

¹⁵³Eu(p,d), ¹⁵³Eu(d,t) 1978Vo05

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. J. Martin	NDS 114,1497 (2013)	31-Aug-2013

J(¹⁵³Eu)=5/2⁺.

¹⁵³Eu(p,d): E=18 MeV, FWHM=2.5 keV; measures $\sigma(E,\theta)$.

¹⁵³Eu(d,t): E=12 MeV, FWHM=8 keV; measured $\sigma(E,\theta)$.

Other: ¹⁵³Eu(³He, α): E=24 MeV; measured $\sigma(E)$ (1978JoZZ).

¹⁵²Eu Levels

(d,t) and (p,d) intensities are given in arbitrary units.

E(level) [†]	Comments
0.0	(d,t) intensity at 60°=11. (p,d) intensity at 30°=11.
65.5	(d,t) intensity at 60°=16. (p,d) intensity at 30°=9.
76.8	(p,d) intensity at 30°=5.
89.9 [‡]	(d,t) intensity at 60°=187. (p,d) intensity at 30°=87.
108.2 [‡]	(p,d) intensity at 30°=10.
111.2	(d,t) intensity at 60°=49. (p,d) intensity at 30°=9.
113.9	(p,d) intensity at 30°=14.
118.2	(p,d) intensity at 30°=5.
120.9	(p,d) intensity at 30°=11.
124.5	(d,t) intensity at 60°=114. (p,d) intensity at 30°=38.
141.5	(p,d) intensity at 30°=14.
147.7 [‡]	(d,t) intensity at 60°=99. (p,d) intensity at 30°=39.
161.0	(d,t) intensity at 60°=23. (p,d) intensity at 30°=14.
174.9	(d,t) intensity at 60°=32. (p,d) intensity at 30°=16.
192.5	(p,d) intensity at 30°=4.
197.2	(p,d) intensity at 30°=6.
202.5 [‡]	(d,t) intensity at 60°=63. (p,d) intensity at 30°=24.
214.1 [‡]	(d,t) intensity at 60°=59. (p,d) intensity at 30°=25.
221.1 [‡]	(p,d) intensity at 30°=8.
224.2	(d,t) intensity at 60°=59. (p,d) intensity at 30°=6.
227.5	(p,d) intensity at 30°=19.
237.4 [‡]	(p,d) intensity at 30°=14.
248.7 [‡]	(d,t) intensity at 60°=353. (p,d) intensity at 30°=286.
253.2	(p,d) intensity at 30°=73.
265.3	(p,d) intensity at 30°=10.
267.1	(d,t) intensity at 60°=45. (p,d) intensity at 30°=7.
272.1	(p,d) intensity at 30°=40.
283.3	(d,t) intensity at 60°=119.

Continued on next page (footnotes at end of table)

$^{153}\text{Eu}(\text{p,d}), ^{153}\text{Eu}(\text{d,t})$ **1978Vo05 (continued)** ^{152}Eu Levels (continued)

E(level) [†]	Comments
294.0	(p,d) intensity at 30°=70. (d,t) intensity at 60°=30.
300.5	(p,d) intensity at 30°=14. (d,t) intensity at 60°=29.
302.7	(p,d) intensity at 30°=22.
321.2	(p,d) intensity at 30°=8.
324.4	(p,d) intensity at 30°=24. The authors report a combined (d,t) intensity of 62 for the 321.2 and 324.4 levels.
333.0	(p,d) intensity at 30°=23.
338.5 [‡]	The authors report a combined (d,t) intensity of 62 for the 321.2 and 324.4 levels. (p,d) intensity at 30°=13.
340.5 [‡]	(p,d) intensity at 30°=12.
345.8	(p,d) intensity at 30°=3. (d,t) intensity at 60°=107.
350.7	(p,d) intensity at 30°=83.
359.8	(p,d) intensity at 30°=20. (d,t) intensity at 60°=40. (p,d) intensity at 30°=23. The (d,t) intensity may include the 350.7 level.
367.3	(p,d) intensity at 30°=5.
375.6	(p,d) intensity at 30°=6.
378.8	(p,d) intensity at 30°=19.
387.3	(p,d) intensity at 30°=4.
393.2	(p,d) intensity at 30°=5.
396.7	(p,d) intensity at 30°=6.
402.4	(p,d) intensity at 30°=24.
413.1	(d,t) intensity at 60°=57. (p,d) intensity at 30°=13. The (d,t) intensity may include the 416.4 level.
416.4	(p,d) intensity at 30°=42.
435.0	(d,t) intensity at 60°=24. (p,d) intensity at 30°=43.
446.4	(d,t) intensity at 60°=145. (p,d) intensity at 30°=70.
456.5	(d,t) intensity at 60°=83. (p,d) intensity at 30°=37.
459.3	(p,d) intensity at 30°=41.
471.0	(p,d) intensity at 30°=4.
482.9	(d,t) intensity at 60°=237. (p,d) intensity at 30°=330.
494.4	(d,t) intensity at 60°=31. (p,d) intensity at 30°=30.
501.4	(p,d) intensity at 30°=15.
512.1	(p,d) intensity at 30°=9.

[†] From $^{153}\text{Eu}(\text{p,d})$. Levels seen in (d,t) have an entry in the intensity column.

[‡] The peaks contain more than one level.