^{93}Nb(n,γ) E=thermal:primary 1988Ke09

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. Abriola(a), A. A. Sonzogni	NDS 107, 2423 (2006)	1-Jan-2006

1988Ke09: primary transitions studied using a pair spectrometer.
1968Ju01: Ge(Li), NaI. Measured Eγ, Iγ, $\gamma\gamma$.

^{94}Nb Levels

E(level)†	Jπ‡	$T_{1/2}$#	E(level)†	Jπ‡	E(level)†	Jπ‡
0.0	6^+		1492.9 *4*		2135.0 *4*	
41.24 *9*	3^+		1499.91 *14*		2140.58 *17*	
58.87 *10*	$(4)^+$		1519.16 *14*	$^-$	2150.0 *5*	
78.4 *6*	$(7)^+$		1581.96 *14*		2157.67 *15*	
113.48 *11*	$(5)^+$	<5 ns	1615.18 *14*		2162.28 *16*	
140.301 *12*	$(2)^-$	30 ns *5*	1620.60 *14*	$4^+,5^+$	2168.2 *3*	
301.565 *12*	$(2)^-$		1636.58 *13*		2175.05 *17*	
312.08 *10*	$(4,5)^+$		1639.69 *18*		2188.2 *6*	
334.42 *18*	$(3)^+$		1655.57 *14*		2195.86 *16*	
396.63 *10*	$(3)^-$	<5 ns	1678.4 *3*		2207.0 *3*	
450.242 *15*	$(3)^-$		1695.73 *15*		2215.4 *3*	
631.86 *11*	$(4)^+$		1716.63 *14*		2221.18 *24*	
640.95 *24*	$(5)^+$		1720.10 *14*		2229.98 *17*	
666.23 *4*	$(3)^+$		1731.76 *13*		2236.44 *22*	$4^+,5^+$
785.90 *3*	$(3)^+$		1763.64 *17*		2245.44 *16*	
793.06 *11*	$(3,4)^+$		1770.7 *4*		2249.4 *4*	
817.20 *17*	$(3)^-$		1776.93 *14*		2278.22 *19*	
896.11 *11*	$(3^+,4^-)$		1780.73 *16*	$^+$	2282.82 *17*	
924.51 *3*	(2^+)		1805.3 *4*	$^+$	2286.41 *25*	
932.69 *4*			1815.71 *17*		2291.8 *10*	
935.66 *11*	$^+$		1820.99 *20*		2300.01 *17*	
957.28 *14*	$(5)^+$		1828.04 *14*	$^+$	2304.7 *3*	
970.60 *17*			1858.93 *14*		2314.32 *16*	
976.5 *6*			1864.11 *14*	$4^+,5^+$	2320.43 *19*	
1005.7 *3*	$4^+,5^+$		1879.35 *14*		2325.9 *3*	$4^+,5^+$
1011.1 *3*			1882.42 *17*		2336.7 *9*	
1023.40 *4*			1919.99 *14*		2346.3 *5*	
1030.199 *17*			1926.70 *15*	$4^+,5^+$	2353.30 *21*	
1060.74 *16*	$4^+,5^+$		1937.45 *17*		2363.54 *21*	
1085.97 *23*	$(2^+,3,4)$		1943.78 *15*		2369.8 *3*	
1159.43 *12*			1950.49 *21*		2378.5 *5*	
1169.71 *13*	$4^+,5^+$		1956.73 *22*		2393.1 *4*	
1179.17 *7*			1970.22 *17*		2400.32 *17*	
1230.16 *8*			1975.41 *15*		2407.0 *6*	
1232.20 *13*	$(2,3,4)^+$		1997.37 *20*		2412.1 *3*	
1247.67 *13*			2000.0 *8*	$4^+,5^+$	2417.8 *3*	
1256.96 *11*	$^+$		2010.5 *3*		2436.36 *17*	
1263.54 *12*	$(3,4^-)$		2014.16 *17*		2445.7 *4*	
1274.94 *13*			2019.98 *15*		2449.6 *6*	
1281.55 *13*	$4^+,5^+$		2034.55 *15*		2455.61 *17*	
1321.54 *17*	$4^+,5^+$		2047.93 *15*		2471.68 *17*	
1332.95 *12*	$(3^+,4,5^+)$		2063.1 *6*		2478.86 *17*	
1347.76 *13*			2071.42 *24*		2488.98 *17*	
1361.5 *7*	$^+$		2076.8 *4*	$4^+,5^+$	2502.98 *23*	
1393.14 *14*	$^+$		2098.78 *16*		2509.6 *3*	
1458.12 *13*			2102.0 *4*		2516.33 *17*	
1488.95 *21*			2124.60 *15*		2528.3 *4*	

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^{93}Nb(n,γ) E=thermal:primary 1988Ke09 (continued)

^{94}Nb Levels (continued)

E(level)†	E(level)†	E(level)†	E(level)†	Jπ‡
2536.9 *4*	2985.86 *23*	3360.49 *22*	3720.01 *22*	
2545.99 *17*	2990.84 *20*	3369.1 *3*	3725.41 *22*	
2555.80 *17*	2995.9 *5*	3371.69 *22*	3732.7 *3*	
2565.64 *18*	3007.06 *23*	3376.6 *4*	3738.1 *3*	
2575.5 *4*	3019.65 *20*	3390.89 *22*	3744.6 *3*	
2585.8 *4*	3031.31 *20*	3393.8 *3*	3747.21 *22*	
2592.54 *17*	3036.94 *22*	3399.2 *3*	3750.6 *4*	
2598.07 *17*	3042.1 *3*	3406.6 *3*	3762.51 *22*	
2607.71 *20*	3047.09 *21*	3411.1 *3*	3769.71 *22*	
2620.08 *17*	3055.44 *23*	3417.30 *22*	3774.6 *5*	
2623.84 *19*	3071.48 *22*	3421.3 *7*	3778.8 *4*	
2633.52 *17*	3074.18 *22*	3424.5 *3*	3785.0 *4*	
2645.0 *5*	3084.48 *22*	3431.2 *3*	3787.8 *4*	
2649.3 *9*	3088.48 *22*	3434.1 *3*	3796.31 *22*	
2653.9 *6*	3097.68 *22*	3438.50 *22*	3799.71 *22*	
2669.45 *18*	3106.68 *22*	3442.3 *8*	3807.2 *3*	
2673.98 *18*	3112.68 *22*	3454.10 *22*	3811.7 *3*	
2684.8 *3*	3118.88 *22*	3462.8 *3*	3819.5 *3*	
2689.34 *17*	3126.78 *22*	3467.10 *22*	3831.0 *3*	
2696.6 *3*	3137.48 *22*	3473.30 *22*	3835.4 *3*	
2703.87 *18*	3142.3 *5*	3482.50 *22*	3839.51 *22*	
2722.19 *19*	3148.7 *3*	3487.10 *22*	3844.51 *22*	
2726.55 *18*	3153.4 *4*	3492.6 *3*	3853.7 *6*	
2730.2 *3*	3169.8 *4*	3498.30 *22*	3861.01 *22*	
2738.1 *4*	3172.3 *5*	3507.40 *22*	3866.41 *22*	
2741.5 *14*	3183.48 *22*	3520.3 *3*	3874.41 *22*	
2757.27 *20*	3195.3 *3*	3524.3 *4*	3877.2 *3*	
2761.47 *19*	3199.9 *3*	3533.20 *22*	3884.11 *22*	
2768.94 *21*	3204.49 *22*	3536.2 *4*	3888.1 *3*	
2772.67 *19*	3212.09 *22*	3544.50 *22*	3897.31 *22*	
2777.6 *4*	3217.29 *22*	3547.50 *22*	3902.81 *22*	
2796.01 *18*	3223.2 *4*	3551.40 *22*	3908.12 *22*	
2801.6 *6*	3227.79 *22*	3569.50 *22*	3912.3 *3*	
2821.32 *20*	3245.39 *22*	3576.80 *22*	3915.8 *5*	
2824.70 *25*	3249.39 *22*	3582.00 *22*	3920.1 *6*	
2832.92 *18*	3255.99 *22*	3590.2 *4*	3923.3 *4*	
2838.95 *21*	3267.7 *3*	3594.00 *22*	3926.6 *6*	
2843.72 *20*	3272.29 *22*	3600.2 *4*	3933.0 *6*	
2849.8 *3*	3281.79 *22*	3622.4 *5*	3936.62 *22*	
2855.8 *3*	3291.29 *22*	3633.9 *3*	3942.2 *3*	
2875.96 *23*	3296.29 *22*	3638.5 *3*	3947.7 *4*	
2880.38 *21*	3300.19 *22*	3647.9 *3*	3953.1 *4*	
2889.7 *3*	3304.49 *22*	3656.9 *8*	3961.62 *22*	
2897.17 *19*	3308.39 *22*	3666.51 *22*	3967.72 *22*	
2900.67 *20*	3315.29 *22*	3671.0 *3*	3972.1 *3*	
2913.75 *22*	3320.99 *22*	3674.71 *22*	3975.7 *3*	
2923.22 *19*	3325.8 *3*	3684.61 *22*	3983.2 *3*	
2942.79 *25*	3335.19 *22*	3689.11 *22*	3987.02 *22*	
2950.36 *23*	3339.29 *22*	3695.2 *3*	3992.1 *3*	
2955.68 *19*	3342.09 *22*	3703.4 *3*	4001.0 *3*	
2967.20 *19*	3348.89 *22*	3706.4 *3*	(7228.08[@] *9*)	4+,5+[@]
2981.8 *6*	3356.6 *4*	3713.81 *22*		

† From least-squares fit to Eγ.

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^{93}Nb(n,γ) E=thermal:primary 1988Ke09 (continued)

^{94}Nb Levels (continued)

‡ From Adopted Levels.
# From $\gamma\gamma$(t) (1971Gu05).
@ Thermal n-capture from 9/2$^+$. E=7227.51 *9* from sum of E(levels upto 1281.63) from 1985Bo48 and primary Eγ's (1988Ke09).

γ(^{94}Nb)

1988Ke09 found Eγ of 1968Ju01 systematically higher by about 2 keV.

E$_\gamma$ †	I$_\gamma$ ‡#	E$_i$(level)	J$_i^\pi$	E$_f$	E$_\gamma$ †	I$_\gamma$ ‡#	E$_i$(level)	J$_i^\pi$	E$_f$
3227.0 *3*	103 *5*	(7228.08)	4$^+$,5$^+$	4001.0	3483.4 *3*	74 *4*	(7228.08)	4$^+$,5$^+$	3744.6
3235.9 *3*	82 *5*	(7228.08)	4$^+$,5$^+$	3992.1	3489.9 *3*	62 *4*	(7228.08)	4$^+$,5$^+$	3738.1
3241.0 *2*	139 *6*	(7228.08)	4$^+$,5$^+$	3987.02	3495.3 *3*	74 *4*	(7228.08)	4$^+$,5$^+$	3732.7
3244.8 *3*	73 *5*	(7228.08)	4$^+$,5$^+$	3983.2	3502.6 *2*	121 *5*	(7228.08)	4$^+$,5$^+$	3725.41
3252.3 *3*	65 *5*	(7228.08)	4$^+$,5$^+$	3975.7	3508.0 *2*	220 *6*	(7228.08)	4$^+$,5$^+$	3720.01
3255.9 *3*	70 *5*	(7228.08)	4$^+$,5$^+$	3972.1	3514.2 *2*	103 *4*	(7228.08)	4$^+$,5$^+$	3713.81
3260.3 *2*	219 *6*	(7228.08)	4$^+$,5$^+$	3967.72	3521.6 *3*	49 *4*	(7228.08)	4$^+$,5$^+$	3706.4
3266.4 *2*	225 *6*	(7228.08)	4$^+$,5$^+$	3961.62	3524.6 *3*	89 *4*	(7228.08)	4$^+$,5$^+$	3703.4
3274.9 *4*	54 *5*	(7228.08)	4$^+$,5$^+$	3953.1	3532.8 *3*	88 *4*	(7228.08)	4$^+$,5$^+$	3695.2
3280.3 *4*	43 *5*	(7228.08)	4$^+$,5$^+$	3947.7	3538.9 *2*	106 *4*	(7228.08)	4$^+$,5$^+$	3689.11
3285.8 *3*	79 *5*	(7228.08)	4$^+$,5$^+$	3942.2	3543.4 *2*	187 *5*	(7228.08)	4$^+$,5$^+$	3684.61
3291.4 *2*	197 *6*	(7228.08)	4$^+$,5$^+$	3936.62	3553.3 *2*	95 *4*	(7228.08)	4$^+$,5$^+$	3674.71
3295.0 *6*	29 *5*	(7228.08)	4$^+$,5$^+$	3933.0	3557.0 *3*	87 *4*	(7228.08)	4$^+$,5$^+$	3671.0
3301.4 *6*	29 *5*	(7228.08)	4$^+$,5$^+$	3926.6	3561.5 *2*	145 *5*	(7228.08)	4$^+$,5$^+$	3666.51
3304.7 *4*	40 *5*	(7228.08)	4$^+$,5$^+$	3923.3	3571.1 *8*	17 *4*	(7228.08)	4$^+$,5$^+$	3656.9
3307.9 *6*	30 *5*	(7228.08)	4$^+$,5$^+$	3920.1	3580.1 *3*	65 *4*	(7228.08)	4$^+$,5$^+$	3647.9
3312.2 *5*	35 *5*	(7228.08)	4$^+$,5$^+$	3915.8	3589.5 *3*	70 *4*	(7228.08)	4$^+$,5$^+$	3638.5
3315.7 *3*	68 *5*	(7228.08)	4$^+$,5$^+$	3912.3	3594.1 *3*	49 *4*	(7228.08)	4$^+$,5$^+$	3633.9
3319.9 *2*	165 *5*	(7228.08)	4$^+$,5$^+$	3908.12	3605.6 *5*	31 *4*	(7228.08)	4$^+$,5$^+$	3622.4
3325.2 *2*	152 *5*	(7228.08)	4$^+$,5$^+$	3902.81	3627.8 *4*	38 *4*	(7228.08)	4$^+$,5$^+$	3600.2
3330.7 *2*	158 *5*	(7228.08)	4$^+$,5$^+$	3897.31	3634.0 *2*	198 *5*	(7228.08)	4$^+$,5$^+$	3594.00
3339.9 *3*	73 *5*	(7228.08)	4$^+$,5$^+$	3888.1	3637.8 *4*	44 *4*	(7228.08)	4$^+$,5$^+$	3590.2
3343.9 *2*	172 *5*	(7228.08)	4$^+$,5$^+$	3884.11	3646.0 *2*	120 *4*	(7228.08)	4$^+$,5$^+$	3582.00
3350.8 *3*	76 *5*	(7228.08)	4$^+$,5$^+$	3877.2	3651.2 *2*	178 *5*	(7228.08)	4$^+$,5$^+$	3576.80
3353.6 *2*	144 *5*	(7228.08)	4$^+$,5$^+$	3874.41	3658.5 *2*	125 *4*	(7228.08)	4$^+$,5$^+$	3569.50
3361.6 *2*	145 *5*	(7228.08)	4$^+$,5$^+$	3866.41	3676.6 *2*	178 *5*	(7228.08)	4$^+$,5$^+$	3551.40
3367.0 *2*	145 *5*	(7228.08)	4$^+$,5$^+$	3861.01	3680.5 *2*	149 *4*	(7228.08)	4$^+$,5$^+$	3547.50
3374.3 *6*	27 *4*	(7228.08)	4$^+$,5$^+$	3853.7	3683.5 *2*	100 *4*	(7228.08)	4$^+$,5$^+$	3544.50
3383.5 *2*	158 *5*	(7228.08)	4$^+$,5$^+$	3844.51	3691.8 *4*	36 *4*	(7228.08)	4$^+$,5$^+$	3536.2
3388.5 *2*	238 *6*	(7228.08)	4$^+$,5$^+$	3839.51	3694.8 *2*	129 *4*	(7228.08)	4$^+$,5$^+$	3533.20
3392.6 *3*	78 *5*	(7228.08)	4$^+$,5$^+$	3835.4	3703.7 *4*	32 *4*	(7228.08)	4$^+$,5$^+$	3524.3
3397.0 *3*	60 *4*	(7228.08)	4$^+$,5$^+$	3831.0	3707.7 *3*	58 *4*	(7228.08)	4$^+$,5$^+$	3520.3
3408.5 *3*	64 *4*	(7228.08)	4$^+$,5$^+$	3819.5	3720.6 *2*	263 *6*	(7228.08)	4$^+$,5$^+$	3507.40
3416.3 *3*	78 *4*	(7228.08)	4$^+$,5$^+$	3811.7	3729.7 *2*	86 *4*	(7228.08)	4$^+$,5$^+$	3498.30
3420.8 *3*	98 *5*	(7228.08)	4$^+$,5$^+$	3807.2	3735.4 *3*	45 *4*	(7228.08)	4$^+$,5$^+$	3492.6
3428.3 *2*	110 *5*	(7228.08)	4$^+$,5$^+$	3799.71	3740.9 *2*	116 *4*	(7228.08)	4$^+$,5$^+$	3487.10
3431.7 *2*	158 *5*	(7228.08)	4$^+$,5$^+$	3796.31	3745.5 *2*	172 *5*	(7228.08)	4$^+$,5$^+$	3482.50
3440.2 *4*	50 *4*	(7228.08)	4$^+$,5$^+$	3787.8	3754.7 *2*	81 *4*	(7228.08)	4$^+$,5$^+$	3473.30
3443.0 *4*	41 *4*	(7228.08)	4$^+$,5$^+$	3785.0	3760.9 *2*	107 *4*	(7228.08)	4$^+$,5$^+$	3467.10
3449.2 *4*	45 *4*	(7228.08)	4$^+$,5$^+$	3778.8	3765.2 *3*	62 *4*	(7228.08)	4$^+$,5$^+$	3462.8
3453.4 *5*	32 *4*	(7228.08)	4$^+$,5$^+$	3774.6	3773.9 *2*	243 *5*	(7228.08)	4$^+$,5$^+$	3454.10
3458.3 *2*	171 *5*	(7228.08)	4$^+$,5$^+$	3769.71	3785.7 *8*	17 *3*	(7228.08)	4$^+$,5$^+$	3442.3
3465.5 *2*	136 *5*	(7228.08)	4$^+$,5$^+$	3762.51	3789.5 *2*	89 *4*	(7228.08)	4$^+$,5$^+$	3438.50
3477.4 *4*	48 *4*	(7228.08)	4$^+$,5$^+$	3750.6	3793.9 *3*	72 *4*	(7228.08)	4$^+$,5$^+$	3434.1
3480.8 *2*	98 *4*	(7228.08)	4$^+$,5$^+$	3747.21	3796.8 *3*	68 *4*	(7228.08)	4$^+$,5$^+$	3431.2

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^{93}Nb(n,γ) E=thermal:primary 1988Ke09 (continued)

γ(^{94}Nb) (continued)

E_γ †	I_γ ‡#	E_i(level)	J_i^π	E_f	E_γ †	I_γ ‡#	E_i(level)	J_i^π	E_f
3803.5 *3*	59 *3*	(7228.08)	4+,5+	3424.5	4185.9 *3*	58 *3*	(7228.08)	4+,5+	3042.1
3806.7 *7*	20 *3*	(7228.08)	4+,5+	3421.3	4191.04 *20*	105 *3*	(7228.08)	4+,5+	3036.94
3810.7 *2*	176 *5*	(7228.08)	4+,5+	3417.30	4196.67 *18*	193 *4*	(7228.08)	4+,5+	3031.31
3816.9 *3*	72 *4*	(7228.08)	4+,5+	3411.1	4208.33 *18*	201 *4*	(7228.08)	4+,5+	3019.65
3821.4 *3*	46 *3*	(7228.08)	4+,5+	3406.6	4220.92 *21*	89 *3*	(7228.08)	4+,5+	3007.06
3828.8 *3*	73 *4*	(7228.08)	4+,5+	3399.2	4232.1 *5*	30 *3*	(7228.08)	4+,5+	2995.9
3834.2 *3*	44 *3*	(7228.08)	4+,5+	3393.8	4237.14 *18*	172 *4*	(7228.08)	4+,5+	2990.84
3837.1 *2*	139 *4*	(7228.08)	4+,5+	3390.89	4242.12 *21*	89 *3*	(7228.08)	4+,5+	2985.86
3851.4 *4*	32 *3*	(7228.08)	4+,5+	3376.6	4246.2 *6*	24 *3*	(7228.08)	4+,5+	2981.8
3856.3 *2*	93 *4*	(7228.08)	4+,5+	3371.69	4260.77 *17*	281 *5*	(7228.08)	4+,5+	2967.20
3858.9 *3*	44 *3*	(7228.08)	4+,5+	3369.1	4272.29 *17*	205 *4*	(7228.08)	4+,5+	2955.68
3867.5 *2*	141 *4*	(7228.08)	4+,5+	3360.49	4277.61 *21*	87 *3*	(7228.08)	4+,5+	2950.36
3871.4 *4*	35 *3*	(7228.08)	4+,5+	3356.6	4285.18 *23*	73 *3*	(7228.08)	4+,5+	2942.79
3879.1 *2*	342 *7*	(7228.08)	4+,5+	3348.89	4304.75 *17*	304 *6*	(7228.08)	4+,5+	2923.22
3885.9 *2*	95 *4*	(7228.08)	4+,5+	3342.09	4314.22 *20*	93 *3*	(7228.08)	4+,5+	2913.75
3888.7 *2*	214 *5*	(7228.08)	4+,5+	3339.29	4327.30 *18*	144 *4*	(7228.08)	4+,5+	2900.67
3892.8 *2*	207 *5*	(7228.08)	4+,5+	3335.19	4330.80 *17*	184 *4*	(7228.08)	4+,5+	2897.17
3902.2 *3*	64 *3*	(7228.08)	4+,5+	3325.8	4338.3 *3*	50 *3*	(7228.08)	4+,5+	2889.7
3907.0 *2*	111 *4*	(7228.08)	4+,5+	3320.99	4347.59 *19*	122 *3*	(7228.08)	4+,5+	2880.38
3912.7 *2*	119 *4*	(7228.08)	4+,5+	3315.29	4352.01 *21*	82 *3*	(7228.08)	4+,5+	2875.96
3919.6 *2*	310 *6*	(7228.08)	4+,5+	3308.39	4372.2 *3*	43 *3*	(7228.08)	4+,5+	2855.8
3923.5 *2*	89 *4*	(7228.08)	4+,5+	3304.49	4378.2 *3*	51 *3*	(7228.08)	4+,5+	2849.8
3927.8 *2*	138 *4*	(7228.08)	4+,5+	3300.19	4384.25 *18*	152 *4*	(7228.08)	4+,5+	2843.72
3931.7 *2*	127 *4*	(7228.08)	4+,5+	3296.29	4389.02 *19*	105 *3*	(7228.08)	4+,5+	2838.95
3936.7 *2*	238 *5*	(7228.08)	4+,5+	3291.29	4395.05 *16*	280 *5*	(7228.08)	4+,5+	2832.92
3946.2 *2*	91 *4*	(7228.08)	4+,5+	3281.79	4403.27 *23*	69 *3*	(7228.08)	4+,5+	2824.70
3955.7 *2*	103 *4*	(7228.08)	4+,5+	3272.29	4406.65 *18*	120 *3*	(7228.08)	4+,5+	2821.32
3960.3 *3*	63 *3*	(7228.08)	4+,5+	3267.7	4426.4 *6*	21 *3*	(7228.08)	4+,5+	2801.6
3972.0 *2*	157 *4*	(7228.08)	4+,5+	3255.99	4431.96 *16*	330 *6*	(7228.08)	4+,5+	2796.01
3978.6 *2*	127 *4*	(7228.08)	4+,5+	3249.39	4450.4 *4*	32 *3*	(7228.08)	4+,5+	2777.6
3982.6 *2*	198 *5*	(7228.08)	4+,5+	3245.39	4455.29 *17*	144 *4*	(7228.08)	4+,5+	2772.67
4000.2 *2*	177 *4*	(7228.08)	4+,5+	3227.79	4459.02 *19*	102 *3*	(7228.08)	4+,5+	2768.94
4004.8 *4*	35 *3*	(7228.08)	4+,5+	3223.2	4466.49 *17*	150 *4*	(7228.08)	4+,5+	2761.47
4010.7 *2*	174 *4*	(7228.08)	4+,5+	3217.29	4470.69 *18*	126 *3*	(7228.08)	4+,5+	2757.27
4015.9 *2*	486 *9*	(7228.08)	4+,5+	3212.09	4486.5 *14*	8 *2*	(7228.08)	4+,5+	2741.5
4023.5 *2*	82 *3*	(7228.08)	4+,5+	3204.49	4489.9 *4*	34 *3*	(7228.08)	4+,5+	2738.1
4028.1 *3*	41 *3*	(7228.08)	4+,5+	3199.9	4497.73 *24*	59 *3*	(7228.08)	4+,5+	2730.2
4032.7 *3*	65 *3*	(7228.08)	4+,5+	3195.3	4501.41 *16*	304 *6*	(7228.08)	4+,5+	2726.55
4044.5 *2*	98 *3*	(7228.08)	4+,5+	3183.48	4505.77 *17*	153 *4*	(7228.08)	4+,5+	2722.19
4055.7 *5*	22 *3*	(7228.08)	4+,5+	3172.3	4524.09 *16*	211 *4*	(7228.08)	4+,5+	2703.87
4058.2 *4*	34 *3*	(7228.08)	4+,5+	3169.8	4531.4 *3*	48 *3*	(7228.08)	4+,5+	2696.6
4074.6 *4*	38 *3*	(7228.08)	4+,5+	3153.4	4538.62 *15*	382 *7*	(7228.08)	4+,5+	2689.34
4079.3 *3*	41 *3*	(7228.08)	4+,5+	3148.7	4543.2 *3*	53 *3*	(7228.08)	4+,5+	2684.8
4085.7 *5*	24 *3*	(7228.08)	4+,5+	3142.3	4553.98 *16*	177 *4*	(7228.08)	4+,5+	2673.98
4090.5 *2*	155 *4*	(7228.08)	4+,5+	3137.48	4558.51 *16*	163 *4*	(7228.08)	4+,5+	2669.45
4101.2 *2*	216 *5*	(7228.08)	4+,5+	3126.78	4574.1 *6*	20 *2*	(7228.08)	4+,5+	2653.9
4109.1 *2*	145 *4*	(7228.08)	4+,5+	3118.88	4578.7 *9*	13 *2*	(7228.08)	4+,5+	2649.3
4115.3 *2*	141 *4*	(7228.08)	4+,5+	3112.68	4583.0 *5*	22 *2*	(7228.08)	4+,5+	2645.0
4121.3 *2*	103 *3*	(7228.08)	4+,5+	3106.68	4594.44 *15*	299 *6*	(7228.08)	4+,5+	2633.52
4130.3 *2*	406 *7*	(7228.08)	4+,5+	3097.68	4604.12 *17*	127 *3*	(7228.08)	4+,5+	2623.84
4139.5 *2*	89 *3*	(7228.08)	4+,5+	3088.48	4607.88 *15*	276 *5*	(7228.08)	4+,5+	2620.08
4143.5 *2*	116 *3*	(7228.08)	4+,5+	3084.48	4620.25 *18*	103 *3*	(7228.08)	4+,5+	2607.71
4153.8 *2*	202 *4*	(7228.08)	4+,5+	3074.18	4629.89 *15*	297 *5*	(7228.08)	4+,5+	2598.07
4156.5 *2*	81 *3*	(7228.08)	4+,5+	3071.48	4635.42 *15*	254 *5*	(7228.08)	4+,5+	2592.54
4172.54 *21*	91 *3*	(7228.08)	4+,5+	3055.44	4642.2 *4*	32 *2*	(7228.08)	4+,5+	2585.8
4180.89 *19*	125 *4*	(7228.08)	4+,5+	3047.09	4652.5 *4*	39 *2*	(7228.08)	4+,5+	2575.5

Continued on next page (footnotes at end of table)

^{93}Nb(n,γ) E=thermal:primary 1988Ke09 (continued)

γ(^{94}Nb) (continued)

E_γ [†]	I_γ [‡#]	E_i(level)	J_i^π	E_f	J_f^π
4662.31 *16*	148 *3*	(7228.08)	$4^+,5^+$	2565.64	
4672.15 *15*	392 *7*	(7228.08)	$4^+,5^+$	2555.80	
4681.96 *15*	347 *6*	(7228.08)	$4^+,5^+$	2545.99	
4691.1 *4*	34 *2*	(7228.08)	$4^+,5^+$	2536.9	
4699.7 *4*	30 *2*	(7228.08)	$4^+,5^+$	2528.3	
4711.62 *14*	388 *7*	(7228.08)	$4^+,5^+$	2516.33	
4718.36 *24*	55 *2*	(7228.08)	$4^+,5^+$	2509.6	
4724.97 *21*	70 *3*	(7228.08)	$4^+,5^+$	2502.98	
4738.97 *14*	1066 *17*	(7228.08)	$4^+,5^+$	2488.98	
4749.09 *15*	205 *4*	(7228.08)	$4^+,5^+$	2478.86	
4756.27 *15*	241 *5*	(7228.08)	$4^+,5^+$	2471.68	
4772.34 *14*	300 *5*	(7228.08)	$4^+,5^+$	2455.61	
4778.3 *6*	21 *2*	(7228.08)	$4^+,5^+$	2449.6	
4782.2 *4*	30 *2*	(7228.08)	$4^+,5^+$	2445.7	
4791.59 *14*	433 *7*	(7228.08)	$4^+,5^+$	2436.36	
4810.19 *25*	53 *2*	(7228.08)	$4^+,5^+$	2417.8	
4815.82 *24*	57 *2*	(7228.08)	$4^+,5^+$	2412.1	
4820.9 *6*	21 *2*	(7228.08)	$4^+,5^+$	2407.0	
4827.62 *14*	473 *8*	(7228.08)	$4^+,5^+$	2400.32	
4834.8 *4*	29 *2*	(7228.08)	$4^+,5^+$	2393.1	
4849.4 *5*	22 *2*	(7228.08)	$4^+,5^+$	2378.5	
4858.1 *3*	50 *2*	(7228.08)	$4^+,5^+$	2369.8	
4864.40 *19*	82 *3*	(7228.08)	$4^+,5^+$	2363.54	
4874.64 *19*	83 *3*	(7228.08)	$4^+,5^+$	2353.30	
4881.6 *5*	26 *2*	(7228.08)	$4^+,5^+$	2346.3	
4891.2 *9*	13 *2*	(7228.08)	$4^+,5^+$	2336.7	
4902.0 *3*	39 *2*	(7228.08)	$4^+,5^+$	2325.9	$4^+,5^+$
4907.51 *17*	103 *3*	(7228.08)	$4^+,5^+$	2320.43	
4913.62 *13*	534 *9*	(7228.08)	$4^+,5^+$	2314.32	
4923.2 *3*	40 *2*	(7228.08)	$4^+,5^+$	2304.7	
4927.93 *14*	181 *4*	(7228.08)	$4^+,5^+$	2300.01	
4936.1 *10*	11 *2*	(7228.08)	$4^+,5^+$	2291.8	
4941.53 *23*	59 *2*	(7228.08)	$4^+,5^+$	2286.41	
4945.12 *15*	155 *3*	(7228.08)	$4^+,5^+$	2282.82	
4949.72 *17*	102 *3*	(7228.08)	$4^+,5^+$	2278.22	
4978.5 *4*	27 *2*	(7228.08)	$4^+,5^+$	2249.4	
4982.50 *13*	293 *5*	(7228.08)	$4^+,5^+$	2245.44	
4991.5 *2*	72 *2*	(7228.08)	$4^+,5^+$	2236.44	$4^+,5^+$
4997.96 *14*	198 *4*	(7228.08)	$4^+,5^+$	2229.98	
5006.76 *22*	60 *2*	(7228.08)	$4^+,5^+$	2221.18	
5012.5 *3*	43 *2*	(7228.08)	$4^+,5^+$	2215.4	
5020.9 *3*	41 *2*	(7228.08)	$4^+,5^+$	2207.0	
5032.07 *13*	395 *7*	(7228.08)	$4^+,5^+$	2195.86	
5039.7 *6*	21 *2*	(7228.08)	$4^+,5^+$	2188.2	
5052.88 *15*	144 *3*	(7228.08)	$4^+,5^+$	2175.05	
5059.7 *3*	46 *2*	(7228.08)	$4^+,5^+$	2168.2	
5065.65 *13*	249 *5*	(7228.08)	$4^+,5^+$	2162.28	
5070.26 *12*	595 *10*	(7228.08)	$4^+,5^+$	2157.67	
5077.9 *5*	22 *2*	(7228.08)	$4^+,5^+$	2150.0	
5087.35 *14*	193 *4*	(7228.08)	$4^+,5^+$	2140.58	
5092.9 *4*	29 *2*	(7228.08)	$4^+,5^+$	2135.0	
5103.33 *12*	1560 *25*	(7228.08)	$4^+,5^+$	2124.60	
5125.9 *4*	31 *2*	(7228.08)	$4^+,5^+$	2102.0	
5129.15 *13*	253 *5*	(7228.08)	$4^+,5^+$	2098.78	
5151.1 *4*	35 *2*	(7228.08)	$4^+,5^+$	2076.8	$4^+,5^+$
5156.51 *22*	57 *2*	(7228.08)	$4^+,5^+$	2071.42	

Continued on next page (footnotes at end of table)

^{93}Nb(n,γ) E=thermal:primary 1988Ke09 (continued)

γ(^{94}Nb) (continued)

E_γ [†]	I_γ [‡#]	E_i(level)	J_i^π	E_f	J_f^π
5164.8 *6*	20 *2*	(7228.08)	$4^+,5^+$	2063.1	
5179.99 *12*	539 *9*	(7228.08)	$4^+,5^+$	2047.93	
5193.37 *12*	850 *14*	(7228.08)	$4^+,5^+$	2034.55	
5207.94 *12*	486 *8*	(7228.08)	$4^+,5^+$	2019.98	
5213.76 *15*	105 *3*	(7228.08)	$4^+,5^+$	2014.16	
5217.4 *3*	45 *2*	(7228.08)	$4^+,5^+$	2010.5	
5227.9 *8*	12 *2*	(7228.08)	$4^+,5^+$	2000.0	$4^+,5^+$
5230.55 *18*	76 *2*	(7228.08)	$4^+,5^+$	1997.37	
5252.51 *12*	603 *10*	(7228.08)	$4^+,5^+$	1975.41	
5257.70 *15*	114 *3*	(7228.08)	$4^+,5^+$	1970.22	
5271.19 *20*	60 *2*	(7228.08)	$4^+,5^+$	1956.73	
5277.43 *19*	67 *2*	(7228.08)	$4^+,5^+$	1950.49	
5284.14 *12*	326 *6*	(7228.08)	$4^+,5^+$	1943.78	
5290.47 *14*	117 *3*	(7228.08)	$4^+,5^+$	1937.45	
5301.22 *12*	229 *4*	(7228.08)	$4^+,5^+$	1926.70	$4^+,5^+$
5307.93 *11*	509 *8*	(7228.08)	$4^+,5^+$	1919.99	
5345.49 *15*	93 *2*	(7228.08)	$4^+,5^+$	1882.42	
5348.56 *11*	487 *8*	(7228.08)	$4^+,5^+$	1879.35	
5363.80 *11*	453 *8*	(7228.08)	$4^+,5^+$	1864.11	$4^+,5^+$
5368.98 *11*	297 *5*	(7228.08)	$4^+,5^+$	1858.93	
5399.87 *11*	362 *6*	(7228.08)	$4^+,5^+$	1828.04	$^+$
5406.92 *18*	65 *2*	(7228.08)	$4^+,5^+$	1820.99	
5412.20 *15*	92 *2*	(7228.08)	$4^+,5^+$	1815.71	
5422.6 *4*	31 *2*	(7228.08)	$4^+,5^+$	1805.3	$^+$
5447.18 *13*	139 *3*	(7228.08)	$4^+,5^+$	1780.73	$^+$
5450.98 *11*	315 *5*	(7228.08)	$4^+,5^+$	1776.93	
5457.16 *34*	29 *2*	(7228.08)	$4^+,5^+$	1770.7	
5464.27 *15*	84 *2*	(7228.08)	$4^+,5^+$	1763.64	
5496.15 *10*	1369 *22*	(7228.08)	$4^+,5^+$	1731.76	
5507.80 *11*	216 *4*	(7228.08)	$4^+,5^+$	1720.10	
5511.28 *11*	299 *5*	(7228.08)	$4^+,5^+$	1716.63	
5532.17 *12*	148 *3*	(7228.08)	$4^+,5^+$	1695.73	
5549.5 *3*	31 *2*	(7228.08)	$4^+,5^+$	1678.4	
5572.33 *11*	234 *4*	(7228.08)	$4^+,5^+$	1655.57	
5588.21 *16*	74 *2*	(7228.08)	$4^+,5^+$	1639.69	
5591.32 *10*	524 *9*	(7228.08)	$4^+,5^+$	1636.58	
5607.30 *11*	219 *4*	(7228.08)	$4^+,5^+$	1620.60	$4^+,5^+$
5612.72 *11*	217 *4*	(7228.08)	$4^+,5^+$	1615.18	
5645.94 *11*	164 *3*	(7228.08)	$4^+,5^+$	1581.96	
5708.73 *11*	135 *3*	(7228.08)	$4^+,5^+$	1519.16	$^-$
5727.98 *11*	148 *3*	(7228.08)	$4^+,5^+$	1499.91	
5735.0 *4*	27 *2*	(7228.08)	$4^+,5^+$	1492.9	
5738.94 *19*	50 *2*	(7228.08)	$4^+,5^+$	1488.95	
5769.77 *9*	376 *6*	(7228.08)	$4^+,5^+$	1458.12	
5834.74 *11*	112 *2*	(7228.08)	$4^+,5^+$	1393.14	$^+$
5866.4 *7*	12 *1*	(7228.08)	$4^+,5^+$	1361.5	$^+$
5880.12 *9*	224 *4*	(7228.08)	$4^+,5^+$	1347.76	
5894.93 *8*	1245 *20*	(7228.08)	$4^+,5^+$	1332.95	$(3^+,4,5^+)$
5906.34 *14*	72 *2*	(7228.08)	$4^+,5^+$	1321.54	$4^+,5^+$
5946.33 *9*	286 *5*	(7228.08)	$4^+,5^+$	1281.55	$4^+,5^+$
5952.94 *10*	134 *3*	(7228.08)	$4^+,5^+$	1274.94	
5964.34 *8*	310 *5*	(7228.08)	$4^+,5^+$	1263.54	$(3,4^-)$
5980.20 *9*	238 *4*	(7228.08)	$4^+,5^+$	1247.67	
5995.67 *9*	212 *4*	(7228.08)	$4^+,5^+$	1232.20	$(2,3,4)^+$
6058.16 *9*	141 *3*	(7228.08)	$4^+,5^+$	1169.71	$4^+,5^+$
6068.44 *8*	276 *5*	(7228.08)	$4^+,5^+$	1159.43	

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^{93}Nb(n,γ) E=thermal:primary 1988Ke09 (continued)

γ(^{94}Nb) (continued)

E_γ [†]	I_γ [‡#]	E_i(level)	J_i^π	E_f	J_f^π
6141.89 *21*	36 *1*	(7228.08)	$4^+,5^+$	1085.97	$(2^+,3,4)$
6167.12 *13*	68 *2*	(7228.08)	$4^+,5^+$	1060.74	$4^+,5^+$
6222.2 *3*	25 *1*	(7228.08)	$4^+,5^+$	1005.7	$4^+,5^+$
6251.4 *6*	11 *1*	(7228.08)	$4^+,5^+$	976.5	
6257.25 *14*	54 *1*	(7228.08)	$4^+,5^+$	970.60	
6270.57 *11*	73 *2*	(7228.08)	$4^+,5^+$	957.28	$(5)^+$
6292.19 *7*	278 *5*	(7228.08)	$4^+,5^+$	935.66	$^+$
6331.74 *7*	228 *4*	(7228.08)	$4^+,5^+$	896.11	$(3^+,4^-)$
6410.64 *14*	50 *1*	(7228.08)	$4^+,5^+$	817.20	$(3)^-$
6434.78 *6*	280 *5*	(7228.08)	$4^+,5^+$	793.06	$(3,4)^+$
6586.88 *22*	27 *1*	(7228.08)	$4^+,5^+$	640.95	$(5)^+$
6595.97 *6*	177 *3*	(7228.08)	$4^+,5^+$	631.86	$(4)^+$
6831.18 *4*	1220 *20*	(7228.08)	$4^+,5^+$	396.63	$(3)^-$
6893.39 *16*	39 *1*	(7228.08)	$4^+,5^+$	334.42	$(3)^+$
6915.73 *4*	269 *5*	(7228.08)	$4^+,5^+$	312.08	$(4,5)^+$
7114.31 *6*	119 *2*	(7228.08)	$4^+,5^+$	113.48	$(5)^+$
7149.4[@] *6*	17 *1*	(7228.08)	$4^+,5^+$	78.4	$(7)^+$
7168.91 *5*	148 *3*	(7228.08)	$4^+,5^+$	58.87	$(4)^+$
7186.54 *2*	681 *11*	(7228.08)	$4^+,5^+$	41.24	3^+
7227.78 *9*	73 *2*	(7228.08)	$4^+,5^+$	0.0	6^+

[†] Eγ are recoil corrected but do not include an absolute uncertainty of 0.085 keV associated with transitions in ^{15}N used for calibration.
[‡] Iγ are per 1.0×10^5 n captures.
[#] For intensity per 100 neutron captures, multiply by 0.001.
[@] Placement of transition in the level scheme is uncertain.

^{93}Nb(n,γ) E=thermal:primary 1988Ke09

Level Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 decays through this branch

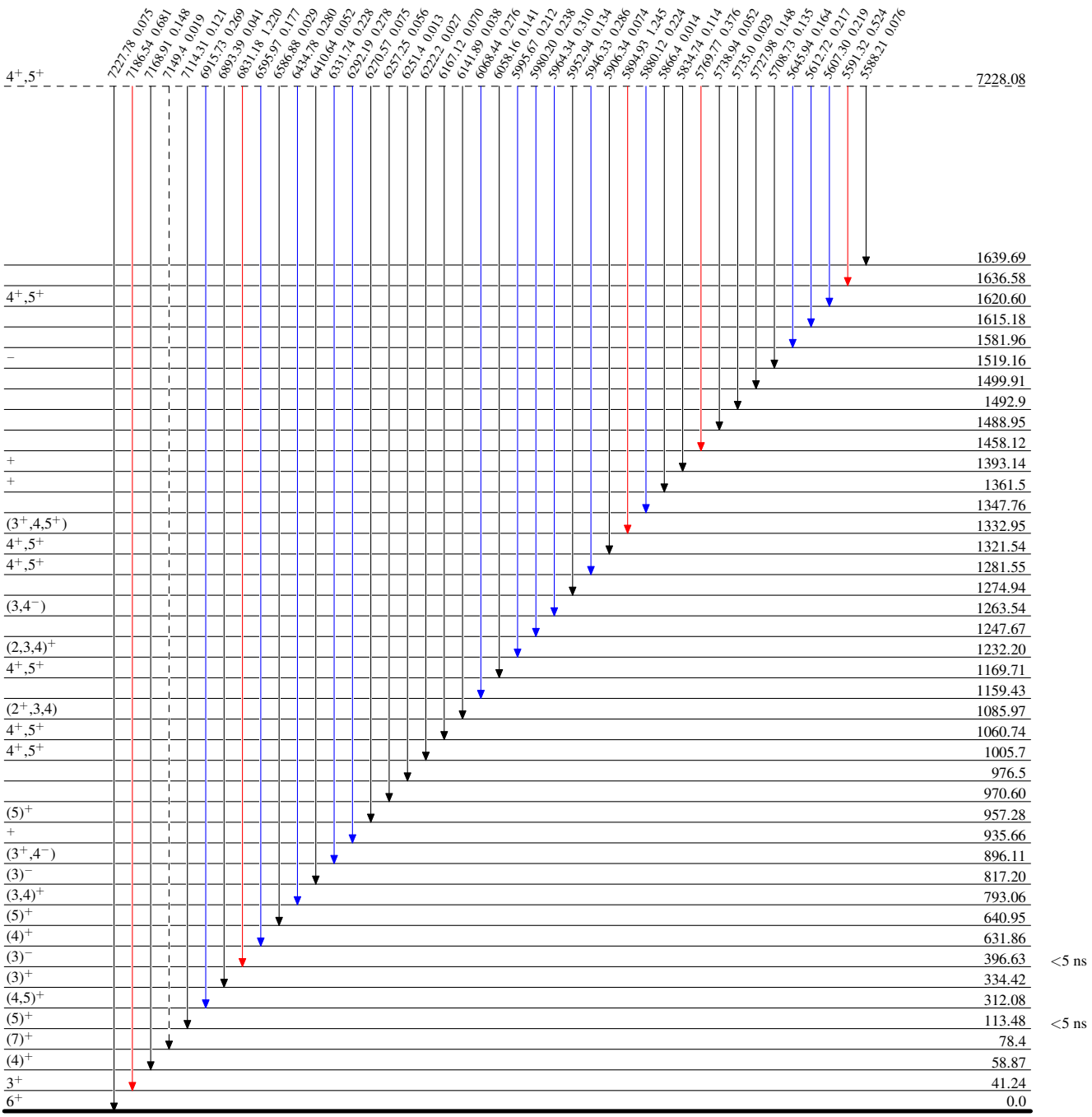
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

γ Decay (Uncertain)



$^{94}_{41}Nb_{53}$

^{93}Nb(n,γ) E=thermal:primary 1988Ke09

Level Scheme (continued)

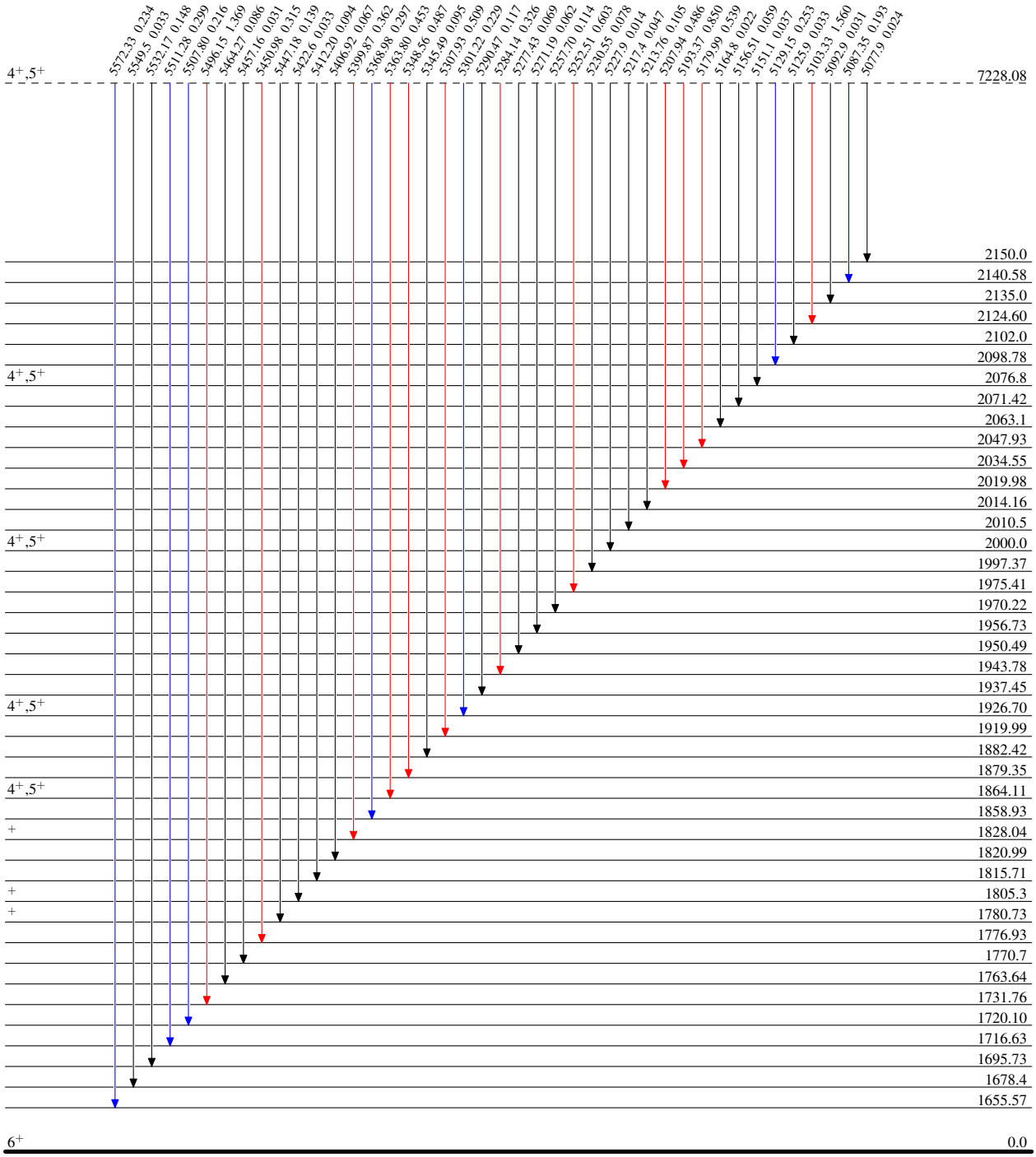
Intensities: $I_{(\gamma+ce)}$ per 100 decays through this branch

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{94}_{41}Nb_{53}$

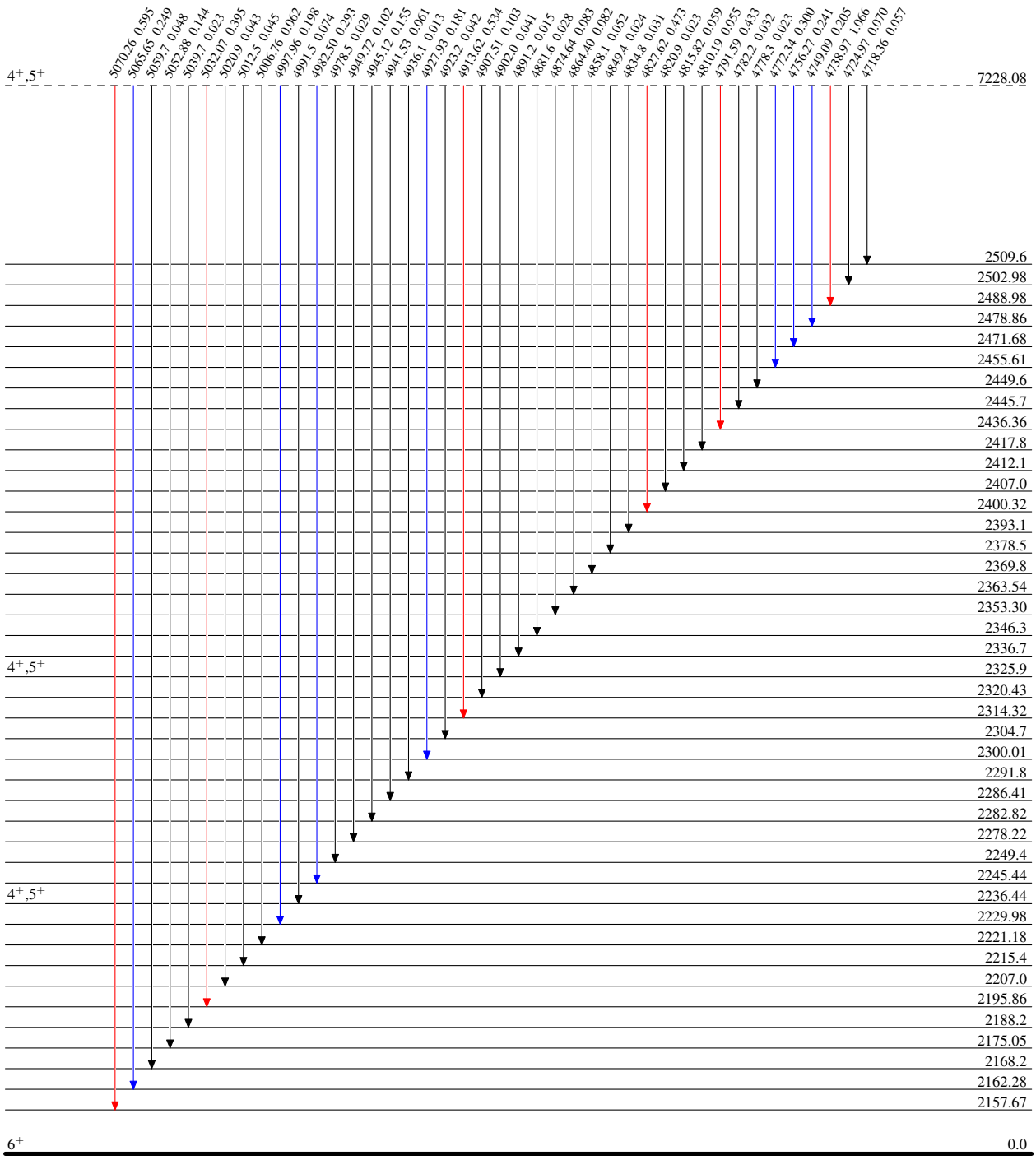
^{93}Nb(n,γ) E=thermal:primary 1988Ke09

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 decays through this branch



$^{94}_{41}Nb_{53}$

^{93}Nb(n,γ) E=thermal:primary 1988Ke09

Level Scheme (continued)

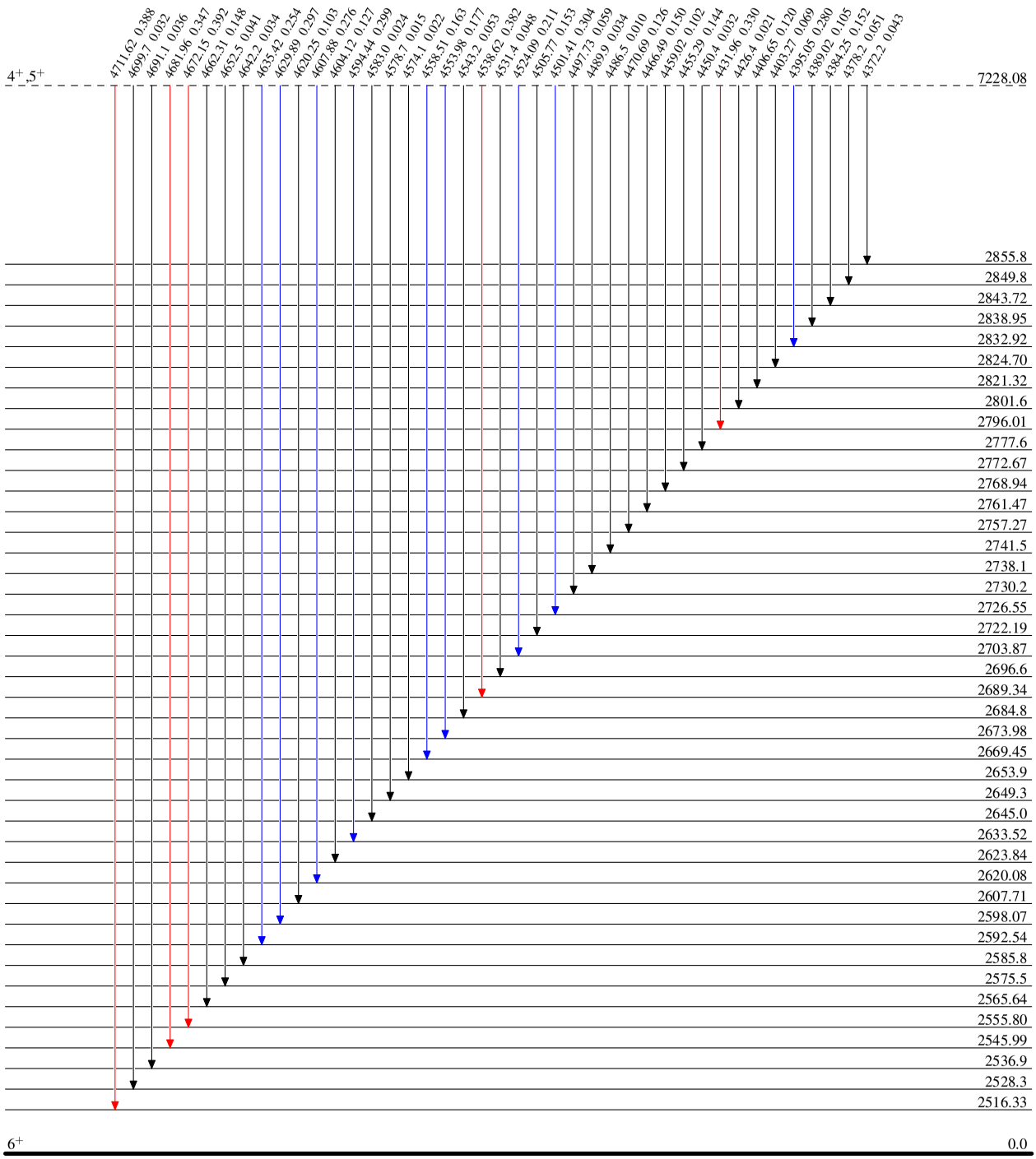
Intensities: $I_{(\gamma+ce)}$ per 100 decays through this branch

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{94}_{41}Nb_{53}$

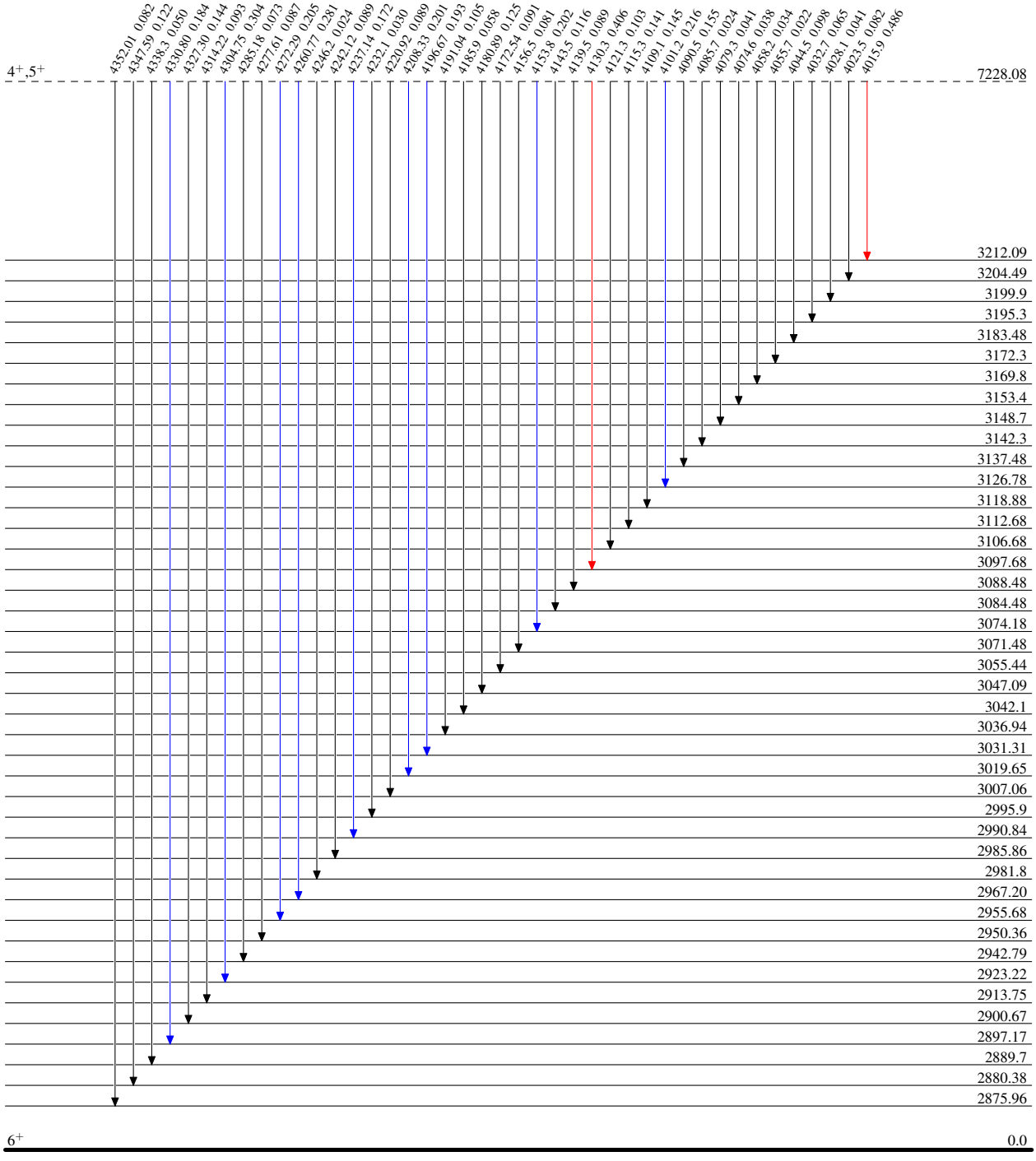
^{93}Nb(n,γ) E=thermal:primary 1988Ke09

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 decays through this branch



$^{94}_{41}Nb_{53}$

^{93}Nb(n,γ) E=thermal:primary 1988Ke09

Level Scheme (continued)

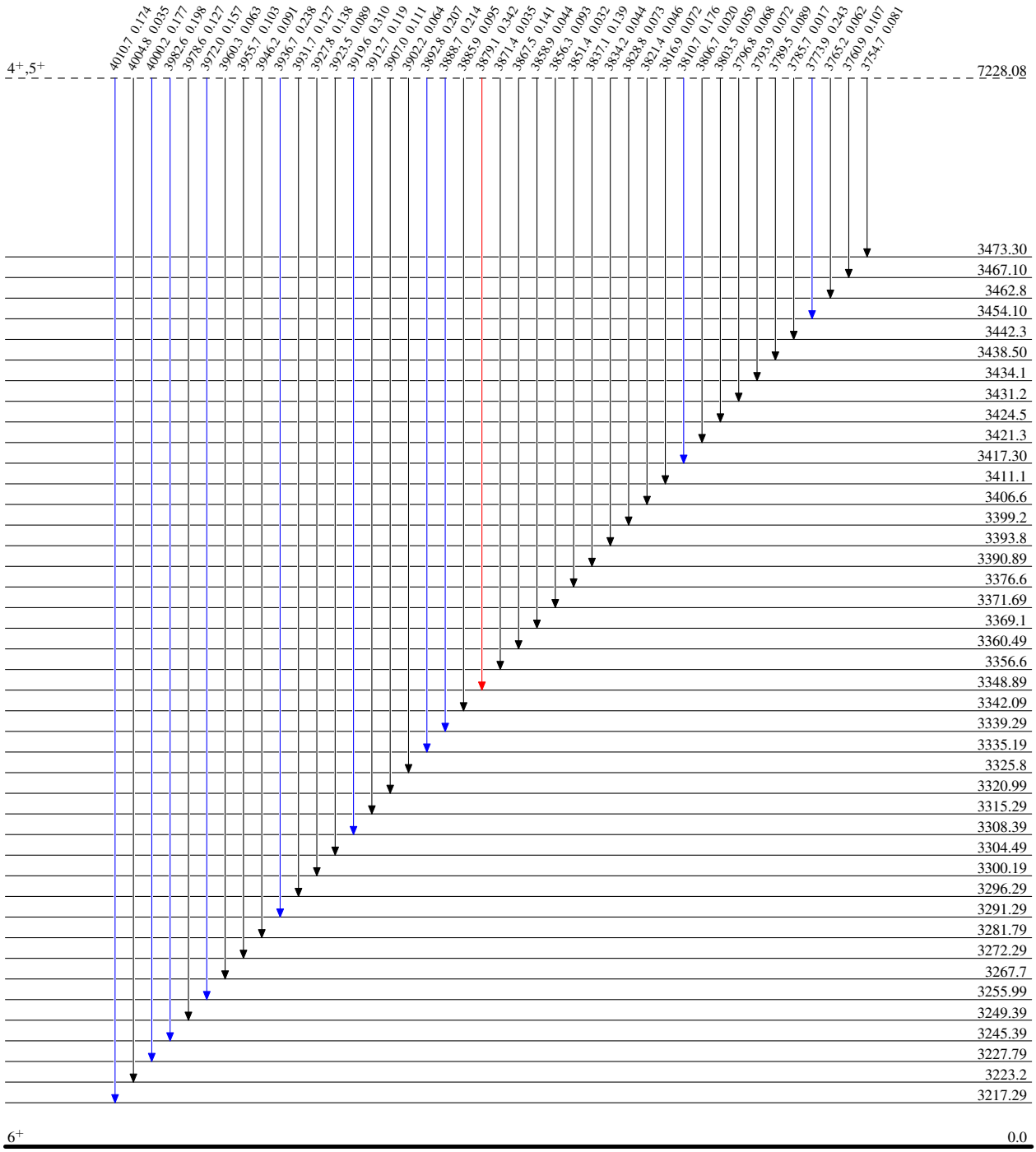
Intensities: $I_{(\gamma+ce)}$ per 100 decays through this branch

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{94}_{41}Nb_{53}$

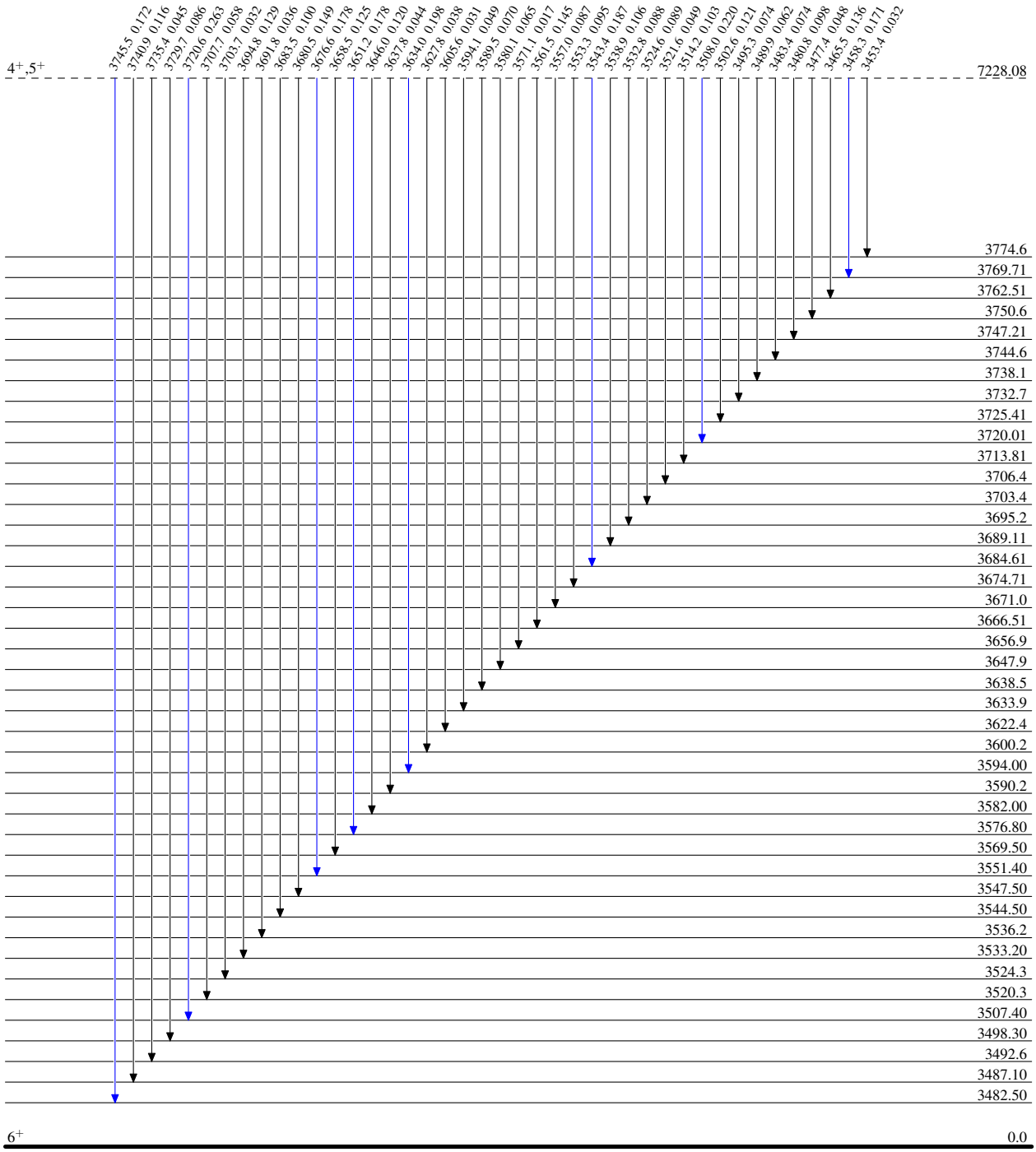
^{93}Nb(n,γ) E=thermal:primary 1988Ke09

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

Level Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 decays through this branch



$^{94}_{41}Nb_{53}$

^{93}Nb(n,γ) E=thermal:primary 1988Ke09

Level Scheme (continued)

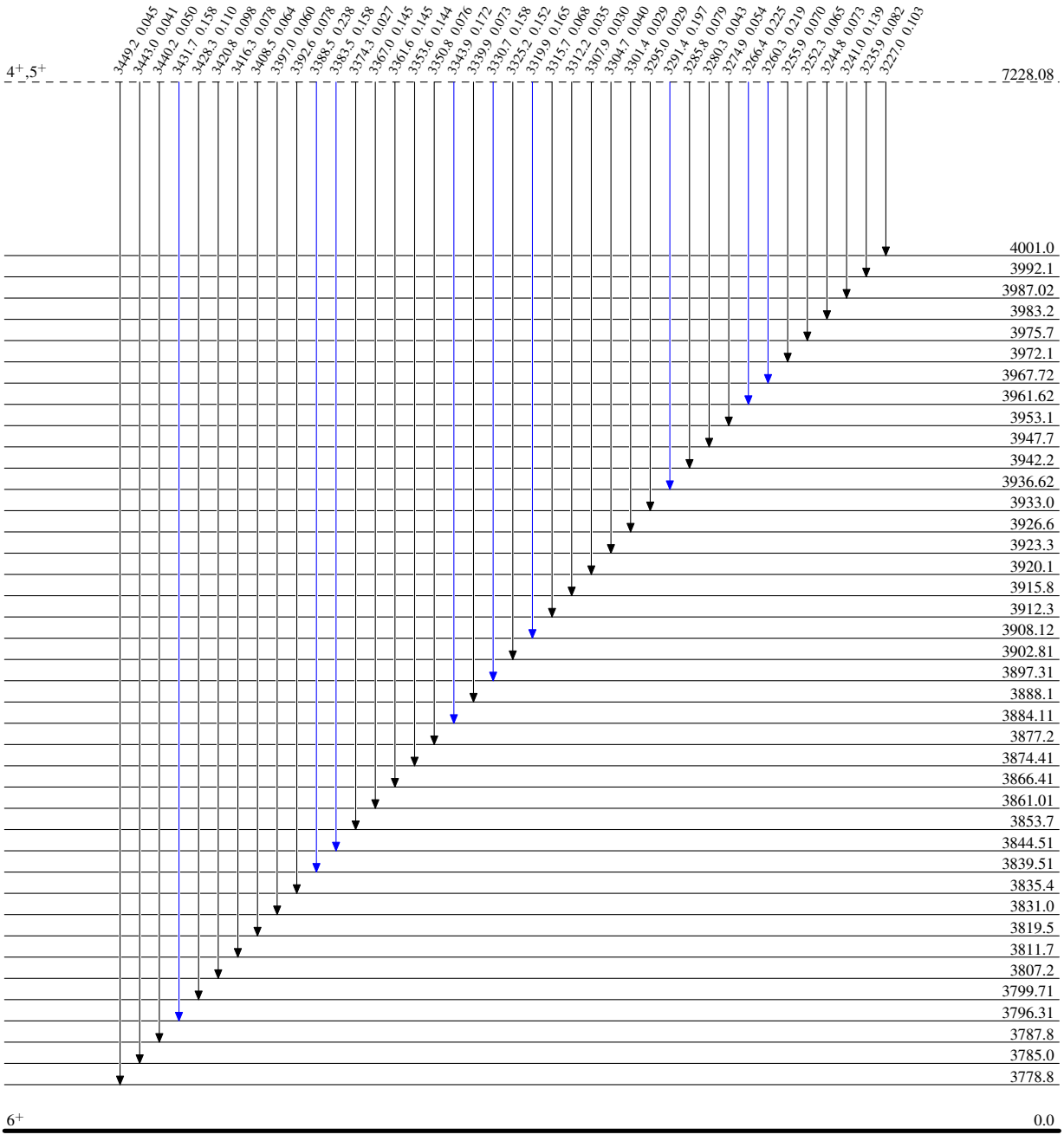
Intensities: $I_{(\gamma+ce)}$ per 100 decays through this branch

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{94}_{41}Nb_{53}$