

${}^{59}\text{Co}(n,\gamma)$ E=24 keV 1984Ko29

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli		NDS 114, 1849 (2013)	31-Dec-2012

E(n)=24 keV, several resonances covered. Measured E_γ , I_γ . Ge, Ge(Li) and NaI detectors, natural target (1984Ko29). See also ${}^{59}\text{Co}(n,\gamma)$ E=thermal.

 ${}^{60}\text{Co}$ Levels

E(level) [†]	E(level) [†]	E(level) [†]	E(level) [†]
0	1853	2489	3085
59	1877	2529	3115
277	1889	2560	3121
288	1924	2570	3141
436	1981	2586	3155
506	1984	2598	3163
543	2033	2607	3186
615	2045	2622	3191
785	2122	2656	3279
1004	2133	2688	3284
1006	2152	2710	3336
1151	2183	2761	3343
1208	2201	2768	3416
1217	2222	2825	3459
1342	2230	2845	3465
1381	2275	2868	3497
1451	2280	2885	3515
1516	2310	2902	3589
1566	2324	2920	3595
1640	2342	2945	3743
1710	2352	2963	3828
1749	2364	2997	3916
1788	2423	3010	4112
1809	2431	3022	7514
1831	2451	3047	

[†] As given in 1984Ko29.

 $\gamma({}^{60}\text{Co})$

E_γ	I_γ [†]	$E_i(\text{level})$	E_f	E_γ	I_γ [†]	$E_i(\text{level})$	E_f
3402.6 [‡] 20	0.59 14	7514	4112	4236.4 16	0.27 14	7514	3279
3600.3 5	0.63 13	7514	3916	4325.7 21	0.14 9	7514	3191
3685.7 8	0.36 12	7514	3828	4331.8 22	0.13 9	7514	3186
3773.5 [‡] 13	0.45 25	7514	3743	4350.8 8	0.37 9	7514	3163
3920.6 14	0.25 11	7514	3595	4359.8 20	0.16 12	7514	3155
3926.2 12	0.34 11	7514	3589	4376.2 14	0.17 8	7514	3141
3999.5 10	0.29 11	7514	3515	4392.2 11	0.36 12	7514	3121
4017.5 5	0.44 8	7514	3497	4397.1 12	0.34 11	7514	3115
4046.9 17	0.13 8	7514	3465	4428.3 [‡] 11	0.26 9	7514	3085
4055.5 [‡] 4	0.64 11	7514	3459	4466.5 13	0.21 9	7514	3047
4095.0 10	0.27 10	7514	3416	4492.2 17	0.16 9	7514	3022
4173.7 [‡] 6	0.76 12	7514	3343	4506.3 3	0.96 10	7514	3010
4179.6 9	0.38 11	7514	3336	4518.6 12	0.22 9	7514	2997
4231.8 5	0.84 15	7514	3284	4552.3 11	0.42 15	7514	2963

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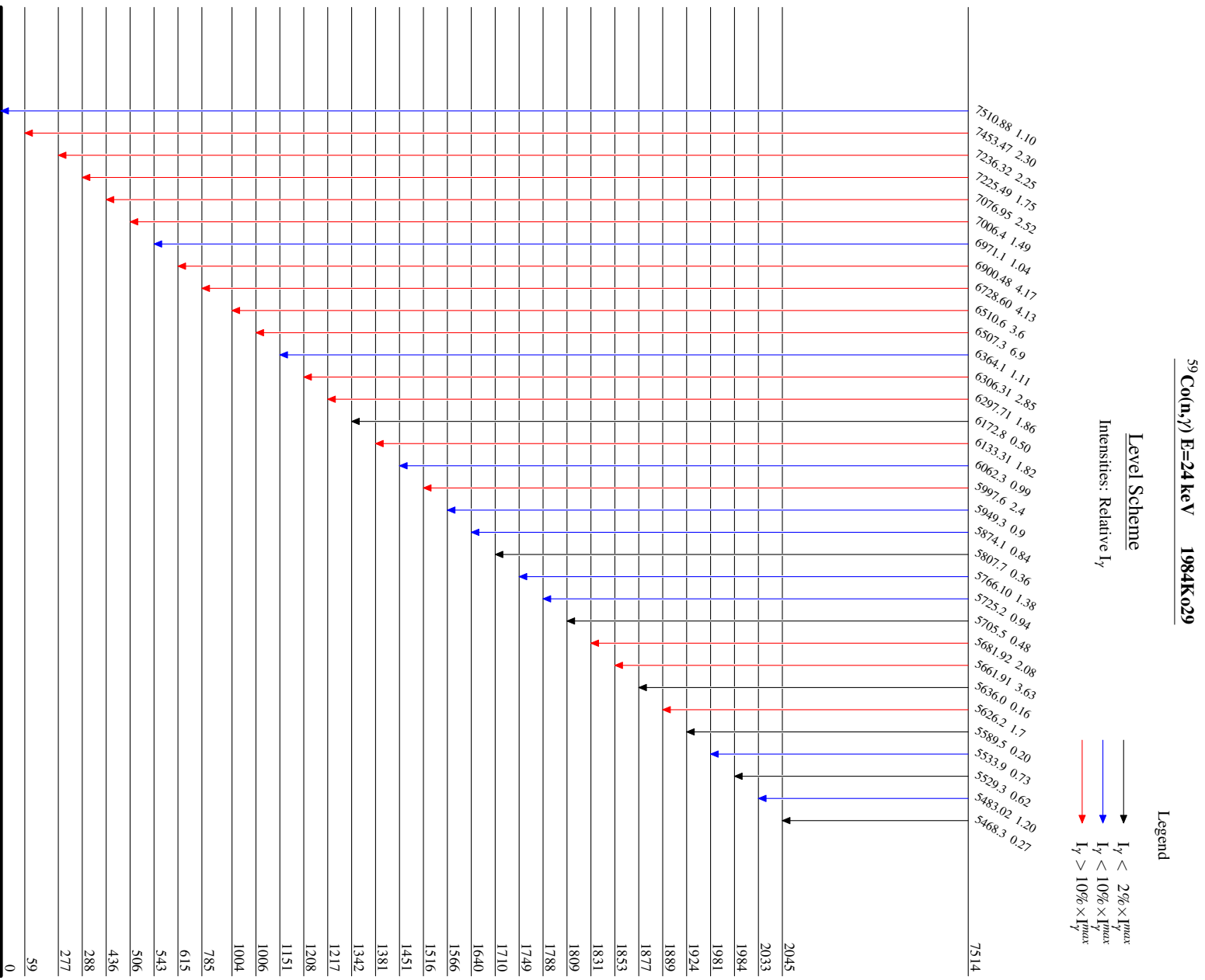
${}^{59}\text{Co}(n,\gamma) E=24 \text{ keV}$ **1984Ko29** (continued) $\gamma({}^{60}\text{Co})$ (continued)

E_γ	I_γ^\dagger	$E_i(\text{level})$	E_f	E_γ	I_γ^\dagger	$E_i(\text{level})$	E_f
4573.2 12	0.25 9	7514	2945	5314.6 15	0.20 8	7514	2201
4595.5 22	0.12 7	7514	2920	5332.7 14	0.19 8	7514	2183
4613.9 4	0.66 9	7514	2902	5360.4 6	0.52 9	7514	2152
4629.2 17	0.15 9	7514	2885	5382.2 10	0.27 8	7514	2133
4645.0 13	0.21 9	7514	2868	5393.50 19	1.80 11	7514	2122
^x 4658.5 17	0.15 9			^x 5462.4 9	0.31 9		
4668.6 22	0.12 5	7514	2845	5468.3 15	0.27 9	7514	2045
4690.7 9	0.48 15	7514	2825	5483.02 [‡] 22	1.20 10	7514	2033
4747.8 5	0.70 11	7514	2768	5529.3 6	0.62 11	7514	1984
4753.9 4	0.85 11	7514	2761	5533.9 8	0.73 18	7514	1981
4806.5 13	0.20 8	7514	2710	5589.5 15	0.20 8	7514	1924
4828.0 21	0.12 8	7514	2688	5626.2 8	1.7 8	7514	1889
^x 4839.3 14	0.20 8			5636.0 18	0.16 9	7514	1877
4859.5 6	0.46 9	7514	2656	5661.91 12	3.63 15	7514	1853
4892.1 26	0.10 5	7514	2622	5681.92 19	2.08 12	7514	1831
4906.1 6	0.47 9	7514	2607	5705.5 6	0.48 10	7514	1809
4917.6 5	0.56 9	7514	2598	5725.2 4	0.94 9	7514	1788
4929.4 5	0.52 9	7514	2586	5766.10 24	1.38 10	7514	1749
4943.0 7	0.77 18	7514	2570	5807.7 7	0.36 8	7514	1710
4947.6 9	0.69 16	7514	2560	5874.1 4	0.84 9	7514	1640
4987.5 3	0.96 9	7514	2529	5949.3 13	0.9 4	7514	1566
^x 5017.5 14	0.20 9			5997.6 [‡] 7	2.4 9	7514	1516
5026.4 10	0.28 8	7514	2489	6062.3 3	0.99 9	7514	1451
5063.0 16	0.09 5	7514	2451	6133.31 20	1.82 11	7514	1381
^x 5068.1 5				6172.8 7	0.50 9	7514	1342
5086.4 16	0.4 2	7514	2431	6297.71 23	1.86 11	7514	1217
5090.8 17	0.5 3	7514	2423	6306.31 17	2.85 13	7514	1208
5151.6 4	0.76 9	7514	2364	6364.1 3	1.11 9	7514	1151
5165.9 20	0.26 11	7514	2352	6507.3 3	6.9 11	7514	1006
5172.1 5	0.92 11	7514	2342	6510.6 6	3.6 11	7514	1004
^x 5179.1 8	0.43 9			6728.60 13	4.13 15	7514	785
5192.6 12	0.37 13	7514	2324	6900.48 18	4.17 20	7514	615
5206.1 6	0.59 9	7514	2310	6971.1 4	1.04 9	7514	543
5233.8 16	0.26 11	7514	2280	7006.4 3	1.49 11	7514	506
5239.4 8	0.71 12	7514	2275	7076.95 20	2.52 12	7514	436
^x 5245.9 11	0.32 8			7225.49 22	1.75 9	7514	288
^x 5268.6 9	0.30 8			7236.32 17	2.25 10	7514	277
5278.6 20		7514	2230	7453.47 16	2.30 9	7514	59
5291.3 10	0.52 18	7514	2222	7510.88 25	1.10 7	7514	0

[†] Normalized such that sum of I_γ populating levels $<2.5 \text{ MeV}$ is taken equal to the thermal data.

[‡] Mixed peak.

^x γ ray not placed in level scheme.



⁶⁰Co₃₃
²⁷Co₃₃

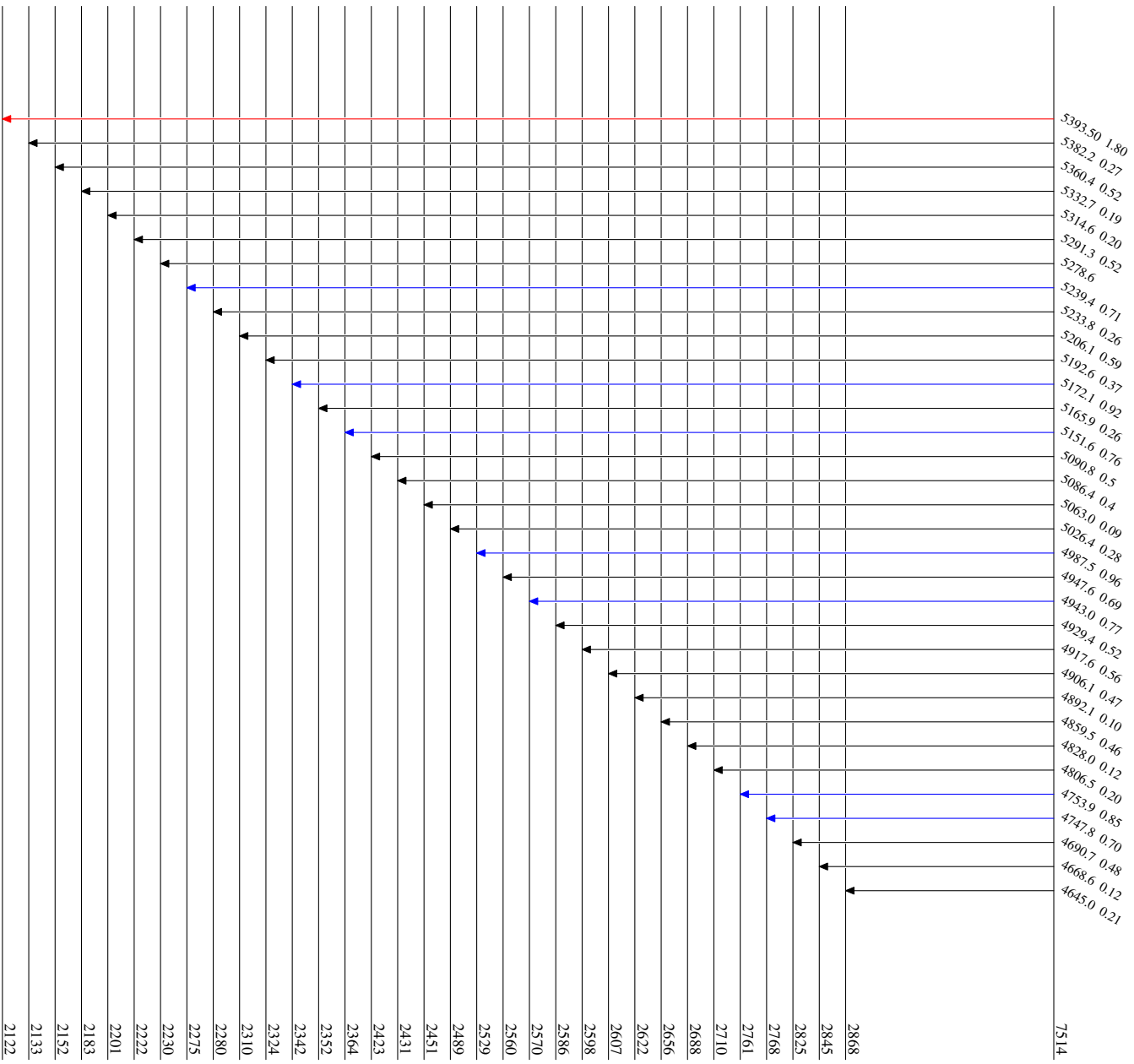
⁵⁹Co(n,γ) E=24 keV 1984Ko29

Level Scheme (continued)

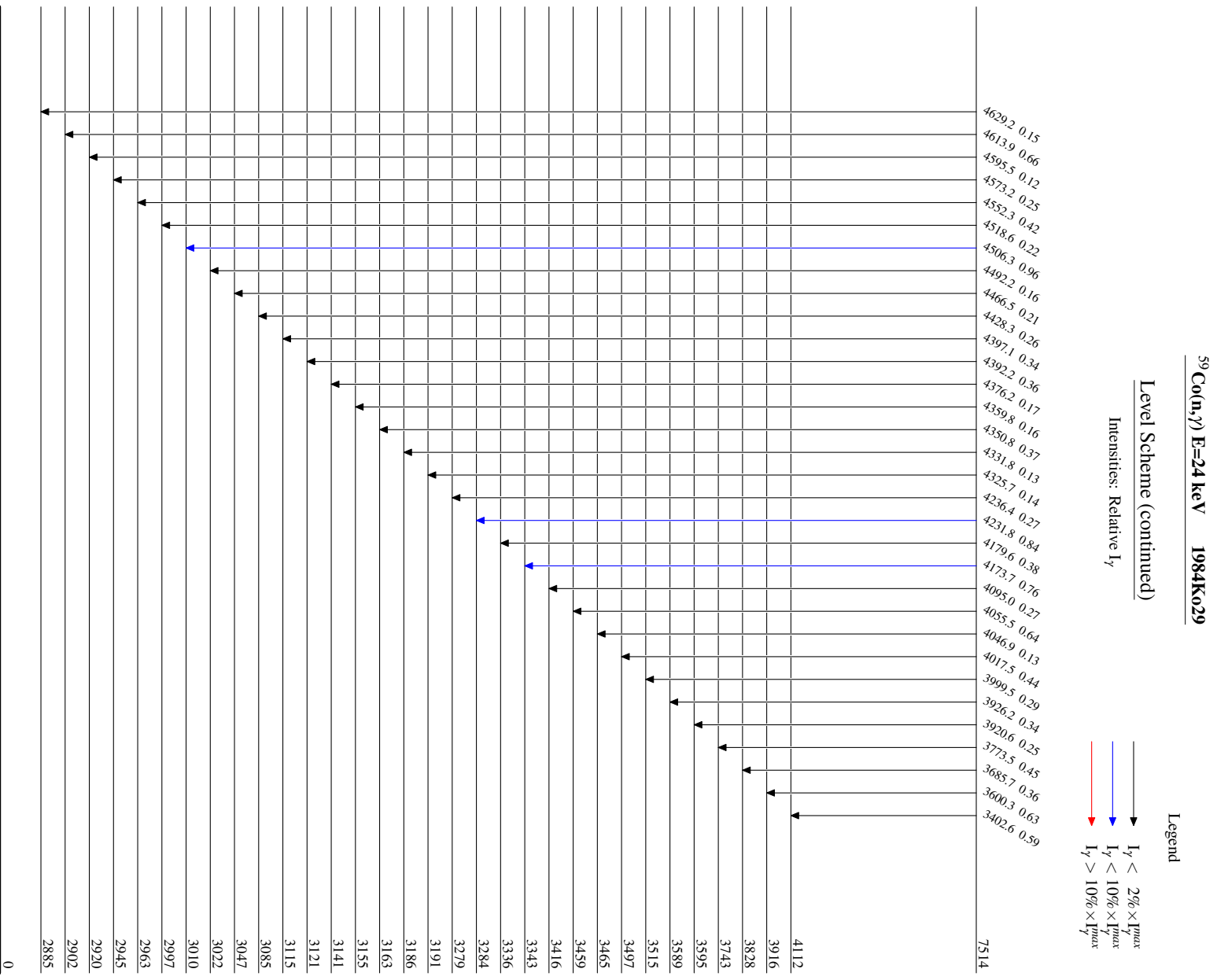
Intensities: Relative I_γ

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}



⁶⁰Co₃₃⁻⁴



⁶⁰Co₃₃