966.4	91Li14
3277.7(30)	3^-		115	0.347	5	1	20	0.44										3211	9968.4	91Li14
3278.1(30)	5^+		15	0.16	5	0	10	0.10										3211	9968.8	91Li14
3279.8(30)	3^+		25	0.266														3213	9970.4	91Li14
3279.8(30)	1^+		810	1.33														3213	9970.4	91Li14
3280.1(30)	5^+		50	0.53														3213	9970.7	91Li14
3280.4(30)	3^-		105	0.315	3	1	25	0.54	5	1	30	0.65						3214	9971.0	91Li14
3280.4(30)	1^-		52	0.156	3	1	30	0.65										3214	9971.0	91Li14
3281.2(30)	5^+		25	0.27	5	0			5	2	20	2.12						3214	9971.8	91Li14
3281.2(30)	3^-		15	0.045	3	1	55	1.19										3214	9971.8	91Li14
3284.0(30)	1^-		15	0.045														3218	9974.5	91Li14
3284.9(30)	1^+		20	0.033	5	2	15	1.57										3218	9975.4	91Li14
3287.7(30)	3^+		37	0.39	3	0	5	0.05	5	2	15	1.56						3221	9978.2	91Li14
3287.7(30)	3^-		6	0.018	3	1	15	0.32										3221	9978.2	91Li14
3288.9(30)	3^+		12	0.126														3222	9979.3	91Li14
3290.4(30)	5^+		40	0.42	5	0	15	0.14	5	2	15	1.55	3	2	15	1.55		3223	9980.8	91Li14
3290.8(30)	1^-		25	0.074														3224	9981.2	91Li14

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	Rel.int. γ_i	E_cm [keV]	E^* [keV]	Ref.
3290.8(30)	1^+		290	0.47	5	2	20	2.06										3224	9981.2	91Li14
3291.2(30)	3^+		8	0.08	3	0	8	0.07										3224	9981.6	91Li14
3292.0(30)	1^-		18	0.053	3	1	20	0.42										3225	9982.4	91Li14
3293.0(30)	1^-		15	0.044	3	1	15	0.31										3226	9983.4	91Li14
3293.6(30)	3^+		15	0.156	3	0	5	0.05	5	2	20	2.04						3226	9983.9	91Li14
3294.0(30)	1^-		145	0.428	3	1	60	1.25										3227	9984.3	91Li14
3296.8(30)	1^+		20	0.032	5	2	25	2.53										3230	9987.1	91Li14
3298.1(30)	3^-		45	0.132	3	1	10	0.21										3231	9988.4	91Li14
3298.8(30)	5^+		35	0.361	5	0	35	0.32										3232	9989.0	91Li14
3299.1(30)	3^-		10	0.03	3	1	10	0.21										3232	9989.3	91Li14
3300.6(30)	3^+		18	0.185	3	0	10	0.09	5	2	25	2.50						3233	9990.8	91Li14
3303.4(30)	1^+		20	0.032	5	2	50	4.95										3236	9993.5	91Li14
3304.5(30)	1^-		15	0.044														3237	9994.6	91Li14
3305.0(30)	5^+		35	0.357	5	0	10	0.09										3238	9995.1	91Li14
3305.3(30)	3^-		15	0.044	3	1	15	0.30										3238	9995.4	91Li14
3306.2(30)	3^+		5	0.05														3239	9996.3	91Li14
3307.1(30)	5^+		15	0.153	5	0	12	0.11	3	2	12	1.18	5	2	15	1.47		3240	9997.2	91Li14
3307.7(30)	3^+		15	0.153	3	0	5	0.04	5	2	5	0.49						3240	9997.8	91Li14
3308.0(30)	1^-		350	1.01	3	1	60	1.20										3240	9998.1	91Li14
3309.5(30)	3^+		35	0.36	3	0	80	0.71	5	2	30	2.92						3242	9999.5	91Li14
3309.9(30)	3^-		32	0.09	3	1	20	0.40	5	1	5	0.10						3242	9999.9	91Li14
3310.6(30)	3^-		33	0.095														3243	10000.6	91Li14
3310.8(30)	5^+		48	0.49	5	0	20	0.18										3243	10000.8	91Li14
3313.1(30)	5^+		42	0.423														3246	10003.0	91Li14
3314.9(30)	1^-		25	0.072														3247	10004.8	91Li14
3315.2(30)	5^+		210	2.11	5	0	30	0.26	3	2	30	2.87						3248	10005.1	91Li14
3315.3(30)	5^-		18	1.197	3	1	20	0.39										3248	10005.2	91Li14
3315.4(30)	1^+		880	1.387														3248	10005.3	91Li14
3315.9(30)	5^+		23	0.231	5	0	15	0.13										3248	10005.8	91Li14
3316.5(30)	5^+		12	0.120														3249	10006.4	91Li14
3319.0(30)	3^-		140	0.399	5	1	80	1.56										3251	10008.8	91Li14
3319.6(30)	3^+		25	0.249	3	0	5	0.43										3252	10009.4	91Li14
3319.7(30)	1^-		20	0.057														3252	10009.5	91Li14
3320.2(30)	5^+		20	199	5	0	40	0.34										3252	10010.0	91Li14
3320.4(30)	5^+		73	0.727	5	0	40	0.34	5	2	40	3.76	3	2	35	3.29		3253	10010.2	91Li14
3322.9(30)	3^+		10	0.099	3	0	10	0.09										3255	10012.6	91Li14
3323.6(30)	3^-		150	0.425	3	1	30	0.58										3256	10013.3	91Li14
3324.2(30)	5^+		24	0.237	5	0	20	0.17										3256	10013.9	91Li14
3327.3(30)	5^+		72	0.709	5	0	70	0.59	3	2	60	5.53	5	2	60	5.53		3259	10017.0	91Li14
3327.5(30)	3^-		20	0.056	3	1	20	0.38										3260	10017.1	91Li14
3328.6(30)	5^+		9	0.088	5	0	15	0.13	5	2	10	0.92						3261	10018.2	91Li14
3328.9(30)	1^-		30	0.084	3	1	60	1.14										3261	10018.5	91Li14
3331.5(30)	3^-		30	0.084														3264	10021.1	91Li14
3331.7(30)	1^+		215	0.333	5	2	40	3.64										3264	10021.3	91Li14
3331.9(30)	3^+		28	0.274														3264	10021.5	91Li14

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3334.0(30)	5^+		5	0.049														3266	10023.5	91Li14
3334.5(30)	3^-		10	0.028														3266	10024.0	91Li14
3338.1(30)	1^-		15	0.042														3270	10027.5	91Li14
3339.6(30)	3^-		40	0.111	3	1	15	0.28	5	1	25	0.46						3271	10029.0	91Li14
3339.8(30)	3^+		30	0.289	3	0	5	0.04	5	2	30	2.66						3272	10029.2	91Li14
3341.9(30)	1^+		375	0.574														3274	10031.3	91Li14
3342.2(30)	5^+		10	0.096														3274	10031.5	91Li14
3344.4(30)	3^-		30	0.083	3	1	45	0.82	5	1	60	1.09						3276	10033.7	91Li14
3345.7(30)	3^-		17	0.047	3	1	50	0.91	5	1	10	0.18						3277	10035.0	91Li14
3346.5(30)	1^-		65	0.179														3278	10035.8	91Li14
3347.3(30)	5^+		8	0.076														3279	10036.5	91Li14
3348.2(30)	1^-		25	0.069														3280	10037.4	91Li14
3348.4(30)	1^+		115	0.175														3280	10037.6	91Li14
3348.9(30)	5^+		7	0.067														3281	10038.1	91Li14
3353.1(30)	5^+		80	0.755	5	0	30	0.24										3285	10042.2	91Li14
3353.8(30)	1^-		60	0.163														3285	10042.9	91Li14
3353.9(30)	1^+		135	0.204														3286	10043.0	91Li14
3354.5(30)	5^+		6	0.056														3286	10043.6	91Li14
3354.9(30)	3^+		8	0.075	3	0	10	0.08	5	2	15	1.27						3286	10044.0	91Li14
3357.6(30)	3^+		15	0.140	3	0	50	0.39	5	2	50	4.21						3289	10046.6	91Li14
3358.0(30)	3^-		12	0.033	3	1	20	0.35										3289	10047.0	91Li14
3360.3(30)	3^-		20	0.054	3	1	30	0.52										3292	10049.3	91Li14
3361.0(30)	1^-		20	0.054														3292	10050.0	91Li14
3361.3(30)	1^+		135	0.202														3293	10050.3	91Li14
3363.6(30)	1^-		790	2.13														3295	10052.5	91Li14
3364.3(30)	3^-		75	0.201	3	1	50	0.86	5	1	120	2.07						3296	10053.2	91Li14
3365.6(30)	3^+		165	1.53	3	0	80	0.62	5	2	20	1.64						3297	10054.5	91Li14
3366.0(30)	5^+		15	0.139														3297	10054.9	91Li14
3366.0(30)	1^-		20	0.054	3	1	20	0.34										3297	10054.9	91Li14
3368.4(30)	5^+		8	0.07	5	0	40	0.31										3300	10057.2	91Li14
3371.0(30)	3^-		70	0.186	3	1	35	0.59										3302	10059.8	91Li14
3373.7(30)	5^+		23	0.210														3305	10062.4	91Li14
3374.0(30)	3^-		60	0.159														3305	10062.7	91Li14
3374.1(30)	3^+		35	0.319														3305	10062.8	91Li14
3374.9(30)	1^-		75	0.199	3	1	50	0.84										3306	10063.6	91Li14
3379.0(30)	5^+		25	0.226	5	0	50	0.37	5	2	40	3.16	3	2	20	1.58		3310	10067.6	91Li14
3380.7(30)	1^-		375	0.987	3	1	50	0.83										3312	10069.3	91Li14
3381.2(30)	5^+		10	0.09	5	0	15	0.11										3312	10069.7	91Li14
3382.6(30)	5^+		25	0.225														3314	10071.1	91Li14
3382.6(30)	1^+		790	1.156	5	2	40	3.13										3314	10071.1	91Li14
3383.0(30)	3^-		220	0.577	3	1	25	0.41										3314	10071.5	91Li14
3383.6(30)	5^+		20	0.18														3315	10072.1	91Li14
3384.2(30)	5^+		10	0.09	5	0	20	0.15										3315	10072.7	91Li14
3385.8(30)	3^+		12	0.108	3	0	10	0.07										3317	10074.2	91Li14
3386.0(30)	3^-		42	0.11	3	1	120	1.96	5	1	60	0.98						3317	10074.4	91Li14

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3387.0(30)	5^+		65	0.58	5	0	15	0.11										3318	10075.4	91Li14
3387.2(30)	1^-		25	0.065														3318	10075.6	91Li14
3388.1(30)	5^+		24	0.214														3319	10076.5	91Li14
3388.2(30)	1^+		80	0.116	5	2	40	3.08										3319	10076.6	91Li14
3388.3(30)	3^-		78	0.203	3	1	60	0.97										3319	10076.7	91Li14
3391.1(30)	5^+		18	0.160	5	0	50	0.36										3322	10079.4	91Li14
3393.7(30)	1^-		130	0.336														3324	10082.0	91Li14
3395.0(30)	3^-		62	0.160	5	1	40	0.64										3326	10083.3	91Li14
3398.8(30)	5^+		28	0.246	5	0	40	0.29										3329	10087.0	91Li14
3400.4(30)	3^-		15	0.038	5	1	20	0.32										3331	10088.5	91Li14
3400.7(30)	5^+		20	0.175														3331	10088.8	91Li14
3401.2(30)	1^+		700	1.00														3332	10089.3	91Li14
3401.6(30)	5^+		83	0.725	5	0	5	0.04										3332	10089.7	91Li14
3401.7(30)	1^+		630	0.903	5	2	30	2.22										3332	10089.8	91Li14
3401.8(30)	3^-		45	0.115	5	1	5	0.08										3332	10089.9	91Li14
3404.6(30)	3^+		55	0.478	3	0	30	0.21	3	2	30	2.20	5	2	40	2.94		3335	10092.7	91Li14
3405.4(30)	3^+		12	0.104	3	0	20	0.14	5	2	20	1.46						3336	10093.4	91Li14
3405.4(30)	1^-		15	0.038	3	1	20	0.31										3336	10093.4	91Li14
3406.0(30)	5^+		10	0.09	5	0	10	0.07										3336	10094.0	91Li14
3406.7(30)	3^+		158	1.37	3	0	55	0.38	3	2	55	4.02	5	2	70	5.11		3337	10094.7	91Li14
3406.9(30)	3^-		35	0.089	3	1	30	0.46										3337	10094.9	91Li14
3408.6(30)	3^+		10	0.086	3	0	5	0.04	5	2	25	1.82						3339	10096.6	91Li14
3410.0(30)	3^+		115	0.99	3	0	120	0.83										3340	10098.0	91Li14
3410.4(30)	3^-		8	0.020	3	1	20	0.31										3341	10098.3	91Li14
3411.7(30)	3^+		8	0.069														3342	10099.6	91Li14
3414.8(30)	5^+		68	0.582	5	0	10	0.07										3345	10102.7	91Li14
3416.8(30)	3^-		95	0.239	3	1	20	0.30										3347	10104.6	91Li14
3417.4(30)	3^+		25	0.213	3	0	15	0.10										3348	10105.2	91Li14
3418.6(30)	1^+		525	0.739	5	2	20	1.41										3349	10106.4	91Li14
3419.1(30)	5^+		10	0.085														3349	10106.9	91Li14
3423.6(30)	3^-		50	0.125	3	1	15	0.22	5	1	15	0.22						3354	10111.3	91Li14
3424.1(30)	3^+		10	0.84														3354	10111.8	91Li14
3424.6(30)	3^-		20	0.050	3	1	20	0.30										3355	10112.2	91Li14
3424.8(30)	1^+		115	0.161	5	2	50	3.47										3355	10112.4	91Li14
3425.4(30)	3^+		17	0.143	3	0	5	0.03	5	2	10	0.69						3356	10113.0	91Li14
3427.2(30)	3^-		30	0.074														3357	10114.8	91Li14
3430.7(30)	5^+		15	0.125	5	0	15	0.10										3361	10118.2	91Li14
3432.3(30)	3^+		80	0.666	3	0	20	0.13										3362	10119.8	91Li14
3432.5(30)	3^-		25	0.062														3362	10120.0	91Li14
3433.1(30)	5^+		32	0.266														3363	10120.6	91Li14
3433.3(30)	1^+		1150	1.59														3363	10120.8	91Li14
3433.5(30)	1^-		40	0.098														3363	10121.0	91Li14
3434.0(30)	5^+		5	0.042	5	0	20	0.13	5	2	10	0.68						3364	10121.5	91Li14
3438.6(30)	3^-		80	0.196	3	1	20	0.29	5	1	10	0.14						3368	10126.0	91Li14
3439.2(30)	5^+		6	0.05														3369	10126.5	91Li14

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3442.0(30)	3^+		5	0.04														3372	10129.3	91Li14
3445.1(30)	3^+		10	0.08														3375	10132.3	91Li14
3445.6(30)	1^-		35	0.085														3375	10132.8	91Li14
3446.1(30)	1^+		110	0.150	5	2	25	1.63										3376	10133.3	91Li14
3447.8(30)	3^+		68	0.553	3	0	5	0.03	5	2	20	1.30						3377	10135.0	91Li14
3448.7(30)	1^+		60	0.082	5	2	50	3.24										3378	10135.9	91Li14
3448.8(30)	5^+		35	0.284	5	0	16	0.10	5	2	12	0.78						3378	10136.0	91Li14
3449.0(30)	3^-		60	0.145	3	1	20	0.28	5	1	35	0.49						3379	10136.1	91Li14
3449.2(30)	3^+		90	0.73	3	0	65	0.41										3379	10136.3	91Li14
3450.5(30)	1^-		55	0.133	3	1	20	0.28										3380	10137.6	91Li14
3451.0(30)	3^-		40	0.096	3	1	10	0.14										3381	10138.1	91Li14
3451.2(30)	5^+		75	0.606														3381	10138.3	91Li14
3451.6(30)	1^+		500	0.680														3381	10138.7	91Li14
3452.6(30)	1^-		10	0.024														3382	10139.7	91Li14
3454.2(30)	3^-		10	0.024														3384	10141.2	91Li14
3454.6(30)	1^+		410	0.556	3	2	20	1.28										3384	10141.6	91Li14
3454.7(30)	3^-		30	0.072	3	1	20	0.28										3384	10141.7	91Li14
3455.3(30)	3^+		8	0.064														3385	10142.3	91Li14
3458.5(30)	1^+		15	0.020														3388	10145.5	91Li14
3459.2(30)	1^-		20	0.048														3389	10146.1	91Li14
3460.2(30)	3^+		55	0.438	3	0	5	0.03	5	2	25	1.57						3390	10147.1	91Li14
3460.7(30)	3^-		135	0.321	3	1	40	0.54										3390	10147.6	91Li14
3461.5(30)	5^+		8	0.064														3391	10148.4	91Li14
3462.3(30)	3^+		10	0.08	3	0	5	0.03	5	2	20	1.25						3392	10149.2	91Li14
3463.6(30)	3^-		12	0.028	3	1	50	0.67	5	1	30	0.40						3393	10150.4	91Li14
3464.2(30)	5^+		105	0.832	5	0	10	0.06										3394	10151.0	91Li14
3464.8(30)	3^-		17	0.040														3394	10151.6	91Li14
3464.9(30)	1^+		1150	1.54														3394	10151.7	91Li14
3468.4(30)	3^-		18	0.042	3	1	15	0.20	5	1	10	0.13						3398	10155.1	91Li14
3469.9(30)	1^-		220	0.518	3	1	95	1.26										3399	10156.6	91Li14
3470.1(30)	1^+		15	0.020	5	2	20	1.22										3399	10156.8	91Li14
3470.5(30)	3^+		8	0.063	3	0	5	0.03	5	2	10	0.61						3400	10157.2	91Li14
3471.5(30)	3^+		22	0.172	3	0	10	0.06	5	2	30	1.83						3401	10158.2	91Li14
3471.9(30)	1^-		8	0.019														3401	10158.6	91Li14
3474.9(30)	1^+		20	0.027	5	2	20	1.21										3404	10161.5	91Li14
3475.0(30)	3^+		10	0.078	3	0	10	0.06	5	2	25	1.51						3404	10161.6	91Li14
3475.3(30)	3^-		15	0.035	3	1	15	0.20	5	1	10	0.13						3404	10161.9	91Li14
3475.7(30)	5^+		8	0.062	5	0	20	0.12										3405	10162.3	91Li14
3477.4(30)	5^+		60	0.466														3406	10164.0	91Li14
3477.4(30)	1^+		1630	2.16	5	2	20	1.20										3406	10164.0	91Li14
3477.6(30)	3^-		45	0.105														3407	10164.2	91Li14
3477.8(30)	1^+		200	0.265														3407	10164.4	91Li14
3478.7(30)	5^+		5	0.039														3408	10165.2	91Li14
3479.9(30)	3^+		40	0.310														3409	10166.4	91Li14
3480.0(30)	3^-		5	0.012														3409	10166.5	91Li14

(continued) $^{49}_{23}$V(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3480.9(30)	5^+		8	0.062														3410	10167.4	91Li14
3481.9(30)	1^-		15	0.035														3411	10168.4	91Li14
3483.4(30)	3^-		38	0.088	3	1	60	0.77	5	1	60	0.77						3412	10169.8	91Li14
3484.2(30)	3^+		20	0.154	3	0	5	0.03	5	2	25	1.47						3413	10170.6	91Li14
3485.6(30)	5^+		70	0.537	5	0	10	0.06	3	2	30	1.76	5	2	30	1.76		3415	10172.0	91Li14
3485.6(30)	3^-		43	0.099	3	1	15	0.19										3415	10172.0	91Li14
3488.5(30)	3^-		35	0.081														3417	10174.8	91Li14
3488.9(30)	1^-		160	0.368	3	1	25	0.32										3418	10175.2	91Li14
3489.6(30)	3^-		70	0.161	3	1	20	0.25	5	1	25	0.32						3418	10175.9	91Li14
3490.2(30)	5^+		85	0.648	5	0	10	0.06	5	2	10	0.58						3419	10176.5	91Li14
3490.3(30)	1^-		40	0.092														3419	10176.6	91Li14
3493.4(30)	3^-		95	0.217	3	1	60	0.75	5	1	15	0.19						3422	10179.6	91Li14
3493.9(30)	1^+		20	0.026	5	2	20	1.15										3423	10180.1	91Li14
3495.0(30)	3^-		90	0.206	5	1	25	0.31	3	1	20	0.25						3424	10181.2	91Li14
3495.9(30)	5^+		72	0.544														3425	10182.1	91Li14
3498.3(30)	3^+		15	0.113														3427	10184.4	91Li14
3498.7(30)	3^-		10	0.023														3427	10184.8	91Li14
3501.2(30)	3^+		50	0.375	3	0	30	0.17	3	2	30	1.69	5	2	20	1.13		3430	10187.3	91Li14
3501.4(30)	1^+		120	0.155	5	2	120	6.75										3430	10187.5	91Li14
3501.5(30)	5^-		6	0.28														3430	10187.6	91Li14
3502.0(30)	3^+		80	0.599	5	2	8	0.45										3431	10188.1	91Li14
3502.0(30)	1^+		575	0.743	5	2	20	1.12										3431	10188.1	91Li14
3502.2(30)	3^-		250	0.566	3	1	5	0.06										3431	10188.3	91Li14
3502.9(30)	5^+		65	0.486	5	0	65	0.37										3431	10188.9	91Li14
3503.4(30)	1^-		15	0.034	3	1	30	0.37										3432	10189.4	91Li14
3505.9(30)	3^-		50	0.113	3	1	50	0.61										3434	10191.9	91Li14
3506.7(30)	5^+		58	0.431	5	0	100	0.56										3435	10192.7	91Li14
3507.2(30)	1^-		57	0.128	3	1	70	0.85										3436	10193.1	91Li14
3508.2(30)	3^-		18	0.040														3437	10194.1	91Li14
3508.6(30)	3^+		73	0.541	3	0	60	0.34	5	2	60	3.31						3437	10194.5	91Li14
3509.8(30)	3^-		35	0.079	3	1	50	0.60										3438	10195.7	91Li14
3510.8(30)	1^-		10	0.022														3439	10196.7	91Li14
3511.5(30)	1^+		900	1.152	5	2	20	1.10										3440	10197.4	91Li14
3512.2(30)	5^+		50	0.368	5	0	70	0.39	5	2	70	3.82	3	2	20	1.09		3441	10198.0	91Li14
3512.8(30)	3^-		60	0.134	5	1	140	1.68										3441	10198.6	91Li14
3513.0(30)	5^+		85	0.626	5	0	35	0.19	5	2	35	1.91	3	2	10	0.55		3441	10198.8	91Li14
3514.5(30)	1^-		20	0.045														3443	10200.3	91Li14
3515.3(30)	5^+		25	0.183	5	0	20	0.11										3444	10201.1	91Li14
3515.9(30)	1^-		50	0.11	3	1	40	0.48										3444	10201.7	91Li14
3516.1(30)	3^-		20	0.045	5	1	25	0.30	3	1	25	0.30						3444	10201.9	91Li14
3518.6(30)	1^-		55	0.122	5	1	45	0.53										3447	10204.3	91Li14
3520.2(30)	3^-		60	0.133	3	1	20	0.23										3448	10205.9	91Li14
3520.8(30)	3^-		30	0.066	5	1	25	0.29										3449	10206.5	91Li14
3521.1(30)	5^-		20	0.901	3	1	30	0.35										3449	10206.8	91Li14
3521.4(30)	1^-		70	0.155	3	1	10	0.12										3450	10207.1	91Li14

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3522.8(30)	1^-		40	0.088	3	1	6	0.07										3451	10208.4	91Li14
3523.5(30)	3^-		230	0.508														3452	10209.1	91Li14
3523.8(30)	3^+		60	0.435	3	0	15	0.08	5	2	15	0.79						3452	10209.4	91Li14
3524.3(30)	3^-		20	0.044	5	1	20	0.23										3452	10209.9	91Li14
3525.2(30)	1^-		560	1.234														3453	10210.8	91Li14
3525.7(30)	5^-		30	1.34	5	1	40	0.47										3454	10211.3	91Li14
3525.7(30)	3^+		25	0.181	3	0	5	0.03	5	2	10	0.53						3454	10211.3	91Li14
3525.8(30)	3^-		320	0.705	5	1	55	0.64	3	1	25	0.29						3454	10211.4	91Li14
3526.2(30)	1^-		250	0.550														3454	10211.8	91Li14
3526.7(30)	3^-		220	0.484	3	1	100	1.16	5	1	50	0.58						3455	10212.2	91Li14
3527.3(30)	1^+		460	0.580	5	2	100	5.25										3455	10212.8	91Li14
3527.4(30)	5^-		25	1.11	5	1	100	1.16	3	1	40	0.46						3455	10212.9	91Li14
3527.8(30)	3^-		90	0.198	3	1	40	0.46										3456	10213.3	91Li14
3528.2(30)	3^-		180	0.395	3	1	40	0.46	5	1	10	0.12						3456	10213.7	91Li14
3528.7(30)	5^-		35	1.556	5	1	10	0.12	3	1	5	0.06						3457	10214.2	91Li14
3528.8(30)	1^+		60	0.076														3457	10214.3	91Li14
3529.2(30)	3^+		10	0.072	3	0	20	0.11	5	2	30	1.57						3457	10214.7	91Li14
3529.6(30)	5^+		8	0.057	5	0	15	0.08	5	2	15	0.78	3	2	15	0.78		3458	10215.1	91Li14
3529.8(30)	3^-		7	0.015	5	1	10	0.12	3	1	25	0.29						3458	10215.3	91Li14
3530.7(30)	3^+		18	0.129	3	0	5	0.03	5	2	15	0.78						3459	10216.2	91Li14
3531.3(30)	3^+		30	0.215	3	1	5	0.03	5	1	10	0.52						3459	10216.8	91Li14
3531.5(30)	5^+		12	0.086														3459	10216.9	91Li14
3531.9(30)	3^-		40	0.087	3	1	55	0.63	5	1	30	0.34						3460	10217.3	91Li14
3532.0(30)	5^-		20	0.88	3	1	25	0.29										3460	10217.4	91Li14
3534.3(30)	3^+		80	0.571	3	0	60	0.32	3	2	60	3.09	5	2	60	3.1		3462	10219.7	91Li14
3534.9(30)	1^-		15	0.033	3	1	30	0.34										3463	10220.3	91Li14
3535.5(30)	3^-		75	0.163	3	1	55	0.63	3	1	25	0.28						3463	10220.9	91Li14
3537.5(30)	5^+		25	0.177	5	2	20	1.02										3465	10222.8	91Li14
3538.0(30)	1^+		280	0.349														3466	10223.3	91Li14
3538.2(30)	3^+		40	0.284														3466	10223.5	91Li14
3538.9(30)	3^-		100	0.217	3	1	30	0.34	5	1	25	0.28						3467	10224.2	91Li14
3540.2(30)	3^-		30	0.065	3	1	25	0.28	5	1	15	0.17						3468	10225.5	91Li14
3540.5(30)	3^+		30	0.212	3	0	10	0.05	5	2	30	1.52						3468	10225.8	91Li14
3540.9(30)	3^-		20	0.043														3469	10226.2	91Li14
3541.4(30)	5^+		10	0.071														3469	10226.6	91Li14
3541.4(30)	1^+		80	0.099	5	2	30	1.52										3469	10226.6	91Li14
3541.9(30)	5^+		8	0.056														3470	10227.1	91Li14
3542.8(30)	3^+		10	0.070	3	0	5	0.03	5	2	15	0.76						3471	10228.0	91Li14
3543.9(30)	1^-		190	0.410														3472	10229.1	91Li14
3544.5(30)	3^-		90	0.194	3	1	40	0.45										3472	10229.7	91Li14
3545.9(30)	3^+		25	0.175	5	2	40	2.00										3474	10231.1	91Li14
3549.6(30)	3^-		70	0.150	3	1	50	0.55										3477	10234.7	91Li14
3551.5(30)	5^+		45	0.313														3479	10236.5	91Li14
3551.5(30)	1^+		490	0.603	5	2	20	0.99										3479	10236.5	91Li14
3551.7(30)	3^-		25	0.053														3479	10236.7	91Li14

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3554.0(30)	5^+		13	0.090														3481	10239.0	91Li14
3554.0(30)	1^+		55	0.068														3481	10239.0	91Li14
3555.3(30)	5^+		15	0.104	5	0	10	0.05										3483	10240.3	91Li14
3559.4(30)	5^+		20	0.138														3487	10244.3	91Li14
3559.8(30)	3^-		10	0.021														3487	10244.7	91Li14
3560.5(30)	3^+		15	0.103														3488	10245.4	91Li14
3561.0(30)	1^+		50	0.061	5	2	60	2.89										3488	10245.8	91Li14
3561.1(30)	5^+		60	0.412	5	0	25	0.13	3	2	20	0.96	5	2	25	1.20		3488	10245.9	91Li14
3562.1(30)	3^-		15	0.032	5	1	30	0.32										3489	10246.9	91Li14
3563.7(30)	1^+		50	0.061														3491	10248.5	91Li14
3563.7(30)	5^+		30	0.205	5	0	60	0.30										3491	10248.5	91Li14
3564.2(30)	1^-		20	0.042	3	1	30	0.32										3492	10249.0	91Li14
3565.0(30)	3^-		80	0.168	3	1	30	0.32										3492	10249.8	91Li14
3566.6(30)	3^-		65	0.137	3	1	30	0.32	5	1	10	0.11						3494	10251.3	91Li14
3567.1(30)	5^+		7	0.048														3494	10251.8	91Li14
3567.3(30)	1^+		260	0.315														3495	10252.0	91Li14
3567.9(30)	3^+		8	0.054														3495	10252.6	91Li14
3568.5(30)	1^+		25	0.030														3496	10253.2	91Li14
3569.2(30)	5^+		10	0.068														3496	10253.9	91Li14
3569.7(30)	3^+		15	0.102														3497	10254.4	91Li14
3569.7(30)	3^-		6	0.013	3	1	20	0.21										3497	10254.4	91Li14
3570.7(30)	3^+		45	0.304	3	0	40	0.20	3	2	20	0.94						3498	10255.3	91Li14
3571.1(30)	5^+		45	0.304	5	0	30	0.15	3	2	30	1.41	5	2	10	0.47		3498	10255.7	91Li14
3572.0(30)	3^-		9	0.002	3	1	20	0.21	5	1	10	0.11						3499	10256.6	91Li14
3572.7(30)	3^+		7	0.047														3500	10257.3	91Li14
3573.6(30)	3^+		35	0.236	5	2	40	1.86	3	0	40	0.20						3501	10258.2	91Li14
3576.9(30)	1^-		80	0.166														3504	10261.4	91Li14
3578.2(30)	3^+		50	0.335	5	2	30	1.38	3	2	10	0.46						3505	10262.7	91Li14
3578.6(30)	5^+		12	0.080	5	2	10	0.46										3506	10263.1	91Li14
3581.1(30)	3^-		30	0.062														3508	10265.5	91Li14
3581.6(30)	5^+		60	0.400														3509	10266.0	91Li14
3581.7(30)	1^+		420	0.502														3509	10266.1	91Li14
3581.8(30)	3^-		60	0.124	3	1	30	0.31										3509	10266.2	91Li14
3582.0(30)	1^+		60	0.072														3509	10266.4	91Li14
3583.1(30)	3^+		35	0.233	3	0	40	0.19										3510	10267.5	91Li14
3583.4(30)	5^+		40	0.266	5	0	65	0.31										3510	10267.8	91Li14
3585.1(30)	3^+		5	0.033														3512	10269.4	91Li14
3587.5(30)	3^+		15	0.099	3	2	20	0.90	5	2	20	0.90						3514	10271.8	91Li14
3589.6(30)	5^+		25	0.165	5	0	30	0.14										3516	10273.9	91Li14
3590.0(30)	1^-		10	0.020														3517	10274.2	91Li14
3590.6(30)	3^+		10	0.066	3	0	10	0.05										3517	10274.8	91Li14
3592.7(30)	3^+		10	0.066	3	0	5	0.02	5	2	15	0.67						3519	10276.9	91Li14
3593.3(30)	3^-		80	0.163	3	1	10	0.10	5	1	20	0.20						3520	10277.5	91Li14
3594.3(30)	5^+		8	0.052	5	0	5	0.02	5	2	5	0.22						3521	10278.5	91Li14
3594.6(30)	3^+		5	0.033	5	2	10	0.44										3521	10278.7	91Li14

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3597.2(30)	3^-		25	0.051	5	1	25	0.25										3524	10281.3	91Li14
3597.7(30)	3^+		105	0.683	3	0	100	0.47	3	2	30	1.31						3524	10281.8	91Li14
3599.0(30)	3^-		15	0.030	3	1	10	0.10	5	1	5	0.05						3526	10283.1	91Li14
3599.7(30)	1^-		75	0.152														3526	10283.7	91Li14
3601.3(30)	3^+		55	0.356	3	0	10	0.05	5	2	20	0.87						3528	10285.3	91Li14
3602.7(30)	5^+		20	0.129														3529	10286.7	91Li14
3602.8(30)	1^+		440	0.516	5	2	70	3.03										3529	10286.8	91Li14
3603.1(30)	3^-		20	0.040	3	1	10	0.10	51		20	0.20						3530	10287.1	91Li14
3607.7(30)	3^+		15	0.096	3	0	20	0.09										3534	10291.6	91Li14
3608.2(30)	1^+		30	0.035	5	2	50	2.13										3535	10292.1	91Li14
3611.4(30)	3^+		10	0.064	5	2	20	0.85										3538	10295.2	91Li14
3611.6(30)	1^-		55	0.110	3	1	75	0.72										3538	10295.4	91Li14
3612.6(30)	5^+		22	0.140	5	0	35	0.16	3	2	25	1.06	5	2	35	1.48		3539	10296.4	91Li14
3613.9(30)	1^-		210	0.418	3	1	60	0.57										3540	10297.7	91Li14
3614.8(30)	1^+		220	0.255	3	2	40	1.68										3541	10298.5	91Li14
3614.9(30)	3^-		30	0.060	3	1	20	0.19										3541	10298.6	91Li14
3618.0(30)	1^+		80	0.092	5	2	80	3.33										3544	10301.7	91Li14
3618.6(30)	3^+		46	0.291	3	0	35	0.16	5	2	10	0.42	3	2	10	0.42		3545	10302.3	91Li14
3621.1(30)	3^+		5	0.03	3	0	10	0.04										3547	10304.7	91Li14
3621.6(30)	1^-		15	0.030	3	1	30	0.28										3548	10305.2	91Li14
3624.3(30)	1^-		40	0.079														3550	10307.8	91Li14
3624.9(30)	5^+		20	0.125														3551	10308.4	91Li14
3624.9(30)	1^+		380	0.437	3	2	40	1.64										3551	10308.4	91Li14
3625.1(30)	3^-		20	0.039	3	1	20	0.19										3551	10308.6	91Li14
3626.9(30)	5^+		12	0.075	5	0	20	0.09	5	2	20	0.82						3553	10310.4	91Li14
3627.1(30)	3^-		30	0.059	5	1	80	0.74										3553	10310.6	91Li14
3628.6(30)	3^+		10	0.062	3	0	50	0.22										3555	10312.1	91Li14
3629.4(30)	3^-		10	0.020	3	1	40	0.37										3555	10312.8	91Li14
3633.7(30)	1^-		750	1.461	3	1	70	0.64										3560	10317.0	91Li14
3634.3(30)	3^-		30	0.058	3	1	10	0.09	5	1	5	0.05						3560	10317.6	91Li14
3634.5(30)	1^+		770	0.877	3	2	80	3.20										3560	10317.8	91Li14
3634.7(30)	3^-		50	0.097	5	1	10	0.09										3561	10318.0	91Li14
3635.6(30)	5^+		15	0.093														3561	10318.9	91Li14
3636.0(30)	5^+		85	0.524	5	0	10	0.04										3562	10319.3	91Li14
3636.1(30)	3^-		5	0.010														3562	10319.4	91Li14
3637.5(30)	3^+		12	0.074														3563	10320.8	91Li14
3637.9(30)	1^-		215	0.417	3	1	50	0.45										3564	10321.2	91Li14
3641.8(30)	3^-		10	0.019														3568	10325.0	91Li14
3644.0(30)	3^+		18	0.110	3	0	25	0.11										3570	10327.1	91Li14
3645.0(30)	3^+		240	1.46	3	2	160	6.23	3	0	160	0.68	5	2	140	5.45		3571	10328.1	91Li14
3646.4(30)	1^-		45	0.086	3	1	70	0.62										3572	10329.5	91Li14
3647.1(30)	3^-		40	0.077	5	1	30	0.27										3573	10330.2	91Li14
3648.3(30)	3^-		30	0.058														3574	10331.3	91Li14
3648.5(30)	5^+		35	0.212	5	0	10	0.04										3574	10331.5	91Li14
3648.6(30)	1^+		325	0.365	5	2	20	0.77										3574	10331.6	91Li14

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3650.2(30)	3^-		20	0.038	3	1	20	0.18	5	1	10	0.09						3576	10333.2	91Li14
3651.2(30)	5^+		6	0.036	5	2	20	0.77										3577	10334.2	91Li14
3651.2(30)	1^+		50	0.056														3577	10334.2	91Li14
3652.7(30)	5^+		15	0.090														3578	10335.7	91Li14
3653.1(30)	3^+		47	0.283	5	2	10	0.38	3	2	20	0.76						3579	10336.0	91Li14
3653.2(30)	3^-		18	0.034														3579	10336.1	91Li14
3654.9(30)	1^-		10	0.019														3580	10337.8	91Li14
3655.4(30)	1^+		240	0.268	3	2	120	4.56										3581	10338.3	91Li14
3655.7(30)	5^+		20	0.120	5	0	25	0.10	5	2	10	0.38						3581	10338.6	91Li14
3656.9(30)	3^-		10	0.019														3582	10339.8	91Li14
3657.7(30)	5^+		53	0.317	5	0	35	0.15										3583	10340.6	91Li14
3658.0(30)	5^+		25	0.149	5	0	10	0.04										3583	10340.8	91Li14
3658.7(30)	1^-		7	0.013	3	1	20	0.17										3584	10341.5	91Li14
3661.3(30)	3^+		10	0.060	3	0	40	0.17										3587	10344.1	91Li14
3663.9(30)	5^+		30	0.178	5	0	20	0.08	5	2	20	0.74						3589	10346.6	91Li14
3664.1(30)	5^+		23	0.136	5	0	10	0.04										3589	10346.8	91Li14
3665.2(30)	3^+		20	0.118	3	2	50	1.86										3590	10347.9	91Li14
3666.0(30)	1^+		55	0.061	5	2	50	1.85										3591	10348.7	91Li14
3666.1(30)	5^+		50	0.296	5	0	25	0.10	3	2	25	0.93	5	2	20	0.74		3591	10348.8	91Li14
3667.3(30)	3^-		35	0.066	3	1	50	0.43	5	1	20	0.17						3593	10350.0	91Li14
3670.4(30)	3^+		40	0.235	3	0	70	0.28										3596	10353.0	91Li14
3671.5(30)	1^+		1380	1.520	5	2	200	7.31										3597	10354.1	91Li14
3671.7(30)	1^-		60	0.112	3	1	40	0.34										3597	10354.3	91Li14
3672.5(30)	5^+		95	0.557	5	0	20	0.08	3	2	20	0.73	5	2	10	0.36		3598	10355.0	91Li14
3672.7(30)	3^-		25	0.047	3	1	20	0.17										3598	10355.2	91Li14
3673.9(30)	3^+		12	0.070	3	2	20	0.73										3599	10356.4	91Li14
3677.9(30)	5^+		7	0.041	5	0	20	0.08										3603	10360.3	91Li14
3678.2(30)	3^-		15	0.028	5	1	20	0.17	3	1	10	0.08						3603	10360.6	91Li14
3683.5(30)	1^+		20	0.022	5	2	20	0.71										3608	10365.8	91Li14
3686.0(30)	1^-		95	0.175														3611	10368.3	91Li14
3688.3(30)	3^+		15	0.086	5	2	15	0.53	3	0	15	0.06						3613	10370.5	91Li14
3688.6(30)	3^-		18	0.033	3	1	20	0.16	5	1	10	0.08						3613	10370.8	91Li14
3689.9(30)	1^-		325	0.596	3	1	50	0.41										3615	10372.1	91Li14
3690.5(30)	1^+		440	0.477	3	2	80	2.79										3615	10372.7	91Li14
3691.1(30)	5^+		15	0.086														3616	10373.3	91Li14
3692.3(30)	1^-		22	0.040	3	1	30	0.24										3617	10374.4	91Li14
3694.4(30)	1^+		40	0.043														3619	10376.5	91Li14
3694.6(30)	3^-		25	0.046														3619	10376.7	91Li14
3698.1(30)	1^+		80	0.086	5	2	50	1.71										3623	10380.1	91Li14
3698.1(30)	5^+		80	0.453	5	0	5	0.02	5	2	10	0.34	3	2	35	1.20		3623	10380.1	91Li14
3698.8(30)	3^-		25	0.45	3	1	30	0.24										3623	10380.8	91Li14
3699.8(30)	5^+		20	0.113														3624	10381.8	91Li14
3700.2(30)	1^+		1280	1.375	5	2	100	3.41										3625	10382.2	91Li14
3700.9(30)	5^+		40	0.226	5	0	40	0.15										3625	10382.9	91Li14
3701.1(30)	3^+		30	0.169	3	2	30	1.02										3626	10383.1	91Li14

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3702.2(30)	1^+		75	0.080	3	2	40	1.36										3627	10384.1	91Li14
3703.6(30)	1^-		100	0.181	3	1	50	0.40										3628	10385.5	91Li14
3710.4(30)	3^+		165	0.918	3	0	25	0.09	3	2	20	0.67	5	2	80	2.67		3635	10392.2	91Li14
3711.7(30)	5^+		23	0.128	5	0	40	0.15	5	2	40	1.33	3	2	30	1.00		3636	10393.4	91Li14
3712.6(30)	5^+		10	0.056	5	0	20	0.08										3637	10394.3	91Li14
3713.3(30)	1^-		450	0.805	3	1	60	0.47										3638	10395.0	91Li14
3713.9(30)	1^+		25	0.027	5	2	20	0.66										3638	10395.6	91Li14
3715.3(30)	3^-		12	0.021														3640	10397.0	91Li14
3716.0(30)	3^+		10	0.055														3640	10397.7	91Li14
3716.9(30)	3^-		15	0.027														3641	10398.5	91Li14
3717.6(30)	5^+		25	0.138														3642	10399.2	91Li14
3717.6(30)	1^+		380	0.402	5	2	40	1.31										3642	10399.2	91Li14
3718.2(30)	3^+		23	0.127	3	0	15	0.06										3642	10399.8	91Li14
3719.7(30)	3^+		10	0.055														3644	10401.3	91Li14
3720.7(30)	5^+		22	0.121														3645	10402.3	91Li14
3720.8(30)	1^+		15	0.016														3645	10402.4	91Li14
3721.0(30)	3^+		50	0.274														3645	10402.5	91Li14
3722.5(30)	5^+		37	0.203														3647	10404.0	91Li14
3722.5(30)	1^+		680	0.716	5	2	60	1.94										3647	10404.0	91Li14
3723.1(30)	5^+		85	0.465	5	0	75	0.28										3647	10404.6	91Li14
3723.4(30)	5^+		47	0.257	5	0	55	0.20										3647	10404.9	91Li14
3724.4(30)	3^+		20	0.11														3648	10405.9	91Li14
3725.2(30)	5^+		14	0.076														3649	10406.7	91Li14
3725.7(30)	1^-		500	0.883	3	1	260	1.97										3650	10407.2	91Li14
3726.0(30)	3^-		25	0.044														3650	10407.4	91Li14
3729.6(30)	5^+		70	0.380	5	0	10	0.04										3654	10411.0	91Li14
3730.2(30)	1^+		12	0.013														3654	10411.6	91Li14
3730.9(30)	3^-		10	0.018	3	1	20	0.15										3655	10412.2	91Li14
3731.2(30)	3^+		118	0.639	3	0	40	0.15	3	2	40	1.27	5	2	20	0.64		3655	10412.5	91Li14
3733.5(30)	3^-		100	0.175	5	1	20	0.15										3657	10414.8	91Li14
3734.1(30)	5^+		8	0.043	5	0	10	0.04	5	2	10	0.32						3658	10415.4	91Li14
3736.0(30)	1^-		800	1.398	3	1	100	0.74										3660	10417.2	91Li14
3736.9(30)	3^-		30	0.052	5	1	20	0.15										3661	10418.1	91Li14
3737.8(30)	3^+		255	1.368	3	0	60	0.22	3	2	50	1.56	5	2	20	0.63		3662	10419.0	91Li14
3738.2(30)	5^+		60	0.322	5	0	60	0.22										3662	10419.4	91Li14
3738.7(30)	1^-		20	0.035	3	1	20	0.15										3662	10419.9	91Li14
3740.8(30)	5^+		28	0.150	5	0	28	0.10										3665	10421.9	91Li14
3741.3(30)	3^-		28	0.049	5	1	30	0.22										3665	10422.4	91Li14
3742.2(30)	3^-		55	0.095	3	1	45	0.33	5	1	20	0.15						3666	10423.3	91Li14
3743.6(30)	1^-		75	0.130	3	1	60	0.44										3667	10424.7	91Li14
3744.8(30)	5^+		43	0.229														3668	10425.9	91Li14
3744.8(30)	1^+		270	0.279														3668	10425.9	91Li14
3744.8(30)	3^-		50	0.087	5	1	10	0.07										3668	10425.9	91Li14
3745.5(30)	5^+		40	0.213	5	0	30	0.11	5	2	30	0.92	3	2	40	1.23		3669	10426.5	91Li14
3745.7(30)	1^-		10	0.017	3	1	15	0.11										3669	10426.7	91Li14

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3748.2(30)	3^-		8	0.014	5	1	30	0.22										3672	10429.2	91Li14
3749.0(30)	5^+		8	0.042	5	0	30	0.11										3672	10430.0	91Li14
3750.3(30)	3^+		18	0.095	3	0	35	0.12	3	2	35	1.06						3674	10431.2	91Li14
3750.7(30)	5^+		20	0.105	5	0	45	0.16	5	2	45	1.37						3674	10431.6	91Li14
3752.8(30)	1^+		45	0.046														3676	10433.7	91Li14
3753.9(30)	1^-		50	0.086	3	1	50	0.36										3677	10434.8	91Li14
3754.8(30)	3^+		55	0.289	3	0	35	0.12	3	2	35	1.05	5	2	30	0.90		3678	10435.7	91Li14
3755.1(30)	5^+		20	0.105	5	0	25	0.09	5	2	25	0.75	3	2	20	0.60		3679	10435.9	91Li14
3757.8(30)	3^-		20	0.034	5	1	40	0.28										3681	10438.6	91Li14
3759.2(30)	1^+		10	0.010														3683	10440.0	91Li14
3759.5(30)	3^+		6	0.03														3683	10440.3	91Li14
3761.4(30)	5^+		30	0.156	5	0	20	0.07	5	2	20	0.59	3	2	20	0.59		3685	10442.1	91Li14
3762.5(30)	5^+		40	0.208	5	0	50	0.17	5	2	50	1.48						3686	10443.2	91Li14
3763.0(30)	1^-		20	0.034	3	1	40	0.28										3686	10443.7	91Li14
3763.9(30)	3^-		30	0.051	5	1	30	0.21										3687	10444.6	91Li14
3764.0(30)	1^+		410	0.417	3	2	80	2.36										3687	10444.7	91Li14
3764.1(30)	3^-		30	0.051	5	1	20	0.14										3687	10444.8	91Li14
3766.1(30)	5^+		17	0.088	5	0	15	0.05	5	2	15	0.44						3689	10446.7	91Li14
3767.0(30)	3^-		45	0.076	5	1	35	0.24										3690	10447.6	91Li14
3768.1(30)	1^+		380	0.385	5	2	70	2.04										3691	10448.7	91Li14
3768.7(30)	5^+		90	0.464	5	0	30	0.10	5	2	20	0.58	3	2	20	0.58		3692	10449.3	91Li14
3770.1(30)	1^-		20	0.034	3	1	15	0.10										3693	10450.6	91Li14
3770.8(30)	5^+		70	0.360	5	0	45	0.15	5	2	45	1.31	3	2	40	1.16		3694	10451.3	91Li14
3771.6(30)	3^-		20	0.034	5	1	40	0.28										3695	10452.1	91Li14
3774.1(30)	5^+		10	0.051	5	0	10	0.03	5	2	5	0.14						3697	10454.6	91Li14
3774.7(30)	1^+		140	0.141	3	2	90	2.59										3698	10455.1	91Li14
3775.9(30)	5^+		10	0.051	5	0	25	0.08	5	2	25	0.72						3699	10456.3	91Li14
3776.5(30)	1^-		18	0.030	3	1	20	0.14										3699	10456.9	91Li14
3777.4(30)	3^-		40	0.067	5	1	30	0.21										3700	10457.8	91Li14
3779.1(30)	1^-		160	0.268	3	1	70	0.48										3702	10459.5	91Li14
3779.6(30)	5^+		6	0.030	5	0	15	0.05	5	2	15	0.43						3703	10459.9	91Li14
3784.1(30)	3^+		10	0.050	3	0	10	0.03										3707	10464.3	91Li14
3784.9(30)	1^+		100	0.100	5	2	100	2.81										3708	10465.1	91Li14
3785.0(30)	5^+		25	0.126	5	0	15	0.05	5	2	15	0.42	3	2	15	0.42		3708	10465.2	91Li14
3785.7(30)	1^-		50	0.083	3	1	50	0.34										3708	10465.9	91Li14
3788.7(30)	3^+		15	0.075														3711	10468.9	91Li14
3790.2(30)	5^+		20	0.100														3713	10470.3	91Li14
3790.2(30)	1^+		1690	1.682	5	2	250	6.94										3713	10470.3	91Li14
3790.5(30)	3^-		40	0.066	5	1	50	0.33	3	1	20	0.13						3713	10470.6	91Li14
3790.9(30)	1^-		50	0.083	3	1	50	0.33										3714	10471.0	91Li14
3791.7(30)	5^+		15	0.075	5	0	40	0.13	5	2	40	1.11						3714	10471.8	91Li14
3792.5(30)	1^+		20	0.020	5	2	30	0.83										3715	10472.6	91Li14
3793.1(30)	5^+		12	0.060	5	0	10	0.03	5	2	10	0.28						3716	10473.2	91Li14
3793.6(30)	3^-		14	0.023	5	1	45	0.30										3716	10473.7	91Li14
3794.9(30)	1^-		15	0.025														3718	10474.9	91Li14

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	$2s$	ℓ	$\Gamma_{\mathrm{p}'}$	$\gamma^2_{\mathrm{p}'}$	Rel.int.	E_cm	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3796.0(30)	5^+		8	0.040	5	0	20	0.07	5	2	20	0.55						3719	10476.0	91Li14
3799.3(30)	3^-		65	0.106														3722	10479.2	91Li14
3801.9(30)	1^+		130	0.128														3724	10481.8	91Li14
3802.1(30)	3^-		30	0.049														3725	10482.0	91Li14
3802.9(30)	3^+		10	0.049														3725	10482.8	91Li14
3803.6(30)	5^+		10	0.049														3726	10483.4	91Li14
3804.2(30)	5^+		70	0.344	5	0	45	0.14	5	2	45	1.21	3	2	10	0.27		3727	10484.0	91Li14
3805.2(30)	3^-		30	0.049	5	1	40	0.26										3728	10485.0	91Li14
3805.3(30)	5^+		20	0.098	5	0	25	0.08	5	2	25	0.67						3728	10485.1	91Li14
3805.6(30)	1^+		1420	1.395	5	2	300	8.05										3728	10485.4	91Li14
3805.9(30)	3^-		15	0.024	5	1	15	0.10										3728	10485.7	91Li14
3806.9(30)	1^-		45	0.73														3729	10486.7	91Li14
3807.5(30)	5^+		20	0.098														3730	10487.3	91Li14
3807.5(30)	1^+		155	0.152														3730	10487.3	91Li14
3809.6(30)	1^-		30	0.049														3732	10489.3	91Li14
3810.3(30)	5^+		40	0.195	5	0	35	0.11	5	2	35	0.93	3	2	30	0.80		3733	10490.0	91Li14
3810.7(30)	5^+		20	0.098	5	0	5	0.02	5	2	5	0.13	3	2	5	0.13		3733	10490.4	91Li14
3810.8(30)	1^+		120	0.117	5	2	80	2.12										3733	10490.5	91Li14
3811.7(30)	3^+		18	0.088	3	0	20	0.06	3	2	20	0.53						3734	10491.4	91Li14
3812.3(30)	3^-		60	0.097	5	1	70	0.45	3	1	30	0.19						3735	10492.0	91Li14
3814.1(30)	1^-		80	0.129	3	1	100	0.64										3736	10493.7	91Li14
3814.8(30)	5^+		58	0.282	5	0	30	0.09										3737	10494.4	91Li14
3815.1(30)	3^+		20	0.097	3	0	20	0.06										3737	10494.7	91Li14
3815.1(30)	3^-		15	0.024	5	1	10	0.06										3737	10494.7	91Li14
3816.7(30)	3^+		30	0.145	3	0	30	0.09										3739	10496.3	91Li14
3817.1(30)	5^+		20	0.097	5	0	20	0.06	5	2	20	0.52						3739	10496.7	91Li14
3817.8(30)	3^+		20	0.097	3	0	20	0.06	3	2	20	0.52						3740	10497.4	91Li14
3819.4(30)	3^-		60	0.096	5	1	50	0.32										3742	10498.9	91Li14
3820.7(30)	1^+		20	0.019	5	2	20	0.52										3743	10500.2	91Li14
3821.0(30)	5^-		35	0.949	3	1	50	0.32										3743	10500.5	91Li14
3821.5(30)	3^-		80	0.128	5	1	160	1.01										3744	10501.0	91Li14
3822.3(30)	3^+		130	0.625	3	0	50	0.16	3	2	50	1.29						3744	10501.8	91Li14
3823.1(30)	1^-		20	0.032	3	1	20	0.13										3745	10502.5	91Li14
3823.9(30)	3^+		40	0.192														3746	10503.3	91Li14
3824.8(30)	3^-		60	0.096	5	1	140	0.88										3747	10504.2	91Li14
3824.9(30)	5^-		12	0.323	3	1	50	0.31										3747	10504.3	91Li14
3826.6(30)	5^-		35	0.941	3	1	25	0.16	5	3	10	2.00						3749	10506.0	91Li14
3827.3(30)	3^-		25	0.040	5	1	25	0.16										3749	10506.7	91Li14
3828.0(30)	5^+		95	0.453	5	0	15	0.05	5	2	10	0.26						3750	10507.3	91Li14
3828.9(30)	5^+		10	0.048	5	0	45	0.14	5	2	45	1.15						3751	10508.2	91Li14
3830.5(30)	5^+		40	0.190														3752	10509.8	91Li14
3830.8(30)	1^+		1380	1.328	5	2	50	1.27										3753	10510.1	91Li14
3831.9(30)	1^-		80	0.127	3	1	160	0.99										3754	10511.2	91Li14
3833.1(30)	3^+		18	0.085	3	0	10	0.03	3	2	10	0.25						3755	10512.3	91Li14
3833.3(30)	5^+		35	0.166	5	0	30	0.09	5	2	30	0.76						3755	10512.5	91Li14

(continued) $^{49}_{23}$V(p)

$E_\circ$	$2J^\pi$	$2T$	Γ_p	γ^2_p	$2s$	ℓ	$\Gamma_{p'}$	$\gamma^2_{p'}$	$2s$	ℓ	$\Gamma_{p'}$	$\gamma^2_{p'}$	$2s$	ℓ	$\Gamma_{p'}$	$\gamma^2_{p'}$	Rel.int.	E_{cm}	E^*	Ref.
[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]			[eV]	[keV]	γ_i	[keV]	[keV]	
3834.4(30)	5^-		65	1.73	3	1	80	0.49	5	1	40	0.25						3756	10513.6	91Li14
3834.9(30)	1^-		40	0.063	3	1	40	0.25										3757	10514.1	91Li14
3835.6(30)	3^-		10	0.016														3757	10514.8	91Li14
3836.3(30)	5^+		15	0.071														3758	10515.5	91Li14
3836.7(30)	5^+		25	0.118	5	0	20	0.06										3758	10515.9	91Li14
3837.0(30)	3^+		118	0.557	3	0	40	0.12	3	2	40	1.00	5	2	30	0.75		3759	10516.2	91Li14
3837.8(30)	5^+		48	0.226	5	0	45	0.14	5	2	45	1.13	3	2	40	1.00		3760	10516.9	91Li14
3838.5(30)	1^+		120	0.115	5	2	60	1.50										3760	10517.6	91Li14
3839.1(30)	5^+		25	0.118	5	0	29	0.06	5	2	10	0.25						3761	10518.2	91Li14
3839.5(30)	5^+		40	0.188	3	0	35	0.11	3	2	35	0.87						3761	10518.6	91Li14
3840.0(30)	1^-		20	0.031	3	1	30	0.18										3762	10519.1	91Li14
3841.6(30)	1^+		50	0.048														3763	10520.7	91Li14
3845.2(30)	3^-		40	0.063	5	1	10	0.06	3	1	20	0.12						3767	10524.2	91Li14
3848.0(30)	5^+		20	0.093	5	2	20	0.49										3769	10526.9	91Li14
3848.8(30)	1^+		310	0.294	5	2	80	1.95										3770	10527.7	91Li14
3849.6(30)	5^+		10	0.046														3771	10528.5	91Li14
3852.9(30)	1^-		30	0.047														3774	10531.7	91Li14
3855.6(30)	3^-		240	0.372	3	1	20	0.12	5	1	20	0.12						3777	10534.4	91Li14
3856.0(30)	5^+		15	0.069	5	0	10	0.03										3777	10534.8	91Li14
3856.3(30)	5^-		15	0.385	3	1	10	0.06										3778	10535.1	91Li14
3856.0(30)	3^-		30	0.047														3777	10534.8	91Li14
3856.8(30)	1^-		20	0.031	3	1	40	0.24										3778	10535.6	91Li14
3857.4(30)	1^+		35	0.033	5	2	35	0.84										3779	10536.1	91Li14
3858.4(30)	3^-		35	0.054	3	1	50	0.29										3780	10537.1	91Li14
3859.5(30)	5^+		30	0.138	5	0	30	0.09	3	2	30	0.72	5	2	30	0.72		3781	10538.2	91Li14
4448(2)	$\langle 3 \rangle$																	4357	11115(2)	84Ra01
4462(2)	5																	4371	11128(2)	84Ra01
4470(2)	9																	4379	11136(2)	84Ra01
4474(2)	5																	4383	11140(2)	84Ra01
4480(2)																		4389	11146(2)	84Ra01
4486(2)	5																	4394	11152(2)	84Ra01

Additional data on this isotope can be found in [87Le22, 86Bu09, 81Ke09, 80Ch16, 76Wi12, 75Na19, 75Wi10, 73Ro40, 71De25, 71Bi07, 69Kl07, 69Ky01, 69Le15, 68Br27, 68Fo04, 68Kl01].

* Γ_γ instead of $\Gamma_{p'}$; $S_{p\gamma}$ for these three resonances are 3.5(10), 2.8(8) and 4.9(14) eV, respectively [70Ma36].

** γ-ray intensities from these resonances were used [61Du03, 68Kl04] for the normalization.

Data for resonances at $E_\circ$>3100 keV are from [91Li14] (except the 6 last data-lines from [84Ra01]);

Spin assignments in data from [91Li14] could be the subject of some additional correction by the authors of publication.

Estimation of missing level fractions for states of ^{49}V with different spins is given in [91Li14].

Amplitude correlations for inelastic proton scattering were discussed in [80Ch16, 81Ch16].

Parameters of inelastic proton scattering for resonances with $J^\pi=3/2^-$. $^{49}_{23}\mathbf{V}(\mathrm{p})$

$E_\circ$ [keV]	$2J^\pi$	Γ_p [eV]	γ^2_p [keV]	$\Gamma_{\mathrm{p}'}$ [eV]	$\gamma^2_{\mathrm{p}'}$ [keV]	$\gamma^2_{\mathrm{s}13}$ [keV]	$\gamma^2_{\mathrm{s}15}$ [keV]	$\gamma_{\mathrm{s}13}\gamma_{\mathrm{s}15}$ [keV]	E^* [keV]	Ref.	
2032.3	3^-	10	0.45	0.62	9.79	3.20	6.58	4.59	8749.0	80We09	
2077.7	3^-	130	5.06	0.36	3.63	1.54	2.09	1.79	8793.4	80We09	
2101.4	3^-	10	0.36	0.28	2.31	2.28	0.03	–0.25	8816.7	80We09	
2149.6	3^-	25	0.78	0.33	1.76	0.74	1.01	0.87	8863.9	80We09	
2193.6	3^-	7	0.19	0.15	0.56	0.18	0.38	–0.26	8907.0	80We09	
2229.6	3^-	10	0.24	0.15	0.41	0.20	0.22	–0.21	8942.2	80We09	
2266.1	3^-	5	0.11	0.04	0.09	0.07	0.02	–0.04	8978.0	80We09	85Mi0A
2280.6	3^-	25	0.55	2.31	4.37	0.38	3.99	1.23	8992.2	80We09	85Mi0A
2296.8	3^-	25	0.51	1.19	2.01	0.28	1.73	–0.70	9008.1	80We09	85Mi0A
2370.9	3^-	70	1.17	0.07	0.08	0.03	0.05	0.04	9080.7	80We09	85Mi0A
2373.1	3^-	5	0.08	2.91	2.93	0.86	2.07	–1.33	9082.8	80We09	85Mi0A
2378.0	3^-	5	0.08	1.26	1.23	0.53	0.69	–0.61	9087.6	80We09	85Mi0A
2389.0	3^-	15	0.24	2.42	2.19	0.13	2.06	0.52	9098.4	80We09	85Mi0A
2396.9	3^-	10	0.16	1.10	0.95	0.26	0.69	–0.42	9106.1	80We09	85Mi0A
2400.8	3^-	15	0.23	0.30	0.26	0.08	0.17	–0.12	9110.0	80We09	85Mi0A
2402.8	3^-	5	0.08	0.23	0.19	0.14	0.06	–0.09	9111.9	80We09	85Mi0A
2437.6	3^-	30	0.42	0.62	0.41	0.14	0.27	0.20	9146.0	80We09	85Mi0A
2448.7	3^-	25	0.34	3.89		0.58	1.87	–1.04	9156.9	80We09	85Mi0A
2462.4	3^-	30	0.40	3.40		0.71	1.26	–0.95	9170.3	80We09	85Mi0A
2477.6	3^-	20	0.26	2.51	1.34	1.33	0.00	–0.08	9185.2	80We09	85Mi0A
2482.0	3^-	55	0.70	0.59	0.30	0.12	0.18	–0.15	9189.5	80We09	85Mi0A
2500.4	3^-	15	0.18	0.22	0.10	0.01	0.09	0.03	9207.5	80We09	85Mi0A
2534.4	3^-	5	0.06	6.85	2.65	1.81	0.84	–1.23	9240.8	80We09	85Mi0A
2538.0	3^-	30	0.34	0.74	0.28	0.00	0.28	0.00	9244.4	80We09	85Mi0A
2565.7	3^-	15	0.16	3.99	1.31	1.03	0.27	–0.53	9271.5	80We09	85Mi0A
2573.4	3^-	80	0.82	1.04	0.33	0.00	0.33	–0.02	9279.0	80We09	85Mi0A
2587.2	3^-	150	1.50	4.91	1.44	0.28	1.16	–0.57	9292.6	80We09	85Mi0A
2600.8	3^-	90	0.87	1.40	0.38	0.14	0.24	0.19	9305.9	80We09	85Mi0A
2608.1	3^-	5	0.05	5.00	1.32	0.21	1.11	0.48	9313.0	80We09	85Mi0A
2610.7	3^-	70	0.66	9.46	2.46	0.00	2.46	0.10	9315.6	80We09	85Mi0A
2635.8	3^-	100	0.90	13.24	3.04	1.41	1.63	1.52	9340.2	80We09	85Mi0A
2664.1	3^-	7	0.06	0.59	0.12	0.05	0.06	0.06	9367.9	80We09	85Mi0A
2696.4	3^-	50	0.40	2.59	0.45	0.00	0.44	–0.05	9399.5	80We09	85Mi0A
2700.7	3^-	15	0.12	4.60	0.78	0.14	0.64	0.30	9403.7	80We09	85Mi0A
2703.5	3^-	15	0.12	1.00	0.17	0.05	0.12	–0.08	9406.5	80We09	85Mi0A
2705.6	3^-	150	1.17	12.55	2.08	0.50	1.58	–0.89	9408.5	80We09	85Mi0A
2715.3	3^-	30	0.23	9.68	1.53	1.48	0.05	–0.28	9418.0	80We09	85Mi0A
2719.8	3^-	5	0.04	0.99	0.15	0.11	0.04	0.07	9422.4	80We09	85Mi0A
2723.5	3^-	60	0.45	0.77	0.12	0.04	0.07	0.06	9426.1	80We09	85Mi0A
2746.2	3^-	150	1.08	9.27	1.28	0.62	0.66	–0.64	9448.3	80We09	85Mi0A
2756.3	3^-	10	0.07	3.70	0.49	0.47	0.02	–0.10	9458.2	80We09	85Mi0A
2759.6	3^-	10	0.07	0.80	0.10	0.04	0.07	0.05	9461.4	80We09	85Mi0A
2769.9	3^-	15	0.10	6.78	0.84	0.38	0.47	0.42	9471.5	80We09	85Mi0A
2786.6	3^-	15	0.10	0.57	0.07	0.02	0.04	0.03	9487.9	80We09	85Mi0A
2811.7	3^-	55	0.35	18.38	1.92	0.86	1.06	–0.96	9512.5	80We09	85Mi0A

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	Γ_p [eV]	γ^2_p [keV]	$\Gamma_{p'}$ [eV]	$\gamma^2_{p'}$ [keV]	γ^2_{s13} [keV]	γ^2_{s15} [keV]	$\gamma_{s13}\gamma_{s15}$ [keV]	E^* [keV]	Ref.	
2817.5	3^-	15	0.09	2.15	0.22	0.19	0.03	–0.07	9518.2	80We09	85Mi0A
2825.9	3^-	25	0.16	7.00	0.69	0.00	0.69	–0.05	9526.4	80We09	85Mi0A
2833.0	3^-	30	0.18	12.00	1.15	0.77	0.38	–0.54	9533.3	80We09	85Mi0A
2835.5	3^-	35	0.21	1.23	0.12	0.03	0.09	0.05	9535.8	80We09	85Mi0A
2836.9	3^-	25	0.15	2.52	0.24	0.14	0.10	0.12	9537.2	80We09	85Mi0A
2841.6	3^-	110	0.66	8.99	0.83	0.43	0.40	–0.42	9541.8	80We09	85Mi0A
2853.9	3^-	20	0.12	6.00	0.53	0.47	0.06	–0.17	9553.8	80We09	85Mi0A
2900.7	3^-	40	0.22	14.68	1.08	0.71	0.37	–0.51	9599.7	80We09	85Mi0A
2910.7	3^-	7	0.04	8.07	0.53	0.13	0.41	0.22	9609.4	80We09	85Mi0A
2914.7	3^-	100	0.53	10.52	0.73	0.69	0.05	0.18	9613.4	80We09	85Mi0A
2939.3	3^-	85	0.43	8.08	0.51	0.17	0.35	–0.24	9637.5	80We09	85Mi0A
2944.3	3^-	300	1.50	63.53	3.97	1.50	2.47	–1.93	9642.4	80We09	85Mi0A
2945.3	3^-	275	1.38	9.09	0.57	0.54	0.03	–0.13	9643.3	80We09	85Mi0A
2953.3	3^-	2800	13.83	270.0	16.3	2.64	13.7	6.02	9651.2	80We09	85Mi0A
2965.1	3^-	250	1.21	6.08	0.35	0.07	0.28	0.14	9662.7	80We09	85Mi0A
2967.9	3^-	70	0.34	23.41	1.34	0.04	1.31	0.22	9665.5	80We09	85Mi0A
2973.6	3^-	40	0.19	22.99	1.29	1.09	0.21	–0.46	9671.1	80We09	85Mi0A
3014.5	3^-	40	0.18	0.37	0.02	0.01	0.01	0.01	9711.1	80We09	85Mi0A
3029.5	3^-	30	0.13	33.73	1.56	0.71	0.85	–0.78	9725.8	80We09	85Mi0A
3030.6	3^-	7	0.03	13.99	0.57	0.17	0.42	–0.25	9726.9	80We09	85Mi0A
3038.0	3^-	25	0.11	37.40	1.68	0.34	1.34	0.68	9734.2	80We09	85Mi0A
3039.1	3^-	50	0.22	0.24	0.01	0.00	0.01	0.00	9735.2	80We09	85Mi0A
3072.0	3^-	20	0.08	20.0	0.80	0.25	0.56	–0.37	9767.5	80We09	85Mi0A
3087.1	3^-	60	0.24	25.5	0.98	0.74	0.24	–0.42	9782.2	80We09	85Mi0A
3087.8	3^-	15	0.06	5.00	0.19	0.03	0.16	0.07	9782.9	80We09	85Mi0A
3090.5	3^-	15	0.06	6.00	0.23	0.10	0.12	–0.11	9785.6	80We09	85Mi0A
Average						0.50	0.90	0.03			85Mi0A

For notation see Table 3 in Introduction.

Parameters of inelastic proton scattering for resonances with $J^\pi=3/2^+$. $^{49}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	$\gamma^2_{p'}$ [keV]	γ^2_{s03} [keV]	γ^2_{s23} [keV]	γ^2_{s25} [keV]	$\gamma_{s03}\gamma_{s23}$ [keV]	$\gamma_{s03}\gamma_{s25}$ [keV]	$\gamma_{s23}\gamma_{s25}$ [keV]	E^* [keV]	Ref.	
2420.3	3^+	0.62	0.06	0.13	0.43	0.09	–0.16	–0.23	9129.1	83Ra15	85Mi0A
2446.4	3^+	0.98	0.18	0.24	0.57	0.21	–0.32	–0.37	9154.6	83Ra15	85Mi0A
2517.6	3^+	2.22	0.43	0.56	1.24	0.49	–0.73	–0.83	9224.4	83Ra15	85Mi0A
2554.7	3^+	0.85	0.24	0.02	0.60	0.06	–0.38	–0.10	9260.7	83Ra15	85Mi0A
2596.2	3^+	0.28	0.02	0.16	0.11	0.05	–0.04	–0.13	9301.4	83Ra15	85Mi0A
2631.3	3^+	0.22	0.04	0.12	0.06	–0.07	–0.05	0.09	9335.8	83Ra15	85Mi0A
2656.0	3^+	0.37	0.05	0.17	0.15	0.09	–0.09	–0.16	9359.9	83Ra15	85Mi0A
2688.5	3^+	0.70	0.21	0.01	0.47	0.05	–0.32	–0.08	9391.8	83Ra15	85Mi0A

(continued) $^{49}_{23}$V(p)

$E_\circ$ [keV]	$2J^\pi$	$\gamma^2_{p'}$ [keV]	γ^2_{s03} [keV]	γ^2_{s23} [keV]	γ^2_{s25} [keV]	$\gamma_{s03}\gamma_{s23}$ [keV]	$\gamma_{s03}\gamma_{s25}$ [keV]	$\gamma_{s23}\gamma_{s25}$ [keV]	E^* [keV]	Ref.	
2698.3	3^+	5.43	1.47	0.07	3.89	0.33	2.39	0.53	9401.4	83Ra15	85Mi0A
2787.8	3^+	0.30	0.02	0.18	0.10	0.06	–0.05	–0.13	9489.1	83Ra15	85Mi0A
2796.4	3^+	1.60	0.49	0.45	0.66	0.47	–0.57	–0.54	9497.5	83Ra15	85Mi0A
2832.2	3^+	1.07	0.19	0.35	0.53	0.26	–0.32	–0.43	9532.6	83Ra15	85Mi0A
2873.7	3^+	2.16	0.35	1.20	0.61	0.65	–0.46	–0.85	9573.2	83Ra15	85Mi0A
2896.4	3^+	0.30	0.10	0.10	0.10	0.10	0.10	0.10	9595.4	83Ra15	85Mi0A
2922.7	3^+	0.59	0.07	0.34	0.19	0.15	0.11	0.25	9621.2	83Ra15	85Mi0A
2929.2	3^+	1.45	0.32	0.23	0.90	0.27	–0.54	–0.45	9627.6	83Ra15	85Mi0A
2950.5	3^+	0.66	0.02	0.17	0.47	0.06	–0.10	–0.28	9648.4	83Ra15	85Mi0A
2955.7	3^+	0.62	0.10	0.26	0.26	0.16	–0.16	–0.26	9653.5	83Ra15	85Mi0A
2979.6	3^+	0.76	0.25	0.30	0.21	0.27	–0.23	–0.25	9676.9	83Ra15	85Mi0A
2982.5	3^+	0.15	0.05	0.04	0.06	0.05	0.06	0.05	9679.8	83Ra15	85Mi0A
2993.0	3^+	1.03	0.21	0.32	0.49	0.26	–0.32	–0.40	9690.1	83Ra15	85Mi0A
2998.1	3^+	0.94	0.17	0.53	0.23	0.31	–0.20	–0.35	9695.1	83Ra15	85Mi0A
3001.2	3^+	3.69	1.31	1.27	1.11	1.29	–1.21	–1.19	9698.1	83Ra15	85Mi0A
3021.5	3^+	0.78	0.37	0.06	0.36	0.15	–0.36	–0.15	9718.0	83Ra15	85Mi0A
3030.0	3^+	4.07	0.97	0.62	2.49	0.77	–1.55	–1.24	9726.3	83Ra15	85Mi0A
3036.7	3^+	0.68	0.04	0.59	0.05	0.15	–0.04	–0.17	9732.9	83Ra15	85Mi0A
3038.3	3^+	1.21	0.08	0.29	0.84	0.15	–0.26	–0.49	9734.4	83Ra15	85Mi0A
3055.9	3^+	0.65	0.24	0.16	0.24	0.20	–0.24	0.20	9751.7	83Ra15	85Mi0A
3075.4	3^+	0.52	0.08	0.14	0.30	0.10	0.15	–0.20	9770.8	83Ra15	85Mi0A
3081.5	3^+	1.22	0.28	0.25	0.69	0.26	–0.44	–0.41	9776.8	83Ra15	85Mi0A
Average			0.28	0.31	0.61	0.25	–0.21	–0.28		85Mi0A	

For notation see Table 3 in Introduction.

Parameters of inelastic proton scattering for resonances with $J^\pi=5/2^+$. $^{49}_{23}$V(p)

$E_\circ$ [keV]	$2J^\pi$	$\gamma^2_{p'}$ [keV]	γ^2_{s05} [keV]	γ^2_{s23} [keV]	γ^2_{s25} [keV]	$\gamma_{s05}\gamma_{s23}$ [keV]	$\gamma_{s05}\gamma_{s25}$ [keV]	$\gamma_{s23}\gamma_{s25}$ [keV]	E^* [keV]	Ref.	
2298.1	5^+	0.57	0.27	0.11	0.19	–0.17	0.23	–0.14	9009.4	81Ch16	85Mi0A
2320.4	5^+	0.58	0.25	0.18	0.15	0.21	–0.19	–0.17	9031.2	81Ch16	85Mi0A
2334.0	5^+	0.82	0.44	0.29	0.10	–0.35	0.20	–0.17	9044.5	81Ch16	85Mi0A
2363.7	5^+	0.43	0.17	0.07	0.18	–0.11	0.18	–0.11	9073.6	81Ch16	85Mi0A
2469.4	5^+	0.38	0.30	0.05	0.03	–0.12	0.10	–0.04	9177.2	81Ch16	85Mi0A
2490.3	5^+	0.72	0.21	0.46	0.05	0.31	0.10	0.15	9197.6	81Ch16	92Di02
2546.8	5^+	0.17	0.15	0.00	0.02	0.01	–0.06	0.00	9253.0	81Ch16	85Mi0A
2571.3	5^+	0.95	0.70	0.11	0.13	0.28	0.31	0.12	9277.0	81Ch16	85Mi0A
2594.3	5^+	0.96	0.56	0.23	0.17	–0.36	0.31	–0.20	9299.5	81Ch16	85Mi0A
2643.7	5^+	0.78	0.45	0.02	0.32	–0.09	0.38	–0.08	9347.9	81Ch16	85Mi0A
2676.4	5^+	0.41	0.03	0.04	0.34	0.03	0.09	0.12	9379.9	81Ch16	85Mi0A
2682.4	5^+	2.95	1.56	0.51	0.88	0.90	1.17	0.67	9385.8	81Ch16	85Mi0A

(continued) $^{49}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	$\gamma^2_{p'}$ [keV]	γ^2_{s05} [keV]	γ^2_{s23} [keV]	γ^2_{s25} [keV]	$\gamma_{s05}\gamma_{s23}$ [keV]	$\gamma_{s05}\gamma_{s25}$ [keV]	$\gamma_{s23}\gamma_{s25}$ [keV]	E^* [keV]	Ref.	
2705.1	5^+	0.55	0.33	0.16	0.06	–0.23	0.14	–0.10	9408.0	81Ch16	85Mi0A
2722.6	5^+	0.18	0.08	0.09	0.01	–0.09	0.03	–0.03	9425.2	81Ch16	85Mi0A
2738.3	5^+	0.71	0.39	0.06	0.26	0.15	0.32	0.12	9440.6	81Ch16	85Mi0A
2767.4	5^+	1.55	0.90	0.11	0.54	0.31	0.70	0.24	9469.1	81Ch16	85Mi0A
2773.6	5^+	0.20	0.13	0.05	0.02	–0.08	0.05	–0.03	9475.1	81Ch16	85Mi0A
2783.4	5^+	0.43	0.12	0.26	0.05	0.17	0.08	0.12	9484.7	81Ch16	85Mi0A
2803.7	5^+	2.44	0.92	0.76	0.75	0.84	0.83	0.76	9504.6	81Ch16	85Mi0A
2807.2	5^+	1.25	0.72	0.09	0.43	–0.26	0.56	–0.20	9508.1	81Ch16	85Mi0A
2828.8	5^+	0.49	0.24	0.09	0.17	–0.14	0.20	–0.12	9529.2	81Ch16	85Mi0A
2842.2	5^+	0.55	0.14	0.24	0.17	–0.18	0.15	–0.20	9542.3	81Ch16	85Mi0A
2867.1	5^+	1.05	0.53	0.43	0.08	–0.48	0.21	–0.19	9566.7	81Ch16	85Mi0A
2885.9	5^+	0.08	0.02	0.02	0.04	–0.02	0.03	–0.03	9585.2	81Ch16	85Mi0A
2908.2	5^+	0.26	0.13	0.05	0.08	–0.08	0.10	–0.06	9607.0	81Ch16	85Mi0A
2918.6	5^+	0.50	0.21	0.26	0.03	–0.23	0.08	–0.09	9617.2	81Ch16	85Mi0A
2924.4	5^+	1.05	0.55	0.18	0.31	0.32	0.41	0.24	9622.9	81Ch16	85Mi0A
2928.4	5^+	0.40	0.23	0.02	0.16	–0.06	0.19	–0.05	9626.8	81Ch16	85Mi0A
2937.8	5^+	1.06	0.48	0.57	0.00	–0.52	0.05	–0.05	9636.0	81Ch16	85Mi0A
2966.1	5^+	0.94	0.36	0.00	0.58	0.03	0.45	0.04	9663.7	81Ch16	85Mi0A
2968.7	5^+	1.57	0.77	0.26	0.53	–0.45	0.64	–0.37	9666.3	81Ch16	85Mi0A
2971.6	5^+	0.41	0.10	0.26	0.05	0.16	0.07	0.12	9669.1	81Ch16	85Mi0A
2978.0	5^+	1.47	0.44	0.43	0.59	0.44	0.51	0.51	9675.4	81Ch16	85Mi0A
2995.0	5^+	1.21	0.68	0.04	0.49	–0.16	0.58	–0.14	9692.0	81Ch16	85Mi0A
3023.4	5^+	0.15	0.06	0.07	0.02	–0.07	0.04	–0.04	9719.8	81Ch16	85Mi0A
3025.6	5^+	0.44	0.12	0.00	0.31	0.01	0.20	0.02	9722.0	81Ch16	85Mi0A
3028.9	5^+	0.37	0.16	0.18	0.03	–0.17	0.07	–0.07	9725.2	81Ch16	85Mi0A
3044.2	5^+	0.60	0.12	0.28	0.20	–0.18	0.15	–0.24	9740.2	81Ch16	85Mi0A
3045.4	5^+	0.21	0.02	0.19	0.01	–0.05	0.01	–0.05	9741.4	81Ch16	85Mi0A
3052.7	5^+	0.57	0.21	0.10	0.27	0.14	0.24	0.16	9748.6	81Ch16	85Mi0A
3060.5	5^+	0.37	0.01	0.16	0.20	–0.04	0.05	–0.18	9756.2	81Ch16	85Mi0A
3062.8	5^+	0.05	0.01	0.03	0.02	–0.01	0.01	–0.02	9758.4	81Ch16	85Mi0A
3078.4	5^+	0.67	0.28	0.12	0.27	0.18	0.28	0.18	9773.7	81Ch16	85Mi0A
3084.3	5^+	0.49	0.12	0.06	0.32	–0.08	0.19	–0.13	9779.5	81Ch16	85Mi0A
3088.0	5^+	1.08	0.78	0.12	0.18	–0.30	0.38	–0.15	9783.1	81Ch16	85Mi0A
Average	5^+		0.34	0.17	0.22	–0.01	0.24	0.00			

For notation see Table 3 in Introduction.

Branching ratios of γ-transitions [86De13, 67Al18, 70Wi06, 95Bu05]. Part 1. $^{49}_{23}\mathrm{V}(\mathrm{p})$

E^*	$2J^\pi$	$E_\circ$	Branching ratios										
[keV]		[keV]	Percentage										
E^*			0.0	91	153	748	1140	1155	1515	1603	1643	1646	1661
$2J_f^\pi$			7^-	5^-	3^-	3^+	5^+	9^-	5^-	7^+	$3^-,5$		3^-
90.639(2)	5^-		100										
152.928(2)	3^-		48	52									
748.27(9)	3^+		<1	45	55								
1021.62(11)	11^-		100										
1140.53(11)	5^+		45	30	20	5							
1155.32(10)	9^-		100										
1183													
1514.54(7)	5^-		35	15	50								
1602.68(12)	7^+												
1610	$9^-,11^-$												
1643.19(18)	$3^-,5$			<2	90	10							
1646.43(21)	$\langle 1^+ \rangle$												
1661.40(13)	3^-			66	34								
1994.7(4)	$3^{\langle + \rangle}$			23	34	11		32					
2178.3(4)	9^+												
2182.0(4)	7^-												
2204	$5^-,7^-$												
2234.0(7)	5			85	15								
2263.3(2)	15^-												
2265.3(3)	5^-				95							5	
2279	$1^-,3^-$												
2309.4(6)	3^-		<2	53	35	10							
2353.4(4)	9^-												
2388.0(5)	5^+		30	70									
2408.3(4)	$\langle 7^- \rangle$		60						20	20			
2671.0(3)	$\langle 11 \rangle^-$												
3531(2)	$\langle 7^- \rangle$												
3531.1(6)	5–9				60							25	
3825(3)	$\langle \mathrm{X}^- \rangle$												
3841(2)	1–5											40	
3885.2(27)													
3975(3)	$\langle \mathrm{X}^- \rangle$												
4002(2)	$\langle 3 \rangle^-$											60	
7699*		960											
7744.2**	3^-	1007											
7748**		1013											
7759.6	3^-	1024											
7801.4(8)	25^-												
7838.7(21)	$\langle 1^- \rangle$	1103*			8	11					43		20
7875*		1140											
7910.2(21)	$\langle 1^- \rangle$	1176*			24	15						7	15
7943.5(21)	$\langle 3^- \rangle$	1210*	2	14	13	2	4						15

(continued) $^{49}_{23}\mathbf{V}$(p)

E^* [keV]	$2J^\pi$	$E_\circ$ [keV]	Branching ratios Percentage										
E^*			0.0	91	153	748	1140	1155	1515	1603	1643	1646	1661
$2J_f^\pi$			7^-	5^-	3^-	3^+	5^+	9^-	5^-	7^+	3^-,5		3^-
8013.0(21)	$\langle 3^- \rangle$	1281*	14	3	9	62	3						4
8058.1(21)	$3,5^+$	1327*		4	23	7	10		13			6	
8071.8(21)	$\langle 5 \rangle$	1341*	20	13	41	2					15		
8092.6**	$\langle 1^- \rangle$	1362*			90	2					6		
8104.2	3,5	1374											
8117.5**	3	1388											
8131.5(21)	$\langle 3^- \rangle$	1402*	1	2	7	5	34		8		10		7
8192(30)		1466											
8246(30)													
8270***		1543											
8290.3	$3^{\langle - \rangle}$	1564											
8371(30)													
8405(30)													
8416.1(9)	$\langle 27^- \rangle$												
8444(30)													
8525.3(21)	$\langle 5 \rangle$	1804*	1	37	9	7	9		2	1			21
8628.2(21)	$\langle 3^- \rangle$	1909*	1	1	4	27	27					13	6
8633.1(21)	$\langle 5 \rangle$	1914*	1	9	24	7	9		10	3	4		3
8640.9(21)	$\langle 3^- \rangle$	1922*	1	15	35	23			4		6		
8642.9(21)	$3^-,5$	1924*	2	18	8	18	9		3			7	10
8682.0(21)	$\langle 5 \rangle$	1964*	22	3	44	4	1		5			3	4
8784.9(21)	$\langle 5 \rangle$	2069*	31	22	6	8	5		5				9
8788.8(21)	$\langle 5^- \rangle$	2073*	12	14	37	6	2	4	2	1			
8851.5(21)	$5^-,7^-$	2137*	7	1	32		13	1	3	1			
8867.2(21)	$\langle 5 \rangle$	2153*	8	5	23	12	8		4	1			11
8877.0(21)	$\langle 5 \rangle$	2163*	33	9	6	11	21		2				2
8880.9(21)	$\langle 5 \rangle$	2167*	12	23			3		3	2		4	
8890.7(21)	$\langle 3^- \rangle$	2177*	2	7	15	30						13	4
8893.6(21)	$\langle 5^- \rangle$	2180*	34	13	7	4	6	1	3	3			4
8895.6(21)	$\langle 5 \rangle$	2182*	4	12	17	29	12		4	2			9
8902.5(21)	$\langle 5 \rangle$	2189*	20	11	19	13	6		2		7		2
8912.2(21)	$\langle 5 \rangle$	2199*	39	19	8	5	3		1			1	3
8921.1(21)	$\langle 5^+ \rangle$	2208*	17	13	19	8	3		4	10		8	
8925.0(21)	$\langle 7^- \rangle$	2212*	47	6	23		3		2	7			2
8927.9(21)	$\langle 5 \rangle$	2215*	18	7	9	4	10		2	2		15	10
8942.6(21)	$\langle 5 \rangle$	2230*	21	11	10	6	2		3	3		13	13
8945(25)	$\langle 1^+ \rangle$												
8965.1(21)	$\langle 5^+ \rangle$	2253*	5	12	10	10	24		9				
8998.5(21)	$\langle 1^- \rangle$	2287*			64	12						7	
9008.2(21)	$\langle 5^+ \rangle$	2297*	3	3	35	5	5			1		1	
9029.8(21)	$\langle 5 \rangle$	2319*	45	4	5	3	2			1	7		3
9037.6(21)	$\langle 5 \rangle$	2327*	16	27	25	6	26						

(continued) $^{49}_{23}$V(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios										
[keV]		[keV]	Percentage										
E^*			0.0	91	153	748	1140	1155	1515	1603	1643	1646	1661
$2J^\pi_f$			7^-	5^-	3^-	3^+	5^+	9^-	5^-	7^+	3^-,5		3^-
9044.5(21)	$\langle 7^-\rangle$	2334*	16	11	15		13		3				
9056.2(21)	$\langle 5\rangle$	2346*	25	16	30	8	2		3				3
9071.9(21)	$\langle 5\rangle$	2362*	12	21	17	5	4		2	2		6	5
9075.8(21)	$\langle 5\rangle$	2366*	19	12	10	2	7		7	5	6		6
9078.8(21)	$\langle 3^-\rangle$	2369*	5	5	9	58			6		4		4
9082.7(21)	$\langle 3^+\rangle$	2373*		30	4	16	17				13		8
9089.5(21)	3^-,5	2380*	3	19	58	6						2	
9094.4(21)	$\langle 5\rangle$	2385*	1	23	7	28	10		6			10	
9118.0(21)	$\langle 5\rangle$	2409*	6	17	6	5	6		21	3			
9131.7(21)	$\langle 5\rangle$	2423*	5	11	46	5				8		11	4
9135.6(21)	$\langle 5\rangle$	2427*	19	8	39	11						8	15
9148.3(21)	$\langle 5\rangle$	2440*	4	13	9	20			10	12			
9154.2(21)	$\langle 5^+\rangle$	2446*	5	9	11	22			13			5	8
9161.1(21)	1^-,3	2453*		11	57	5					11		
9167.9(21)	$\langle 5\rangle$	2460*	13	4	10	3	4		6	7	8		9
9168.9(21)	$\langle 3^-\rangle$	2461*	4	2	59				2	2	7		3
9174.8(21)	$\langle 5\rangle$	2467*	35	6	17	14	8			4			8
9182.6(21)	$\langle 5\rangle$	2475*	2	20		32	43		3				
9193.4(21)	5,7^+	2486*	20	22		24						10	
9195.3(21)	$\langle 5\rangle$	2488*	21	5	4	19	16		8	4			8

* Only this resonance from many other resonances given in [92Di02] was included in [02Nu0A].
** Partial radiative width of this resonance is given in a separate table.
*** This level is introduced in [72Ki06] and is absent in [02Nu0A].
There is other representation [95Bu23] of these branchings by the normalized values I_{γ_i} with the intensity of the strongest transition taken as I_{γ_i}=100.

Branching ratios of γ-transitions [86De13, 67Al18, 70Wi06, 95Bu05]. Part 2. $^{49}_{23}$V(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios													
[keV]		[keV]	Percentage													
E^*			1995	2178	2182	2234	2265	2309	2388	2408	2671	2680	2808	2811	3017	3134
$2J^\pi_f$			$\langle 3^+\rangle$	9^+	7^-	5	5^-	3^-	5^+	$\langle 7^-\rangle$	11^-		5^+	X^-		
3531.1(6)	5–9		15													
3841(2)	1–5		60													
4002(2)	$\langle 3\rangle^-$								40							
7838.7(21)	$\langle 1^-\rangle$	1103					5									
7910.2(21)	$\langle 1^-\rangle$	1176	11				6	15								

(continued) $^{49}_{23}\mathbf{V}$(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios													
[keV]		[keV]	Percentage													
E^*			1995	2178	2182	2234	2265	2309	2388	2408	2671	2680	2808	2811	3017	3134
$2J_f^\pi$			$\langle 3^+\rangle$	9^+	7^-	5	5^-	3^-	5^+	$\langle 7^-\rangle$	11^-		5^+	X^-		
7943.5(21)	$\langle 3^-\rangle$	1210	5			2	18	9						3		
8013.0(21)	$\langle 3^-\rangle$	1281						4								
8058.1(21)	$3,5^+$	1327	2			10	4	4	2							
8071.8(21)	$\langle 5\rangle$	1341					9									
8131.5(21)	$\langle 3^-\rangle$	1402	5						4							
8525.3(21)	$\langle 5\rangle$	1804	2							1						
8628.2(21)	$\langle 3^-\rangle$	1909	10				4							7		
8633.1(21)	$\langle 5\rangle$	1914	3		4	3		7	2							
8640.9(21)	$\langle 3^-\rangle$	1922						1					1		1	
8642.9(21)	$3^-,5$	1924	3			3	1	1	1					1	4	1
8682.0(21)	$\langle 5\rangle$	1964	2			1	2		1	1						1
8784.9(21)	$\langle 5\rangle$	2069	5						2	2						
8788.8(21)	$\langle 5^-\rangle$	2073			2			2	2	2		2			3	
8851.5(21)	$5^-,7^-$	2137				8			8	2			4		3	
8867.2(21)	$\langle 5\rangle$	2153	1			2	2	5	1	1					1	3
8877.0(21)	$\langle 5\rangle$	2163				4		1	4					1	1	1
8880.9(21)	$\langle 5\rangle$	2167	5		5	3		3		1					5	
8890.7(21)	$\langle 3^-\rangle$	2177	3			2	4	3								
8893.6(21)	$\langle 5^-\rangle$	2180	3		2	6	3	2					1	1		
8895.6(21)	$\langle 5\rangle$	2182	2				3									
8902.5(21)	$\langle 5\rangle$	2189	4			6		3							2	
8912.2(21)	$\langle 5\rangle$	2199	3			3	1	1		1				4		
8921.1(21)	$\langle 5^+\rangle$	2208	4	3	3			8								
8925.0(21)	$\langle 7^-\rangle$	2212				2										
8927.9(21)	$\langle 5\rangle$	2215	2			7		4							6	
8942.6(21)	$\langle 5\rangle$	2230	3			1		6	3						2	
8965.1(21)	$\langle 5^+\rangle$	2253		2						2		2			3	2
8998.5(21)	$\langle 1^-\rangle$	2287					17									
9008.2(21)	$\langle 5^+\rangle$	2297	5					4	10	2					4	
9029.8(21)	$\langle 5\rangle$	2319	5			3		1	2	1					3	1
9037.6(21)	$\langle 5\rangle$	2327														
9044.5(21)	$\langle 7^-\rangle$	2334			11	7		11			3					
9056.2(21)	$\langle 5\rangle$	2346	6					7								
9071.9(21)	$\langle 5\rangle$	2362	4		2	1		10	2					1	2	
9075.8(21)	$\langle 5\rangle$	2366	6		2			6		2					3	
9078.8(21)	$\langle 3^-\rangle$	2369							6						3	
9082.7(21)	$\langle 3^+\rangle$	2373														
9089.5(21)	$3^-,5$	2380							4							
9094.4(21)	$\langle 5\rangle$	2385				3		2							4	
9118.0(21)	$\langle 5\rangle$	2409	10			11		2					5		7	
9131.7(21)	$\langle 5\rangle$	2423					6	4								
9135.6(21)	$\langle 5\rangle$	2427														

(continued) $^{49}_{23}\mathbf{V}$(p)

E^*	$2J^\pi$	$E_\circ$	Branching ratios													
[keV]		[keV]	Percentage													
E^*			1995	2178	2182	2234	2265	2309	2388	2408	2671	2680	2808	2811	3017	3134
$2J^\pi_f$			$\langle 3^+\rangle$	9^+	7^-	5	5^-	3^-	5^+	$\langle 7^-\rangle$	11^-		5^+	X^-		
9148.3(21)	$\langle 5\rangle$	2440	13		7				7							
9154.2(21)	$\langle 5^+\rangle$	2446		3			5	13					3			
9161.1(21)	1^-,3	2453				9	4									
9167.9(21)	$\langle 5\rangle$	2460	1			1	2	8	2	2			3		2	
9168.9(21)	$\langle 3^-\rangle$	2461	4					3								
9174.8(21)	$\langle 5\rangle$	2467						3							5	
9182.6(21)	$\langle 5\rangle$	2475														
9193.4(21)	$5,7^+$	2486	24													
9195.3(21)	$\langle 5\rangle$	2488						3	3	3					3	

Branching ratios of γ-transitions [86De13, 67Al18, 70Wi06, 95Bu05]. Part 3. $^{49}_{23}\mathbf{V}$(p)

E^*	$2J^\pi$	$E_\circ$	Com.	Branching ratios												
[keV]		[keV]		Percentage												
E^*,keV				3224	3239	3242	3259	3325	3342	3388	3464	3516	3521	3531	3603	3638	3671
$2J^\pi_f$																	
7838.7(21)	$\langle 1^-\rangle$	1103*	x							9							
7910.2(21)	$\langle 1^-\rangle$	1176*	x							7							
7943.5(21)	$\langle 3^-\rangle$	1210*	x							3				1			
8013.0(21)	$\langle 3^-\rangle$	1281*	x	1													
8058.1(21)	$3,5^+$	1327*	x	1		3	1			2							
8092.6**	$\langle 1^-\rangle$	1362*	x	2													
8131.5(21)	$\langle 3^-\rangle$	1402*	x			1				3				4	3		
8525.3(21)	$\langle 5\rangle$	1804*	x												5		
8633.1(21)	$\langle 5\rangle$	1914*	x							2		2					
8640.9(21)	$\langle 3^-\rangle$	1922*	x		2											1	
8642.9(21)	$3^-,5$	1924*	x			1		1		1							
8682.0(21)	$\langle 5\rangle$	1964*	x					2								1	1
8788.8(21)	$\langle 5^-\rangle$	2073*	x	2		1				3							
8851.5(21)	$5^-,7^-$	2137*	x	2						5							
8867.2(21)	$\langle 5\rangle$	2153*	x			1				1	1					1	
8877.0(21)	$\langle 5\rangle$	2163*	x	1	1			1		1							
8880.9(21)	$\langle 5\rangle$	2167*	x							2	3						
8890.7(21)	$\langle 3^-\rangle$	2177*	x							2							
8893.6(21)	$\langle 5^-\rangle$	2180*	x													1	
8895.6(21)	$\langle 5\rangle$	2182*	x			2				2							
8902.5(21)	$\langle 5\rangle$	2189*	x		4												

(continued) $^{49}_{23}$V(p)

E^* [keV]	$2J^\pi$	$E_\circ$ [keV]	Com.	Branching ratios Percentage													
E^*,keV $2J_f^\pi$				3224	3239	3242	3259	3325	3342	3388	3464	3516	3521	3531	3603	3638	3671
8912.2(21)	⟨5⟩	2199*	x		1					1					1		
8921.1(21)	⟨5$^+$⟩	2208*	x														
8925.0(21)	⟨7$^-$⟩	2212*	x							2							
8927.9(21)	⟨5⟩	2215*	x							4							
8942.6(21)	⟨5⟩	2230*	x														
8965.1(21)	⟨5$^+$⟩	2253*	x	1						3							
8998.5(21)	⟨1$^-$⟩	2287*	x														
9008.2(21)	⟨5$^+$⟩	2297*	x						3								3
9029.8(21)	⟨5⟩	2319*	x		4					1					1		1
9037.6(21)	⟨5⟩	2327*	x														
9044.5(21)	⟨7$^-$⟩	2334*	x				4					2					
9056.2(21)	⟨5⟩	2346*	x														
9071.9(21)	⟨5⟩	2362*	x							1			3				
9075.8(21)	⟨5⟩	2366*	x					2									
9078.8(21)	⟨3$^-$⟩	2369*	x														
9082.7(21)	⟨3$^+$⟩	2373*	x														
9089.5(21)	3$^-$,5	2380*	x														
9094.4(21)	⟨5⟩	2385*	x														
9118.0(21)	⟨5⟩	2409*	x							1							
9131.7(21)	⟨5⟩	2423*	x														
9135.6(21)	⟨5⟩	2427*	x														
9148.3(21)	⟨5⟩	2440*	x											5			
9154.2(21)	⟨5$^+$⟩	2446*	x	1	2												
9161.1(21)	1$^-$,3	2453*	x	3													
9167.9(21)	⟨5⟩	2460*	x			2				2					1		
9168.9(21)	⟨3$^-$⟩	2461*	x	2						1							
9174.8(21)	⟨5⟩	2467*	x														
9182.6(21)	⟨5⟩	2475*	x														
9193.4(21)	5,7$^+$	2486*	x														
9195.3(21)	⟨5⟩	2488*	x										3				

* Only this resonance from many other resonances given in [92Di02] was included in [02Nu0A].
** Partial radiative widths of this resonance is given in a separate table.
x marks presence [95Bu23] of other representation of these branchings by the normalized values I_{γ_i} with the intensity of the strongest transition taken as 100.

Branching ratios of γ-transitions [86De13, 67Al18, 70Wi06, 95Bu05]. Part 4. $^{49}_{23}\mathrm{V}(\mathrm{p})$

E^* [keV]	$2J^\pi$	$E_\circ$ [keV]	Com.	Branching ratios Percentage													
E^*,keV $2J_f^\pi$				3678	3694	3721	3741	3771	3782	3816	3841	3912	3927	3960	4002	4035	4088
7838.7(21)	$\langle 1^- \rangle$	1103*	x				4										
7943.5(21)	$\langle 3^- \rangle$	1210*	x	5						1		1					
8058.1(21)	$3,5^+$	1327*	x				8										
8525.3(21)	$\langle 5 \rangle$	1804*	x											5			
8633.1(21)	$\langle 5 \rangle$	1914*	x											3			
8640.9(21)	$\langle 3^- \rangle$	1922*	x			3	1				1	2		1	1		
8642.9(21)	$3^-,5$	1924*	x											1	2		
8851.5(21)	$5^-,7^-$	2137*	x									2					
8867.2(21)	$\langle 5 \rangle$	2153*	x				2				2	2					
8880.9(21)	$\langle 5 \rangle$	2167*	x		1					1	1	1			1		
8890.7(21)	$\langle 3^- \rangle$	2177*	x		1		3			1	1			1			
8893.6(21)	$\langle 5^- \rangle$	2180*	x				1					2					
8912.2(21)	$\langle 5 \rangle$	2199*	x		1							2					
8925.0(21)	$\langle 7^- \rangle$	2212*	x						2							1	
8942.6(21)	$\langle 5 \rangle$	2230*	x		3												
8965.1(21)	$\langle 5^+ \rangle$	2253*	x				4			2		2	2	2			1
9008.2(21)	$\langle 5^+ \rangle$	2297*	x	3			3	2				5			3		2
9044.5(21)	$\langle 7^- \rangle$	2334*	x									2		2			
9075.8(21)	$\langle 5 \rangle$	2366*	x		1	1						2		1			
9094.4(21)	$\langle 5 \rangle$	2385*	x		2		2					2					
9167.9(21)	$\langle 5 \rangle$	2460*	x	1	1		1							2		1	
9168.9(21)	$\langle 3^- \rangle$	2461*	x				1										

* Only this resonance from many other resonances given in [92Di02] was included in [02Nu0A].
x marks presence [95Bu23] of other representation of these branchings by the normalized values I_{γ_i} with the intensity of the strongest transition taken as 100.

Branching ratios of γ-transitions [86De13, 67Al18, 70Wi06, 95Bu05]. Part 5. $^{49}_{23}\mathrm{V}(\mathrm{p})$

E^* [keV]	$2J^\pi$	$E_\circ$ [keV]	Com.	Branching ratios Percentage													
E^*,keV $2J_f^\pi$				4098	4129	4152	4218	4253	4259	4270	4289	4359	4373	4397	4422	4540	4635
7943.5(21)	$\langle 3^- \rangle$	1210*	x				1	1									
8633.1(21)	$\langle 5 \rangle$	1914*	x			4											
8640.9(21)	$\langle 3^- \rangle$	1922*	x				1										
8642.9(21)	$3^-,5$	1924*	x						1	1							
8851.5(21)	$5^-,7^-$	2137*	x		2												

(continued) $^{49}_{23}$V(p)

E^* [keV]	$2J^\pi$	$E_\circ$ [keV]	Com.	Branching ratios Percentage													
E^*,keV $2J^\pi_f$				4098	4129	4152	4218	4253	4259	4270	4289	4359	4373	4397	4422	4540	4635
8890.7(21)	$\langle 3^- \rangle$	2177*	x	1				1		2			2				2
8893.6(21)	$\langle 5^- \rangle$	2180*	x		1				1					1			
8895.6(21)	$\langle 5 \rangle$	2182*	x						2								
8902.5(21)	$\langle 5 \rangle$	2189*	x								1						
8912.2(21)	$\langle 5 \rangle$	2199*	x		1									2			
8925.0(21)	$\langle 7^- \rangle$	2212*	x														1
8965.1(21)	$\langle 5^+ \rangle$	2253*	x				1	1									
9167.9(21)	$\langle 5 \rangle$	2460*	x									2			1		1

* Only this resonance from many other resonances given in [92Di02] was included in [02Nu0A].
x marks presence [95Bu23] of other representation of these branchings by the normalized values I_{γ_i} with the intensity of the strongest transition taken as 100.

Partial radiative widths [69Le15]. $^{49}_{23}$V(p)

E^* [keV]	$2J^\pi$	$E_\circ$ [keV]	Partial radiative widths [meV]										
E^* $2J^\pi_f$			0.0 7^-	91 5^-	153 3^-	748 3^+	1140 5^+	1514 5^-	1646 $\langle 1^+ \rangle$	1661 3^-	1995 $\langle 3^+ \rangle$	2234 5	2303
7744.2	3^-	1007		110	150				50	50		10	30
				0.007	0.08				0.0002	0.01			0.01
7748	3^-	1013	7	170	9	5		10	60	20			30
			0.01	0.01	0.005	0.0001			0.0003	0.004			0.009
8092.6	1^-	1361		1400	5				170	<20			
				0.065					0.0007				
8117.5	3	1387		9	50	30	30		20	20	50		
				0.0005	0.025	0.0004	0.002		0.00008	0.004	0.0002		

Estimations of Γ_{γ_i} in the Weisskoph units W.u. are given in the second line.

Target isotope: $^{49}_{22}$Ti $I^{\pi}_{\circ} = 7/2^-$ *Abundance:* 5.41(2) % $S_{\mathrm{p}} = 7948.5(11)$ keV

$^{50}_{23}$V(p)

$E_{\circ}$ [keV]	Rel.int. γ_i	E_{cm} [keV]	E^* [keV]	Ref.
882.9(10)	35	865.2	8813.7(15)	61Du03
911.4(10)	50	893.2	8841.6(15)	61Du03
917.0(10)	50	899.0	8847.1(15)	61Du03
924.0(10)	50	906.0	8854.0(15)	61Du03
934.0(10)	85	915.0	8863.8(15)	61Du03
939.6(10)	85	920.8	8869.3(15)	61Du03
945.6(10)	120	926.7	8875.1(15)	61Du03
948.8(10)	70	929.8	8878.3(15)	61Du03
953.3(10)	100	934.2	8882.7(15)	61Du03
959.9(10)*	1500	940.7	8889.2(15)	69Se01
963.5(10)	35	944.2	8892.7(15)	61Du03
964.9(10)	70	945.6	8894.1(15)	61Du03
966.7(10)	120	947.4	8895.8(15)	61Du03
969.6(10)	300	950.2	8898.7(15)	61Du03
974.5(10)	540	955.0	8903.5(15)	61Du03
977.0(10)	50	957.0	8905.9(15)	61Du03
978.8(10)	130	959.2	8907.7(15)	61Du03
981.8(10)	610	962.2	8910.6(15)	61Du03
985.6(10)	370	965.9	8914.3(15)	61Du03
988.7(10)	220	968.9	8917.4(15)	61Du03
991.9(10)	100	972.1	8920.5(15)	61Du03
993.9(10)	250	974.0	8922.5(15)	61Du03
996.7(10)*	70	976.8	8925.2(15)	61Du03
999.1(10)	240	979.1	8927.6(15)	61Du03
1004.8(10)	190	984.7	8933.2(15)	61Du03
1009.0(10)	70	989.0	8937.3(15)	61Du03
1013.0(10)*	25	993.0	8941.2(15)	61Du03
1021.3(10)	120	1000.9	8949.3(15)	61Du03
1029.3(10)	50	1008.7	8957.2(15)	61Du03
1031.0(10)	25	1010.0	8958.8(15)	61Du03
1035.9(10)	35	1015.2	8963.6(15)	61Du03
1037.8(10)	85	1017.0	8965.5(15)	61Du03
1039.9(10)	35	1019.1	8967.6(15)	61Du03
1044.8(10)	35	1023.9	8972.4(15)	61Du03
1048.2(10)	25	1027.2	8975.7(15)	61Du03
1059.5(10)	50	1038.3	8986.8(15)	61Du03
1062.3(10)	50	1041.1	8989.5(15)	61Du03
1065.0(10)	90	1044.0	8992.2(15)	61Du03
1068.8(10)	150	1047.4	8995.9(15)	61Du03
1076.6(10)	100	1055.1	9003.5(15)	61Du03
1084.3(10)	190	1062.6	9011.1(15)	61Du03
1087.1(10)	70	1065.4	9013.8(15)	61Du03
1090.5(10)	100	1068.7	9017.2(15)	61Du03
1094.5(10)	50	1072.6	9021.1(15)	61Du03
1098.0(10)	90	1076.0	9024.5(15)	61Du03

(continued) $^{50}_{23}$V(p)

$E_\circ$ [keV]	Rel.int. γ_i	E_{cm} [keV]	E^* [keV]	Ref.
1099.6(10)	70	1077.6	9026.1(15)	61Du03
1102.3(10)	130	1080.3	9028.7(15)	61Du03
1105.0(10)	70	1083.0	9031.4(15)	61Du03
1107.7(10)	100	1085.5	9034.0(15)	61Du03
1111.1(10)	120	1088.9	9037.3(15)	61Du03
1112.5(10)	120	1090.2	9038.7(15)	61Du03
1115.8(10)*	70	1093.5	9041.9(15)	61Du03
1119.2(10)	85	1096.8	9045.3(15)	61Du03
1124.4(10)	250	1101.9	9050.4(15)	61Du03
1126.6(10)	150	1104.1	9052.5(15)	61Du03
1130.5(10)*	70	1107.9	9056.4(15)	61Du03
1135.6(10)	70	1112.9	9061.3(15)	61Du03
1138.8(10)	240	1116.0	9064.5(15)	61Du03
1143.5(10)	220	1120.6	9069.1(15)	61Du03
1146.5(10)	70	1123.6	9072.0(15)	61Du03
1150.2(10)*	70	1127.2	9075.7(15)	61Du03
1155.4(10)	150	1132.3	9080.8(15)	61Du03
1158.5(10)	130	1135.3	9083.8(15)	61Du03
1161.4(10)	85	1138.2	9086.6(15)	61Du03
1162.8(10)	100	1139.5	9088.0(15)	61Du03
1166.5(10)	170	1143.2	9091.6(15)	61Du03
1171.9(10)	240	1148.5	9096.9(15)	61Du03
1174.9(10)	85	1151.4	9099.9(15)	61Du03
1179.1(10)	120	1155.5	9104.0(15)	61Du03
1181.8(10)	100	1158.2	9106.6(15)	61Du03
1184.5(10)	200	1160.8	9109.3(15)	61Du03
1187.2(10)	50	1163.5	9111.9(15)	61Du03
1190.4(10)	300	1166.6	9115.1(15)	61Du03
1193.7(10)	85	1169.8	9118.3(15)	61Du03
1200.6(10)	80	1176.6	9125.0(15)	61Du03
1202.9(10)	340	1178.8	9127.3(15)	61Du03
1206.5(10)	170	1182.4	9130.8(15)	61Du03
1208.8(10)	100	1184.6	9133.1(15)	61Du03
1216.3(10)*	200	1192.0	9140.4(15)	61Du03
1220.7(10)	130	1196.3	9144.7(15)	61Du03
1223.6(10)	170	1199.1	9147.6(15)	61Du03
1226.3(10)	130	1201.8	9150.2(15)	61Du03
1230.0(10)	170	1205.0	9153.9(15)	61Du03
1233.2(10)	290	1208.5	9157.0(15)	61Du03
1238.1(10)	130	1213.3	9161.8(15)	61Du03
1239.4(10)	320	1214.6	9163.1(15)	61Du03
1241.8(10)	100	1217.0	9165.4(15)	61Du03
1243.7(10)	250	1218.8	9167.3(15)	61Du03
1249.8(10)	290	1224.8	9173.3(15)	61Du03
1251.4(10)	70	1226.4	9174.8(15)	61Du03

(continued) $^{50}_{23}\mathrm{V}(\mathrm{p})$

$E_\circ$ [keV]	Rel.int. γ_i	E_{cm} [keV]	E^* [keV]	Ref.
1254.5(10)	240	1229.4	9177.9(15)	61Du03
1255.8(10)	300	1230.7	9179.1(15)	61Du03
1258.5(10)	220	1233.3	9181.8(15)	61Du03
1264.6(10)	370	1239.3	9187.8(15)	61Du03
1268.1(10)	240	1242.7	9191.2(15)	61Du03
1273.3(10)	300	1247.8	9196.3(15)	61Du03
1275.1(10)	440	1249.6	9198.1(15)	61Du03
1279.8(10)	240	1254.2	9202.7(15)	61Du03

Additional data on this isotope can be found in [80Ke09, 69Se01, 63Du09, 61Du03].
* doublet

Branching ratios of γ-transitions [02Nu0A]. $^{50}_{23}\mathrm{V}(\mathrm{p})$

E^* [keV]	J^π	Branching ratios Percentage												
E^*		0.0	226	320	355	388	836	910	910	1301	1332	1402	1495	1518
J^π_{f}		6^+	5^+	4^+	3^+	2^+	5^+	$\langle 7\rangle^+$	4^+	2^+	1^+	3^+	1^+	2^+
226.2(2)	5^+	100												
320.2(2)	4^+	1.5(2)	98.5(2)											
355.4(3)	3^+		0.7	99.3										
388.4(4)	2^+				100									
836.3(4)	5^+	51		49										
910.0(4)	$\langle 7\rangle^+$		100											
910.1(4)	4^+		100											
1301.4(4)	2^+				33(4)	67(4)								
1331.5(6)	1^+					100								
1401.9(4)	3^+			14(5)	16(7)	58(3)		12(4)						
1495.3(5)	1^+				12(5)	88(5)								
1518.4(4)	2^+				18(3)	82(2)								
1561.7(4)	2^+				51(2)	49(2)								
1677.2(4)	1^+–3^+				20	15				54		11		
1810.8(10)	2^+,3^+			x	x	x								

Target isotope: $^{50}_{22}$Ti $I^{\pi}_{\circ} = 0^+$ *Abundance:* 5.18(2) % $S_{\mathrm{p}} = 8060.6(11)$ keV

$^{51}_{23}$V(p)

$E_{\circ}$ [keV]	$2J^{\pi}$	$2T$	Γ_{p} [eV]	γ^2_{p} [keV]	$\Gamma_{\mathrm{p}'}$ [eV]	Γ_{γ} [eV]	Rel.int. γ_i	E^*_{analog} [keV]	S_{pp}	S_{dp}	E_{cm} [keV]	E^* [keV]	Ref.	
885.5(10)							50*				868	8816.3(15)	61Du03	
911.1(10)							150				893	8841.3(15)	61Du03	
916.3(10)							120				898	8846.4(15)	61Du03	
953.4(10)							35				935	8882.8(15)	61Du03	doublt
970.8(10)							70				952	8899.8(15)	61Du03	
985.1(10)							130				966	8913.9(15)	61Du03	
989.6(10)							250				970	8918.3(15)	61Du03	
1007.8(10)							80				988	8936.1(15)	61Du03	
1028.2(5)							500				1008	8956.1(12)	61Du03	
1033.1(10)							25				1013	8960.9(15)	61Du03	
1038.7(10)							250				1018	8966.4(15)	61Du03	
1050.7(10)							75				1030	8978.1(15)	61Du03	
1055.2(10)							35				1034	8982.6(15)	61Du03	
1059.1(2)							230				1038	8986.4(11)	61Du03	
1075.3(10)							70				1054	9002.3(15)	61Du03	
1077.0(10)							80				1056	9003.9(15)	61Du03	
1079.7(10)							230				1058	9006.6(15)	61Du03	
1087.5(10)							370				1066	9014.2(15)	61Du03	
1090.7(10)							50				1069	9017.3(15)	61Du03	uncert
1092.2(10)							110				1071	9018.8(15)	61Du03	
1101.9(10)							50				1080	9028.3(15)	61Du03	
1106.8(10)							25				1085	9033.1(15)	61Du03	
1109.6(5)							250				1088	9035.9(12)	61Du03	
1112.5(10)							50				1090	9038.7(15)	61Du03	
1123.3(5)							370				1101	9049.3(12)	61Du03	
1127.5(10)							40				1105	9053.4(15)	61Du03	
1130.9(10)							40				1109	9056.7(15)	61Du03	
1132.4(10)							20				1110	9058.2(15)	61Du03	uncert
1134.5(10)							30				1112	9060.3(15)	61Du03	uncert
1145.9(10)							90				1123	9071.4(15)	61Du03	
1150.4(10)							330				1128	9075.9(15)	61Du03	
1153.5(10)							25				1131	9078.9(15)	61Du03	
1159.5(10)							20				1137	9084.8(15)	61Du03	uncert
1162.8(10)							50				1140	9088.0(15)	61Du03	
1164.1(5)							40				1141	9089.3(12)	61Du03	
1167.6(10)							40				1145	9092.7(15)	61Du03	uncert
1168.8(10)							40				1146	9093.9(15)	61Du03	
1177.8(5)							50				1155	9102.7(12)	61Du03	
1179.1(10)							40				1156	9104.0(15)	61Du03	uncert
1183.1(10)							400				1160	9107.9(15)	61Du03	
1186.0(10)							400				1163	9110.7(15)	61Du03	
1191.3(5)							30				1168	9115.9(12)	61Du03	uncert
1193.2(10)							70				1170	9117.8(15)	61Du03	uncert
1195.3(10)							50				1172	9119.9(15)	61Du03	
1198.6(10)							25				1175	9123.1(15)	61Du03	doublt

(continued) $^{51}_{23}$V(p)

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$\Gamma_{\mathrm{p}'}$ [eV]	Γ_γ [eV]	Rel.int. γ_i	E_cm [keV]	E^* [keV]	Ref.			
1201.9(10)							35	1178	9126.3(15)	61Du03			
1203.6(5)							170	1180	9128.0(12)	61Du03			
1206.9(10)							300	1183	9131.2(15)	61Du03			
1211.2(10)							330	1187	9135.4(15)	61Du03			
1214.2(10)							400	1190	9138.4(15)	61Du03			
1223.5(10)							350	1199	9147.5(15)	61Du03			
1224.9(10)							⟨200⟩	1201	9148.9(15)	61Du03			
1232.3(10)							150	1208	9156.1(15)	61Du03			
1236.7(10)							410	1212	9160.4(15)	61Du03			
1237.9(10)							⟨200⟩	1213	9161.6(15)	61Du03			
1248.8(10)							140	1224	9172.3(15)	61Du03			
1255.0(10)							650	1230	9178.4(15)	61Du03			
1257.1(10)							⟨150⟩	1232	9180.4(15)	61Du03			
1262.5(10)							330	1238	9185.7(15)	61Du03			
1264.8(10)							170	1240	9188.0(15)	61Du03			
1268.5(10)							300	1243	9191.6(15)	61Du03			
1276.0(10)							380	1251	9198.9(15)	61Du03			
1277.9(10)							270	1253	9200.8(15)	61Du03			
1283.8(10)							580	1258	9206.6(15)	61Du03			
1287.0(10)							810	1262	9209.7(15)	61Du03			
1290.3(10)							480	1265	9213.0(15)	61Du03			
1298.0(10)							110	1272	9220.5(15)	61Du03			
1301.1(10)							50	1275	9223.5(15)	61Du03			
1306.1(10)							60	1280	9228.4(15)	61Du03			
1309.6(10)							40	1284	9231.9(15)	61Du03			
1315.8(10)							1200	1290	9237.9(15)	61Du03			
1322.5(10)							1400*	1296	9244.5(15)	61Du03			
1329.0(20)							540**	1303	9250.9(23)	70Kl05	69Ma0A		
1331.0(20)							1300	1305	9252.8(23)	70Kl05			
1333.0(20)							750	1307	9254.8(23)	70Kl05			
1335.8(20)							900	1309	9257.5(23)	70Kl05			
1342.8(20)							1250	1316	9264.4(23)	70Kl05	doublt		
1345.0(20)							350	1318	9266.6(23)	70Kl05	doublt		
1357.0(20)							910	1330	9278.3(23)	70Kl05	doublt		
1360.4(20)							960	1333	9281.7(23)	70Kl05	doublt		
1364.5(20)							1900	1338	9285.7(23)	70Kl05			
1366.6(20)	3^-		8(3)***			0.6(2)	4100	1340	9287.7(23)	69Ma0A	70Ma36	73Pr02	70Kl05
1371.4(20)	3^-		50(15)***			7.2(24)	20000	1344	9292.4(23)	69Ma0A	70Ma36	73Pr02	70Kl05
1376.9(20)	3^-		10(4)***			1.0(3)	5550	1350	9297.8(23)	69Ma0A	70Ma36	73Pr02	70Kl05
1384.5(20)							640	1357	9305.3(23)	70Kl05			
1386.6(20)							570	1359	9307.3(23)	70Kl05			
1390.0(20)							690	1363	9310.7(23)	70Kl05	doublt		
1394.9(20)							960	1367	9315.5(23)	70Kl05			
1398.4(20)							4050	1371	9318.9(23)	70Kl05			
1404.6(20)							300	1377	9325.0(23)	70Kl05			

(continued) $^{51}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$\Gamma_{\mathrm{p}'}$ [eV]	Γ_γ [eV]	Rel.int. γ_i	E^*_analog [keV]	S_pp	S_dp	E_cm [keV]	E^* [keV]	Ref.	
1406.8(20)							700				1379	9327.1(23)	70Kl05	
1413.0(20)							720				1385	9333.2(23)	70Kl05	
1415.8(20)							250				1388	9335.9(23)	70Kl05	doublt
1421.8(20)							1370				1394	9341.8(23)	70Kl05	doublt
1426.7(20)							770				1398	9346.6(23)	70Kl05	
1431.0(20)							1900				1403	9350.8(23)	70Kl05	
1434.1(20)							1650				1406	9353.9(23)	70Kl05	
1437.6(20)							1070				1409	9357.3(23)	70Kl05	
1444.0(20)							1050				1415	9363.6(23)	70Kl05	doublt
1447.5(20)							150				1419	9367.0(23)	70Kl05	
1457.5(20)							190				1429	9376.8(23)	70Kl05	
1459.6(20)							960				1431	9378.9(23)	70Kl05	
1463.9(20)							310				1435	9383.1(23)	70Kl05	
1471.7(20)							1030				1443	9390.7(23)	70Kl05	doublt
1474.6(20)							260				1445	9393.6(23)	70Kl05	
1478.9(20)							880**				1450	9397.8(23)	70Kl05	69Ma0A
1861.4(30)	$\langle 1^- \rangle$		35(10)	2.79							1825	9772.6(31)	76Bi0A	73Pr18
1865.0(30)	1^+		50(20)	1.92							1828	9776.2(31)	76Bi0A	73Pr18
1882.8(30)	1^+		15(5)	0.45							1846	9793.6(31)	76Bi0A	73Pr18
1908.3(30)	1^+		25(10)	0.68							1871	9818.6(31)	76Bi0A	73Pr18
1924.3(30)	5^+		12(5)	4.10							1886	9834.3(31)	76Bi0A	73Pr18
1950.8(30)	1^+		40(10)	0.94							1912	9860.2(31)	76Bi0A	73Pr18
1958.3(30)	1^+		30(10)	0.69							1920	9867.6(31)	76Bi0A	73Pr18
1991.1(30)	1^+		90(10)	1.85							1952	9899.7(31)	76Bi0A	73Pr18
1998.7(30)	$\langle 1^- \rangle$		35(10)	1.68							1959	9907.2(31)	76Bi0A	73Pr18
2009.9(30)	$\langle 1^- \rangle$		30(10)	1.39							1970	9918.2(31)	76Bi0A	73Pr18
2011.7(30)	1^+		10(5)	0.19							1972	9919.9(31)	76Bi0A	73Pr18
2017.1(30)	1^+		15(5)	0.28							1977	9925.2(31)	76Bi0A	73Pr18
2025.1(30)	1^+		30(5)	0.55							1985	9933.1(31)	76Bi0A	73Pr18
2031.8(30)	$\langle 1^- \rangle$		10(5)	0.43							1992	9939.6(31)	76Bi0A	73Pr18
2032.3(30)	1^+		10(5)	0.10							1992	9940.1(31)	76Bi0A	73Pr18
2048.6(30)	1^-		40(10)	1.62							2008	9956.1(31)	76Bi0A	73Pr18
2055.5(30)	$\langle 1^- \rangle$		10(5)	0.40							2015	9962.9(31)	76Bi0A	73Pr18
2060.7(30)	1^+		15(10)	0.25							2020	9967.9(31)	76Bi0A	73Pr18
2071.7(30)	$\langle 1^- \rangle$		10(5)	0.38							2031	9978.7(31)	76Bi0A	73Pr18
2076.9(30)	$\langle 1^- \rangle$		10(5)	0.37							2036	9983.8(31)	76Bi0A	73Pr18
2089.7(30)	1^+		35(10)	0.53							2048	9996.4(31)	76Bi0A	73Pr18
2099.9(30)	$\langle 1^- \rangle$		20(10)	0.69							2058	10006.4(31)	76Bi0A	73Pr18
2117.8(30)	$\langle 1^- \rangle$		10(5)	0.32							2076	10023.9(31)	76Bi0A	73Pr18
2127.0(30)	$\langle 3^+ \rangle$		5(3)	0.80							2085	10032.9(31)	76Bi0A	73Pr18
2138.5(30)	1^+		5(5)	0.06							2096	10044.2(31)	76Bi0A	73Pr18
2145.3(30)	$\langle 1^- \rangle$		10(5)	0.29							2103	10050.9(31)	76Bi0A	73Pr18
2151.8(30)	1^+		45(10)	0.56							2109	10057.2(31)	76Bi0A	73Pr18
2165.7(30)	3^-		50(10)	1.40							2123	10070.8(31)	76Bi0A	73Pr18
2172.1(30)	1^+		10(5)	0.12							2129	10077.1(31)	76Bi0A	73Pr18

(continued) $^{51}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$\Gamma_{\mathrm{p}'}$ [eV]	Γ_γ [eV]	Rel.int. γ_i	E^*_analog [keV]	S_pp	S_dp	E_cm [keV]	E^* [keV]	Ref.
2180.1(30)	1^+		15(5)	0.17							2137	10085.0(31)	76Bi0A 73Pr18
2180.9(30)	$\langle 5^+\rangle$		5(3)	0.67							2138	10085.7(31)	76Bi0A 73Pr18
2191.3(30)	1^+		125(15)	1.41							2148	10095.9(31)	76Bi0A 73Pr18
2198.0(30)	$\langle 1^-\rangle$		5(3)	0.13							2155	10102.5(31)	76Bi0A 73Pr18
2200.1(30)	1^-		45(10)	1.14							2157	10104.6(31)	76Bi0A 73Pr18
2222.4(30)	1^+		70(20)	0.72							2178	10126.4(31)	76Bi0A 73Pr18
2234.4(30)	$\langle 1^-\rangle$		25(10)	0.57							2190	10138.2(31)	76Bi0A 73Pr18
2242.1(30)	1^+		35(10)	0.34							2198	10145.7(31)	76Bi0A 73Pr18
2243.2(30)	$\langle 1^-\rangle$		30(10)	0.66							2199	10146.8(31)	76Bi0A 73Pr18
2249.3(30)	1^+		60(15)	0.57							2205	10152.8(31)	76Bi0A 73Pr18
2255.9(30)	1^+		150(25)	1.41							2211	10159.2(31)	76Bi0A 73Pr18
2262.4(30)	$\langle 1^-\rangle$		5(3)	0.11							2218	10165.6(31)	76Bi0A 73Pr18
2268.9(30)	1^+		290(30)	2.64							2224	10172.0(31)	76Bi0A 73Pr18
2269.3(30)	1^+		50(20)	0.45							2224	10172.4(31)	76Bi0A 73Pr18
2280.4(30)	$\langle 1^-\rangle$		5(3)	0.10							2235	10183.3(31)	76Bi0A 73Pr18
2282.7(30)	$\langle 5^+\rangle$		5(3)	0.48							2238	10185.5(31)	76Bi0A 73Pr18
2287.6(30)	1^+		40(10)	0.35							2242	10190.3(31)	76Bi0A 73Pr18
2289.7(30)	1^+		40(10)	0.34							2244	10192.4(31)	76Bi0A 73Pr18
2307.1(30)	1^+		20(5)	0.17							2261	10209.4(31)	76Bi0A 73Pr18
2315.3(30)	$\langle 3^+\rangle$		10(5)	0.87							2270	10217.5(31)	76Bi0A 73Pr18
2318.4(30)	1^+		40(10)	0.32							2273	10220.5(31)	76Bi0A 73Pr18
2324.7(30)	3^-		30(10)	0.53							2279	10226.7(31)	76Bi0A 73Pr18
2329.0(30)	1^-		90(20)	1.59							2283	10230.9(31)	76Bi0A 73Pr18
2332.4(30)	1^+		100(20)	0.78							2286	10234.2(31)	76Bi0A 73Pr18
2334.9(30)	1^-		50(10)	0.87							2289	10236.7(31)	76Bi0A 73Pr18
2344.6(30)	1^+		30(10)	0.23							2298	10246.2(31)	76Bi0A 73Pr18
2347.5(30)	1^+		60(15)	0.45							2301	10249.0(31)	76Bi0A 73Pr18
2353.9(30)	1^+		10(5)	0.07							2307	10255.3(31)	76Bi0A 73Pr18
2357.5(30)	1^+		75(10)	0.55							2311	10258.8(31)	76Bi0A 73Pr18
2359.0(30)	$\langle 1^-\rangle$		15(5)	0.24							2312	10260.3(31)	76Bi0A 73Pr18
2363.9(30)	3^-		60(20)	0.96							2317	10265.1(31)	76Bi0A 73Pr18
2368.3(30)	3^+		25(10)	1.86							2321	10269.4(31)	76Bi0A 73Pr18
2372.9(30)	1^+		35(10)	0.25							2326	10273.9(31)	76Bi0A 73Pr18
2384.3(30)	1^+		50(10)	0.34							2337	10285.1(31)	76Bi0A 73Pr18
2387.1(30)	$\langle 3^+\rangle$		10(5)	0.70							2340	10287.8(31)	76Bi0A 73Pr18
2394.7(30)	1^+		225(35)	1.51							2347	10295.3(31)	76Bi0A 73Pr18
2405.6(30)	1^+		90(20)	0.59							2358	10305.9(31)	76Bi0A 73Pr18
2412.3(30)	1^-		45(10)	0.64							2365	10312.5(31)	76Bi0A 73Pr18
2419.2(30)	$\langle 3^-\rangle$		20(10)	0.26							2371	10319.3(31)	76Bi0A 73Pr18
2422.3(30)	1^+		30(10)	0.13							2374	10322.3(31)	76Bi0A 73Pr18
2425.7(30)	1^-		100(15)	1.36							2378	10325.6(31)	76Bi0A 73Pr18
2428.8(30)	1^+		50(10)	0.31							2381	10328.7(31)	76Bi0A 73Pr18
2434.1(30)	1^-		40(10)	0.50							2386	10333.9(31)	76Bi0A 73Pr18
2435.6(30)	1^+		50(10)	0.30							2387	10335.3(31)	76Bi0A 73Pr18
2441.9(30)	1^-		50(20)	0.65							2394	10341.5(31)	76Bi0A 73Pr18

(continued) $^{51}_{23}$V(p)

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$\Gamma_{\mathrm{p}'}$ [eV]	Γ_γ [eV]	Rel.int. γ_i	E^*_analog [keV]	S_pp	S_dp	E_cm [keV]	E^* [keV]	Ref.
2449.3(30)	1^-		45(10)	0.58							2401	10348.8(31)	76Bi0A 73Pr18
2453.4(30)	1^-		300(20)	0.74							2405	10352.8(31)	76Bi0A 73Pr18
2455.4(30)	1^-		140(30)	1.77							2407	10354.8(31)	76Bi0A 73Pr18
2466.8(30)	1^+		130(15)	0.74							2418	10365.9(31)	76Bi0A 73Pr18
2468.5(30)	$\langle 5^+ \rangle$		30(10)	1.69							2420	10367.6(31)	76Bi0A 73Pr18
2469.3(30)	$\langle 5^+ \rangle$		15(5)	0.84							2420	10368.4(31)	76Bi0A 73Pr18
2471.9(30)	$\langle 5^+ \rangle$		10(5)	0.45							2423	10370.9(31)	76Bi0A 73Pr18
2474.8(30)	$\langle 1^- \rangle$		15(5)	0.18							2426	10373.8(31)	76Bi0A 73Pr18
2479.9(30)	1^+		310(40)	1.72							2431	10378.8(31)	76Bi0A 73Pr18
2480.6(30)	$\langle 5^+ \rangle$		10(5)	0.54							2432	10379.4(31)	76Bi0A 73Pr18
2484.9(30)	1^-		75(10)	0.89							2436	10383.7(31)	76Bi0A 73Pr18
2488.6(30)	$\langle 5^+ \rangle$		5(3)	0.27							2439	10387.3(31)	76Bi0A 73Pr18
2508.3(30)	1^-		35(15)	0.39							2459	10406.6(31)	76Bi0A 73Pr18
2511.2(30)	$\langle 5^+ \rangle$		10(5)	0.50							2462	10409.4(31)	76Bi0A 73Pr18
2515.0(30)	1^+		100(10)	0.52							2465	10413.2(31)	76Bi0A 73Pr18
2517.4(30)	1^-		185(20)	2.04							2468	10415.5(31)	76Bi0A 73Pr18
2518.8(30)	1^+		35(15)	0.18							2469	10416.9(31)	76Bi0A 73Pr18
2521.1(30)	$\langle 5^+ \rangle$		25(10)	1.22							2471	10419.1(31)	76Bi0A 73Pr18
2525.4(30)	1^+		50(15)	0.25							2475	10423.4(31)	76Bi0A 73Pr18
2532.5(30)	1^+		90(10)	0.45							2482	10430.3(31)	76Bi0A 73Pr18
2534.9(30)	1^+		45(15)	0.22							2485	10432.7(31)	76Bi0A 73Pr18
2537.8(30)	1^-		260(25)	2.80							2488	10435.5(31)	76Bi0A 73Pr18
2538.1(30)	$\langle 5^+ \rangle$		10(5)	0.47							2488	10435.8(31)	76Bi0A 73Pr18
2539.9(30)	1^-		260(40)	2.72							2490	10437.6(31)	76Bi0A 73Pr18
2540.2(30)	3^-		110(10)	1.15							2490	10437.9(31)	76Bi0A 73Pr18
2541.3(30)	$\langle 5^+ \rangle$		10(5)	0.46							2491	10438.9(31)	76Bi0A 73Pr18
2543.9(30)	1^-		225(25)	2.33							2494	10441.5(31)	76Bi0A 73Pr18
2544.4(30)	1^-		1200(150)	12.4							2494	10442.0(31)	76Bi0A 73Pr18
2544.9(30)	1^-		210(25)	2.17							2495	10442.5(31)	76Bi0A 73Pr18
2545.8(30)	1^-		50(15)	0.52							2495	10443.3(31)	76Bi0A 73Pr18
2552.6(30)	1^-		1400(200)	14.2							2502	10450.0(31)	76Bi0A 73Pr18
2554.4(30)	1^-		240(25)	2.42							2504	10451.8(31)	76Bi0A 73Pr18
2556.8(30)	1^+		20(10)	0.09							2506	10454.1(31)	76Bi0A 73Pr18
2561.1(30)	1^+		215(40)	1.01							2510	10458.3(31)	76Bi0A 73Pr18
2561.4(30)	1^+		85(15)	0.40							2511	10458.6(31)	76Bi0A 73Pr18
2564.2(30)	$\langle 5^+ \rangle$		15(5)	0.66							2513	10461.4(31)	76Bi0A 73Pr18
2564.8(30)	$\langle 5^+ \rangle$		10(5)	0.44							2514	10462.0(31)	76Bi0A 73Pr18
2573.7(30)	$\langle 1^- \rangle$		25(15)	0.24							2523	10470.7(31)	76Bi0A 73Pr18
2580.7(30)	1^-		30(10)	0.29							2530	10477.5(31)	76Bi0A 73Pr18
2581.8(30)	1^+		200(30)	0.90							2531	10478.6(31)	76Bi0A 73Pr18
2593.7(30)	1^+		280(25)	1.23							2542	10490.3(31)	76Bi0A 73Pr18
2597.7(30)	$\langle 5^+ \rangle$		5(3)	0.20							2546	10494.2(31)	76Bi0A 73Pr18
2598.1(30)	$\langle 1^- \rangle$		10(5)	0.09							2547	10494.6(31)	76Bi0A 73Pr18
2603.0(30)	$\langle 5^+ \rangle$		10(5)	0.40							2552	10499.4(31)	76Bi0A 73Pr18
2623.3(30)	1^+		30(10)	0.13							2571	10519.3(31)	76Bi0A 73Pr18

(continued) $^{51}_{23}\mathbf{V}$(p)

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ^2_p [keV]	$\Gamma_{\mathrm{p}'}$ [eV]	Γ_γ [eV]	Rel.int. γ_i	E^*_analog [keV]	S_pp	S_dp	E_cm [keV]	E^* [keV]	Ref.
2629.8(30)	3^+		40(10)	1.49							2578	10525.7(31)	76Bi0A 73Pr18
2634.7(30)	3^+		20(5)	0.73							2583	10530.5(31)	76Bi0A 73Pr18
2642.5(30)	1^+		50(10)	0.20							2590	10538.1(31)	76Bi0A 73Pr18
2648.3(30)	1^+		690(75)	2.76							2596	10543.8(31)	76Bi0A 73Pr18
2654.6(30)	1^-		40(10)	0.33							2602	10550.0(31)	76Bi0A 73Pr18
2658.5(30)	1^-		75(15)	0.56							2606	10553.8(31)	76Bi0A 73Pr18
2659.0(30)	1^+		575(75)	2.25							2606	10554.3(31)	76Bi0A 73Pr18
2660.9(30)	$\langle 5^+ \rangle$		10(5)	0.34							2608	10556.1(31)	76Bi0A 73Pr18
2667.8(30)	1^+		575(100)	2.22							2615	10562.9(31)	76Bi0A 73Pr18
2674.1(30)	1^+		25(5)	0.10							2621	10569.1(31)	76Bi0A 73Pr18
2682.9(30)	1^+		375(60)	1.41							2630	10577.7(31)	76Bi0A 73Pr18
2686.8(30)	1^+		250(50)	0.93							2634	10581.5(31)	76Bi0A 73Pr18
2689.2(30)	$\langle 5^+ \rangle$		2(2)	0.06							2636	10583.9(31)	76Bi0A 73Pr18
2691.0(30)	$\langle 5^+ \rangle$		10(5)	0.32							2638	10585.6(31)	76Bi0A 73Pr18
2694.7(30)	1^+		200(40)	0.73							2641	10589.3(31)	76Bi0A 73Pr18
2702.2(30)	$\langle 5^+ \rangle$		2(2)	0.04							2649	10596.6(31)	76Bi0A 73Pr18
2702.9(30)	1^+		25(10)	0.09							2649	10597.3(31)	76Bi0A 73Pr18
2707.3(30)	$\langle 5^+ \rangle$		20(10)	0.62							2654	10601.6(31)	76Bi0A 73Pr18
2715.9(30)	$\langle 5^+ \rangle$		5(3)	0.15							2662	10610.0(31)	76Bi0A 73Pr18
2717.2(30)	3^-		50(15)	0.36							2663	10611.3(31)	76Bi0A 73Pr18
2720.1(30)	$\langle 5^+ \rangle$		5(3)	0.15							2666	10614.2(31)	76Bi0A 73Pr18
2721.9(30)	1^+		375(50)	1.31							2668	10615.9(31)	76Bi0A 73Pr18
2722.7(30)	5^+		20(10)	0.60							2669	10616.7(31)	76Bi0A 73Pr18
2723.7(30)	1^-		125(25)	0.89							2670	10617.7(31)	76Bi0A 73Pr18
2726.0(30)	1^+		200(40)	0.69							2672	10619.9(31)	76Bi0A 73Pr18
2726.9(30)	$\langle 5^+ \rangle$		10(5)	0.29							2673	10620.8(31)	76Bi0A 73Pr18
2732.3(30)	$\langle 5^+ \rangle$		5(3)	0.15							2678	10626.1(31)	76Bi0A 73Pr18
2740.6(30)	$\langle 5^+ \rangle$		10(5)	0.29							2686	10634.2(31)	76Bi0A 73Pr18
2749.9(30)	$\langle 5^+ \rangle$		10(5)	0.28							2696	10643.4(31)	76Bi0A 73Pr18
2754.0(30)	1^+		20(10)	0.07							2700	10647.4(31)	76Bi0A 73Pr18
2756.6(30)	3^+		40(10)	1.10							2702	10649.9(31)	76Bi0A 73Pr18
2757.7(30)	1^+		125(25)	0.41							2703	10651.0(31)	76Bi0A 73Pr18
2759.5(30)	$\langle 3^+ \rangle$		15(5)	0.41							2705	10652.8(31)	76Bi0A 73Pr18
2766.0(30)	$\langle 5^+ \rangle$		2(2)	0.05							2711	10659.1(31)	76Bi0A 73Pr18
2769.1(30)	$\langle 5^+ \rangle$		15(5)	0.40							2714	10662.2(31)	76Bi0A 73Pr18
2774.6(30)	$\langle 5^+ \rangle$		2(2)	0.05							2720	10667.6(31)	76Bi0A 73Pr18
2776.4(30)	1^+		40(15)	0.13							2721	10669.3(31)	76Bi0A 73Pr18
2781.1(30)	$\langle 5^+ \rangle$		2(2)	0.05							2726	10673.9(31)	76Bi0A 73Pr18
2785.8(30)	$\langle 5^+ \rangle$		8(4)	0.21							2731	10678.5(31)	76Bi0A 73Pr18
2791.2(30)	1^+		60(10)	0.19							2736	10683.8(31)	76Bi0A 73Pr18
2793.6(30)	5^+		20(5)	0.51							2738	10686.2(31)	76Bi0A 73Pr18
2800.8(30)	$\langle 5^+ \rangle$		2(2)	0.05							2745	10693.2(31)	76Bi0A 73Pr18
2802.2(30)	1^-		115(20)	0.70							2747	10694.6(31)	76Bi0A 73Pr18
2811.3(30)	1^+		575(60)	1.73							2756	10703.5(31)	76Bi0A 73Pr18
2815.3(30)	$\langle 5^+ \rangle$		5(3)	0.12							2760	10707.5(31)	76Bi0A 73Pr18

(continued) $^{51}_{23}$V(p)

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ_p^2 [keV]	$\Gamma_{p'}$ [eV]	Γ_γ [eV]	Rel.int. γ_i	E^*_{analog} [keV]	S_{pp}	S_{dp}	E_{cm} [keV]	E^* [keV]	Ref.	
2817.1(30)	1^-		30(10)	0.18							2761	10709.2(31)	76Bi0A	73Pr18
2822.1(30)	1^+		25(10)	0.07							2766	10714.1(31)	76Bi0A	73Pr18
2823.7(30)	$\langle 1^-\rangle$		15(5)	0.09							2768	10715.7(31)	76Bi0A	73Pr18
2828.1(30)	1^+		20(5)	0.06							2772	10720.0(31)	76Bi0A	73Pr18
2831.8(30)	$\langle 5^+\rangle$		15(5)	0.35							2776	10723.6(31)	76Bi0A	73Pr18
2834.4(30)	1^-		30(10)	0.17							2778	10726.2(31)	76Bi0A	73Pr18
2838.3(30)	1^+		75(15)	0.22							2782	10730.0(31)	76Bi0A	73Pr18
2840.8(30)	1^+		50(15)	0.14							2785	10732.4(31)	76Bi0A	73Pr18
2843.7(30)	1^+		110(20)	0.31							2787	10735.3(31)	76Bi0A	73Pr18
2847.4(30)	$\langle 5^+\rangle$		5(3)	0.11							2791	10738.9(31)	76Bi0A	73Pr18
2848(20)	7^-							1430			2792	10853(20)	71Pr04	
2852.8(30)	1^-		45(15)	0.25							2796	10744.2(31)	76Bi0A	73Pr18
2860.5(30)	$\langle 5^+\rangle$		15(5)	0.33							2804	10751.8(31)	76Bi0A	73Pr18
2861.0(30)	$\langle 5^+\rangle$		15(5)	0.33							2804	10752.2(31)	76Bi0A	73Pr18
2863.2(30)	1^-		30(10)	0.16							2807	10754.4(31)	76Bi0A	73Pr18
2863.8(30)	1^+		25(10)	0.07							2807	10755.0(31)	76Bi0A	73Pr18
2867.3(30)	1^+		75(20)	0.21							2811	10758.4(31)	76Bi0A	73Pr18
2868.7(30)	1^-		30(5)	0.16							2812	10759.8(31)	76Bi0A	73Pr18
2871.6(30)	$\langle 5^+\rangle$		10(5)	0.21							2815	10762.6(31)	76Bi0A	73Pr18
2878.2(30)	1^+		100(10)	0.27							2821	10769.1(31)	76Bi0A	73Pr18
2880.6(30)	1^+		700(100)	1.88							2824	10771.4(31)	76Bi0A	73Pr18
2883.7(30)	1^-		75(15)	0.40							2827	10774.5(31)	76Bi0A	73Pr18
2885.5(30)	5^+		20(5)	0.42							2828	10776.3(31)	76Bi0A	73Pr18
2887.1(30)	1^+		200(30)	0.53							2830	10777.8(31)	76Bi0A	73Pr18
2890.8	5^+		50(10)	1.03							2834	10781.4	76Bi0A	
2892.3	1^-		60(15)	0.31							2835	10782.9	76Bi0A	
2894.3	$\langle 5^+\rangle$		2(2)	0.04							2837	10784.9	76Bi0A	
2899.3	$\langle 5^+\rangle$		10(5)	0.20							2842	10789.8	76Bi0A	
2900.8	$\langle 5^+\rangle$		2(2)	0.04							2843	10791.2	76Bi0A	
2903.0	$\langle 5^+\rangle$		5(3)	0.10							2846	10793.4	76Bi0A	
2905.2	1^+		90(15)	0.23							2848	10795.6	76Bi0A	
2912.2	1^+		1300(150)	3.33							2855	10802.4	76Bi0A	
2924.4	$\langle 5^+\rangle$		20(10)	0.38							2867	10814.4	76Bi0A	
2924.8	1^+		150(50)	0.38							2867	10814.8	76Bi0A	
2925.4	$\langle 5^+\rangle$		15(10)	0.29							2868	10815.4	76Bi0A	
2926.1	1^+		140(30)	0.35							2868	10816.0	76Bi0A	
2927.3	1^-		90(20)	0.44							2869	10817.2	76Bi0A	
2928.1	1^-		150(30)	0.73							2870	10818.0	76Bi0A	
2929.6	1^+		180(20)	0.45							2872	10819.5	76Bi0A	
2932.2	$\langle 5^+\rangle$		5(3)	0.09							2874	10822.0	76Bi0A	
2932.9	$\langle 3^-\rangle$		30(15)	0.15							2875	10822.7	76Bi0A	
2939.1	1^+		40(10)	0.10							2881	10828.8	76Bi0A	
2945.3	1^+		200(20)	0.49							2887	10834.9	76Bi0A	
2945.3	$\langle 5^+\rangle$		15(5)	0.27							2887	10834.9	76Bi0A	
2947.3	$\langle 5^+\rangle$		15(5)	0.27							2889	10836.8	76Bi0A	

(continued) **$^{51}_{23}$V(p)**

$E_\circ$ [keV]	$2J^\pi$	$2T$	Γ_p [eV]	γ_p^2 [keV]	$\Gamma_{p'}$ [eV]	Γ_γ [eV]	Rel.int. γ_i	E^*_{analog} [keV]	S_{pp}	S_{dp}	E_{cm} [keV]	E^* [keV]	Ref.
2948.8	1^+		150(20)	0.36							2890	10838.3	76Bi0A
2951.3	$\langle 5^+\rangle$		5(3)	0.09							2893	10840.7	76Bi0A
2958.2	$\langle 5^+\rangle$		10(5)	0.18							2900	10847.5	76Bi0A
2962.0	$\langle 5^+\rangle$		10(5)	0.18							2903	10851.2	73Pr18
2983(20)	5^-							1560			2924	10985	71Pr04
3598(20)	$\langle 5^-\rangle$		3780(1100)		120(90)	3900(1000)		2136	0.27(10)	0.33	3527	11474(3)	71Pr04
3614(20)	3^-		340(300)		3760(1300)	4100(1000)		2189	0.04(4)	0.065	3543	11490(3)	71Pr04

Additional data on this isotope can be found in [79Er05, 76Kr13, 70Ga05, 69Ma0A, 68Ga11, 63Du09].

* Relative intensities of resonances with $E_\circ$=885–1323 keV are taken from [61Du03].

** Relative intensities of resonances with $E_\circ$=1323–1479 keV are taken from [69Ma0A].

*** Absolute strengths of these resonances are $(2J+1)\Gamma_p\Gamma_\gamma/\Gamma$=0.6(2), 7.2(24) and 1.0(3) eV, respectively [70Ma36].

For the resonances at $E_\circ$=3598 and 3614 keV Γ_{p_1} and Γ are given instead of $\Gamma_{p'}$ and Γ_γ.

Branching ratios of γ-transitions [73Ro40, 71Pr04, 97Zh09]. Part 1. **$^{51}_{23}$V(p)**

E^* [keV]	$2J^\pi$	$E_\circ$ [keV]	Branching ratios Percentage															
E^*			0.0	320	929	1609	1813	2411	2547	2677	3084	3215	3264	3412	3555	3568	3678	3765
$2J_f^\pi$			7^-	5^-	3^-	11^-	9^-	3^-	1^+	$\langle 3\rangle^+$	$\langle 5\rangle^-$	3^-	$\langle 5\rangle^-$					
320.08	5^-		100															
928.66	3^-		85	15														
1609.23	11^-																	
1813.24	9^-		70	30														
2410.78	3^-		26	65	10													
9402.7	3^-	1366	5	32	7			4		3		7				7		
9407.49	3^-	1371	1	33	15			2	3		4							
9413.8	3^-	1377	1	17				4		16	3		10					
10545	1^-																	
10856	7^-	2848																
10988	5^-	2983																
11593.3	5^-	3598	31.1	31.3	6.2			12.8			3.4	1.9	1.0				2.9	
11608.5	3^-	3614	12.7		9.7			14.9	4.8	21.9			15.1		4.1			
12300	1^-																	
12359	5^-																	
12555	3^-																	
13217	9^+																	

Resonances with $E_\circ$=3598 and 3614 keV (E^*=11593 and 11609 keV) are analogs of excitations in ^{51}Ti.

Branching ratios of γ-transitions. Part 2. $^{51}_{23}\mathrm{V}(\mathrm{p})$

E^*	$2J^\pi$	$E_\circ$	Branching ratios															Com.
[keV]		[keV]	Percentage															
			3867	4237	4475	4540	4650	4661	4689	4765	4844	4862	4944	5140	5182	5311	5341	E^*,keV $2J_\mathrm{f}^\pi$
9402.7	3^-	1366	8							10				7				
9407.49	3^-	1371					15			3		7		7				
9413.8	3^-	1377					22			7				10				
10856	7^-	2848																
10988	5^-	2983																
11593.3	5^-	3598			1.5	2.4					4.9							
11608.5	3^-	3614						6.5		3.9								