## <sup>153</sup>Eu(p,d), <sup>153</sup>Eu(d,t) 1978Vo05

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

J(<sup>153</sup>Eu)=5/2<sup>+</sup>. <sup>153</sup>Eu(p,d): E=18 MeV, FWHM=2.5 keV; measures  $\sigma(E,\theta)$ . <sup>153</sup>Eu(d,t): E=12 MeV, FWHM=8 keV; measured  $\sigma(E,\theta)$ .

Other: <sup>153</sup>Eu(<sup>3</sup>He, $\alpha$ ): E=24 MeV; measured  $\sigma$ (E) (1978JoZZ).

## <sup>152</sup>Eu Levels

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

0.0       (d) intensity at $00^{\circ} = 11$ .         (p,d) intensity at $30^{\circ} = 10$ .       (p,d) intensity at $30^{\circ} = 10$ .         (p,d) intensity at $30^{\circ} = 5$ .       (p,d) intensity at $30^{\circ} = 10$ .         (p,d) intensity at $30^{\circ} = 10$ .       (p,d) intensity at $30^{\circ} = 10$ .         (111.2)       (p,d) intensity at $30^{\circ} = 10$ .         (111.2)       (p,d) intensity at $30^{\circ} = 10$ .         (111.2)       (p,d) intensity at $30^{\circ} = 11$ .         (111.2)       (p,d) intensity at $30^{\circ} = 11$ .         (112.4)       (p,d) intensity at $30^{\circ} = 11$ .         (124.5)       (p,d) intensity at $30^{\circ} = 11$ .         (124.5)       (p,d) intensity at $30^{\circ} = 11$ .         (124.5)       (p,d) intensity at $30^{\circ} = 11$ .         (14.7)       (p,d) intensity at $30^{\circ} = 11$ .         (14.7)       (p,d) intensity at $30^{\circ} = 11$ .         (14.7)       (p,d) intensity at $30^{\circ} = 14$ .         (14.7)       (p,d) intensity at $30^{\circ} = 14$ .         (14.7)       (p,d) intensity at $30^{\circ} = 14$ .         (17.4)       (q,d) intensity at $30^{\circ} = 6$ .         (120.5)       (p,d) intensity at $30^{\circ} = 6$ .         (14.7)       (p,d) intensity at $30^{\circ} = 14$ .         (17.4)       (q,d) intensity at $30^{\circ} = 14$ .         (17.2)       (p,d) intensity at	E(level) <sup>†</sup>	Co	mments
65.5 (d,1) intensity at $30^{\circ} = 16$ . (p,d) intensity at $30^{\circ} = 5$ . 89.9 <sup>‡</sup> (d,1) intensity at $30^{\circ} = 187$ . 108.2 <sup>‡</sup> (p,d) intensity at $30^{\circ} = 10$ . 111.2 (d,1) intensity at $30^{\circ} = 10$ . 112.2 (p,d) intensity at $30^{\circ} = 9$ . 113.9 (p,d) intensity at $30^{\circ} = 1$ . 124.5 (d,1) intensity at $30^{\circ} = 14$ . (p,d) intensity at $30^{\circ} = 114$ . (p,d) intensity at $30^{\circ} = 38$ . 141.5 (p,d) intensity at $60^{\circ} = 114$ . (p,d) intensity at $60^{\circ} = 39$ . (p,d) intensity at $60^{\circ} = 39$ . (p,d) intensity at $30^{\circ} = 38$ . 161.0 (d,1) intensity at $30^{\circ} = 38$ . 161.0 (d,1) intensity at $30^{\circ} = 34$ . 161.0 (d,1) intensity at $30^{\circ} = 144$ . 174.7 <sup>‡</sup> (d,1) intensity at $30^{\circ} = 16$ . 192.5 (p,d) intensity at $30^{\circ} = 16$ . 192.5 (p,d) intensity at $30^{\circ} = 44$ . 197.2 (p,d) intensity at $30^{\circ} = 25$ . 202.5 <sup>‡</sup> (d,1) intensity at $30^{\circ} = 26$ . 202.5 <sup>‡</sup> (d,1) intensity at $30^{\circ} = 26$ . 202.5 <sup>‡</sup> (d,1) intensity at $30^{\circ} = 25$ . 21.1 <sup>‡</sup> (p,d) intensity at $30^{\circ} = 25$ . 221.1 <sup>‡</sup> (p,d) intensity at $30^{\circ} = 26$ . 233.2 (p,d) intensity at $30^{\circ} = 19$ . 237.4 (d,1) intensity at $30^{\circ} = 19$ . 237.5 (p,d) intensity at $30^{\circ} = 19$ . 237.5 (p,d) intensity at $30^{\circ} = 10$ . 237.7 (p,d) intensity at $30^{\circ} = 10$ .	0.0		
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	65 5		
76.8       (p,d) intensity at 30° = 5.         89.9 <sup>4</sup> (d,i) intensity at 30° = 17.         (p,d) intensity at 30° = 17.       (p,d) intensity at 30° = 10.         111.2       (d,i) intensity at 30° = 10.         (p,d) intensity at 30° = 14.       (p,d) intensity at 30° = 14.         118.2       (p,d) intensity at 30° = 14.         (p,d) intensity at 30° = 14.       (p,d) intensity at 30° = 14.         (p,d) intensity at 30° = 14.       (p,d) intensity at 30° = 38.         141.5       (p,d) intensity at 30° = 39.         (6.10       (d,t) intensity at 30° = 14.         147.7 <sup>4</sup> (d,t) intensity at 30° = 14.         174.9       (p,d) intensity at 30° = 16.         197.2       (p,d) intensity at 30° = 6.         202.5 <sup>4</sup> (d,t) intensity at 30° = 24.         21.1 <sup>4</sup> (d,t) intensity at 30° = 25.         22.1.1 <sup>4</sup> (p,d) intensity at 30° = 19.         237.4 <sup>4</sup> (p,d) intensity at 30° = 19.         237.4 <sup>4</sup> (p,d) intensity at 30° = 10.	05.5		
89.9 <sup>4</sup> (d,t) intensity at $60^{\circ}=187$ , (p,d) intensity at $30^{\circ}=87$ . 111.2 (d,t) intensity at $30^{\circ}=10$ . 111.2 (d,t) intensity at $30^{\circ}=10$ . 111.2 (d,t) intensity at $30^{\circ}=10$ . 113.9 (p,d) intensity at $30^{\circ}=14$ . 118.2 (p,d) intensity at $30^{\circ}=14$ . 118.2 (p,d) intensity at $30^{\circ}=11$ . 124.5 (d,t) intensity at $30^{\circ}=114$ . 124.5 (d,t) intensity at $30^{\circ}=14$ . 141.5 (p,d) intensity at $30^{\circ}=14$ . 147.7 <sup>4</sup> (d,t) intensity at $30^{\circ}=14$ . 147.7 <sup>4</sup> (d,t) intensity at $30^{\circ}=14$ . 147.7 <sup>5</sup> (d,t) intensity at $30^{\circ}=14$ . 147.9 (d,t) intensity at $30^{\circ}=14$ . 147.9 (d,t) intensity at $30^{\circ}=14$ . 152.5 (p,d) intensity at $30^{\circ}=14$ . 153.7 (p,d) intensity at $30^{\circ}=14$ . 154.1 (d,t) intensity at $30^{\circ}=14$ . 154.1 (d,t) intensity at $30^{\circ}=24$ . 154.1 (d,t) intensity at $30^{\circ}=24$ . 154.1 (d,t) intensity at $30^{\circ}=24$ . 155.2 (p,d) intensity at $30^{\circ}=10$ . 157.5 (p,d) intensity at $30^{\circ}=10$ . 157.1 (d,t) intensity at $30^{\circ}=10$ . 157.1 (d,t	76.8		
$ \begin{array}{c} (p,d) \text{ intensity at } 30^\circ = 87. \\ 108.2^{\frac{1}{2}} & (p,d) \text{ intensity at } 00^\circ = 49. \\ (p,d) \text{ intensity at } 30^\circ = 9. \\ (p,d) \text{ intensity at } 30^\circ = 14. \\ 118.2 & (p,d) \text{ intensity at } 30^\circ = 14. \\ 124.5 & (d,d) \text{ intensity at } 30^\circ = 114. \\ (p,d) \text{ intensity at } 30^\circ = 114. \\ (p,d) \text{ intensity at } 30^\circ = 38. \\ 141.5 & (p,d) \text{ intensity at } 30^\circ = 39. \\ (p,d) \text{ intensity at } 30^\circ = 39. \\ (p,d) \text{ intensity at } 30^\circ = 39. \\ (p,d) \text{ intensity at } 30^\circ = 39. \\ (p,d) \text{ intensity at } 30^\circ = 14. \\ 147.7^{\frac{1}{2}} & (d,d) \text{ intensity } at 30^\circ = 14. \\ 147.7^{\frac{1}{2}} & (d,d) \text{ intensity } at 30^\circ = 14. \\ 147.7^{\frac{1}{2}} & (d,d) \text{ intensity } at 30^\circ = 14. \\ 174.9 & (d,d) \text{ intensity } at 30^\circ = 14. \\ 174.9 & (d,d) \text{ intensity } at 30^\circ = 14. \\ 197.2 & (p,d) \text{ intensity } at 30^\circ = 16. \\ 192.5 & (p,d) \text{ intensity } at 30^\circ = 16. \\ 192.5 & (p,d) \text{ intensity } at 30^\circ = 6. \\ 202.5^{\frac{1}{2}} & (d,d) \text{ intensity } at 30^\circ = 6. \\ 202.5^{\frac{1}{2}} & (d,d) \text{ intensity } at 30^\circ = 25. \\ 221.1^{\frac{1}{2}} & (p,d) \text{ intensity } at 30^\circ = 25. \\ 221.1^{\frac{1}{2}} & (p,d) \text{ intensity } at 30^\circ = 5. \\ 224.2 & (d,d) \text{ intensity } at 30^\circ = 5. \\ 227.5 & (p,d) \text{ intensity } at 30^\circ = 16. \\ 227.5 & (p,d) \text{ intensity } at 30^\circ = 16. \\ 227.5 & (p,d) \text{ intensity } at 30^\circ = 26. \\ 227.5 & (p,d) \text{ intensity } at 30^\circ = 26. \\ 227.5 & (p,d) \text{ intensity } at 30^\circ = 19. \\ 237.4^{\frac{1}{2}} & (p,d) \text{ intensity } at 30^\circ = 19. \\ 237.4^{\frac{1}{2}} & (p,d) \text{ intensity } at 30^\circ = 10. \\ 265.3 & (p,d) \text{ intensity } at 30^\circ = 10. \\ 265.3 & (p,d) \text{ intensity } at 30^\circ = 73. \\ (p,d) \text{ intensity } at 30^\circ = 73. \\ (p,d) \text{ intensity } at 30^\circ = 10. \\ 267.1 & (d,d) \text{ intensity } at 30^\circ = 10. \\ 267.1 & (d,d) \text{ intensity } at 30^\circ = 10. \\ 267.1 & (d,d) \text{ intensity } at 30^\circ = 74. \\ 272.1 & (p,d) \text{ intensity } at 30^\circ = 74. \\ 272.1 & (p,d) \text{ intensity } at 30^\circ = 74. \\ 272.1 & (p,d) \text{ intensity } at 30^\circ = 74. \\ 272.1 & (p,d) \text{ intensity } at 30^\circ = 74. \\ 272.1 & (p,d) \text{ intensity } at 30^\circ = 74. \\ 272.$			
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147.7 <sup>‡</sup> (d.t) intensity at $60^{\circ} = 99$ .         (p,d) intensity at $30^{\circ} = 39$ .         161.0       (d.t) intensity at $60^{\circ} = 23$ .         (p,d) intensity at $30^{\circ} = 14$ .         174.9       (d.t) intensity at $30^{\circ} = 16$ .         192.5       (p,d) intensity at $30^{\circ} = 4$ .         197.2       (p,d) intensity at $30^{\circ} = 6$ .         202.5 <sup>‡</sup> (d.t) intensity at $30^{\circ} = 24$ .         214.1 <sup>‡</sup> (d.t) intensity at $30^{\circ} = 24$ .         214.1 <sup>‡</sup> (d.t) intensity at $30^{\circ} = 25$ .         (p,d) intensity at $30^{\circ} = 16$ .         (p,d) intensity at $30^{\circ} = 25$ .         (p,d) intensity at $30^{\circ} = 25$ .         (p,d) intensity at $30^{\circ} = 16$ .         (p,d) intensity at $30^{\circ} = 16$ .         (p,d) intensity at $30^{\circ} = 19$ .         237.4 <sup>‡</sup> (p,d) intensity at $30^{\circ} = 14$ .         248.7 <sup>‡</sup> (d,t) intensity at $30^{\circ} = 14$ .         248.7 <sup>‡</sup> (d,t) intensity at $30^{\circ} = 13$ .         (p,d) intensity at $30^{\circ} = 10$ .         253.2       (p,d) intensity at $30^{\circ} = 10$ .         265.3       (p,d) intensity at $30^{\circ} = 10$ .         267.1       (	141.5		
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(p,d) intensity at $30^{\circ} = 14$ . 174.9 (d,t) intensity at $30^{\circ} = 16$ . 192.5 (p,d) intensity at $30^{\circ} = 4$ . 197.2 (p,d) intensity at $30^{\circ} = 6$ . 202.5 <sup>‡</sup> (d,t) intensity at $60^{\circ} = 63$ . (p,d) intensity at $30^{\circ} = 24$ . 214.1 <sup>‡</sup> (d,t) intensity at $60^{\circ} = 59$ . (p,d) intensity at $30^{\circ} = 8$ . 224.2 (d,t) intensity at $30^{\circ} = 8$ . 224.2 (d,t) intensity at $30^{\circ} = 6$ . 27.5 (p,d) intensity at $30^{\circ} = 19$ . 237.4 <sup>‡</sup> (p,d) intensity at $30^{\circ} = 14$ . 248.7 <sup>‡</sup> (d,t) intensity at $30^{\circ} = 14$ . 248.7 <sup>‡</sup> (d,t) intensity at $30^{\circ} = 17$ . (p,d) intensity at $30^{\circ} = 10$ . 265.3 (p,d) intensity at $30^{\circ} = 10$ . 267.1 (d,t) intensity at $30^{\circ} = 45$ . (p,d) intensity at $30^{\circ} = 73$ . 272.1 (p,d) intensity at $30^{\circ} = 40$ .		(p,d) intensity at 30°=39.	
174.9       (d,t) intensity at $30^{\circ} = 16$ .         192.5       (p,d) intensity at $30^{\circ} = 4$ .         197.2       (p,d) intensity at $30^{\circ} = 6$ .         202.5 <sup>‡</sup> (d,t) intensity at $30^{\circ} = 24$ .         214.1 <sup>‡</sup> (d,t) intensity at $30^{\circ} = 25$ .         221.1 <sup>‡</sup> (p,d) intensity at $30^{\circ} = 59$ .         (p,d) intensity at $30^{\circ} = 25$ .         224.2       (d,t) intensity at $30^{\circ} = 6$ .         227.5       (p,d) intensity at $30^{\circ} = 19$ .         237.4 <sup>‡</sup> (p,d) intensity at $30^{\circ} = 14$ .         248.7 <sup>‡</sup> (d,t) intensity at $30^{\circ} = 286$ .         253.2       (p,d) intensity at $30^{\circ} = 73$ .         (p,d) intensity at $30^{\circ} = 73$ .         265.3       (p,d) intensity at $30^{\circ} = 10$ .         267.1       (p,d) intensity at $30^{\circ} = 7$ .         272.1       (p,d) intensity at $30^{\circ} = 7$ .	161.0		
192.5       (p,d) intensity at $30^\circ = 4$ .         197.2       (p,d) intensity at $30^\circ = 6$ .         202.5 <sup>‡</sup> (d,t) intensity at $60^\circ = 63$ .         (p,d) intensity at $30^\circ = 24$ .         214.1 <sup>‡</sup> (d,t) intensity at $60^\circ = 59$ .         (p,d) intensity at $30^\circ = 25$ .         221.1 <sup>‡</sup> (p,d) intensity at $30^\circ = 8$ .         224.2       (d,t) intensity at $30^\circ = 6$ .         227.5       (p,d) intensity at $30^\circ = 19$ .         237.4 <sup>‡</sup> (p,d) intensity at $30^\circ = 14$ .         248.7 <sup>‡</sup> (d,t) intensity at $30^\circ = 286$ .         253.2       (p,d) intensity at $30^\circ = 73$ .         265.3       (p,d) intensity at $30^\circ = 73$ .         267.1       (d,t) intensity at $30^\circ = 77$ .         272.1       (p,d) intensity at $30^\circ = 77$ .	174.9		
197.2       (p,d) intensity at 30° = 6.         202.5 <sup>‡</sup> (d,t) intensity at 60° = 63.         (p,d) intensity at 30° = 24.         214.1 <sup>‡</sup> (d,t) intensity at 60° = 59.         (p,d) intensity at 30° = 25.         221.1 <sup>‡</sup> (p,d) intensity at 30° = 8.         224.2       (d,t) intensity at 30° = 6.         (p,d) intensity at 30° = 6.         (p,d) intensity at 30° = 19.         237.4 <sup>‡</sup> (p,d) intensity at 30° = 14.         248.7 <sup>‡</sup> (d,t) intensity at 30° = 286.         (p,d) intensity at 30° = 286.         253.2       (p,d) intensity at 30° = 73.         265.3       (p,d) intensity at 30° = 74.         267.1       (d,t) intensity at 30° = 7.         272.1       (p,d) intensity at 30° = 7.	192.5		
202.5 <sup>‡</sup> (d,t) intensity at $60^{\circ}=63$ . (p,d) intensity at $30^{\circ}=24$ . 214.1 <sup>‡</sup> (d,t) intensity at $60^{\circ}=59$ . (p,d) intensity at $30^{\circ}=25$ . 221.1 <sup>‡</sup> (p,d) intensity at $30^{\circ}=8$ . 224.2 (d,t) intensity at $30^{\circ}=6$ . 227.5 (p,d) intensity at $30^{\circ}=19$ . 237.4 <sup>‡</sup> (p,d) intensity at $30^{\circ}=14$ . 248.7 <sup>‡</sup> (d,t) intensity at $30^{\circ}=286$ . (p,d) intensity at $30^{\circ}=286$ . 253.2 (p,d) intensity at $30^{\circ}=73$ . (p,d) intensity at $30^{\circ}=10$ . 267.1 (d,t) intensity at $30^{\circ}=7$ . (p,d) intensity at $30^{\circ}=7$ . 272.1 (p,d) intensity at $30^{\circ}=40$ .			
(p,d) intensity at $30^{\circ} = 24$ . 214.1 <sup>‡</sup> (d,t) intensity at $30^{\circ} = 59$ . (p,d) intensity at $30^{\circ} = 25$ . 221.1 <sup>‡</sup> (p,d) intensity at $30^{\circ} = 8$ . 224.2 (d,t) intensity at $30^{\circ} = 59$ . (p,d) intensity at $30^{\circ} = 19$ . 227.5 (p,d) intensity at $30^{\circ} = 19$ . 237.4 <sup>‡</sup> (p,d) intensity at $30^{\circ} = 14$ . 248.7 <sup>‡</sup> (d,t) intensity at $30^{\circ} = 286$ . 253.2 (p,d) intensity at $30^{\circ} = 73$ . 265.3 (p,d) intensity at $30^{\circ} = 10$ . 267.1 (d,t) intensity at $30^{\circ} = 7$ . 272.1 (p,d) intensity at $30^{\circ} = 40$ .			
(p,d) intensity at $30^{\circ}=25$ . 221.1 <sup>‡</sup> (p,d) intensity at $30^{\circ}=8$ . 224.2 (d,t) intensity at $30^{\circ}=59$ . (p,d) intensity at $30^{\circ}=6$ . 227.5 (p,d) intensity at $30^{\circ}=19$ . 237.4 <sup>‡</sup> (p,d) intensity at $30^{\circ}=14$ . 248.7 <sup>‡</sup> (d,t) intensity at $60^{\circ}=353$ . (p,d) intensity at $30^{\circ}=286$ . 253.2 (p,d) intensity at $30^{\circ}=73$ . 265.3 (p,d) intensity at $30^{\circ}=10$ . 267.1 (d,t) intensity at $30^{\circ}=7$ . 272.1 (p,d) intensity at $30^{\circ}=40$ .	202.5		
221.1 <sup>‡</sup> (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 <sup>‡</sup> (p,d) intensity at 30°=14. 248.7 <sup>‡</sup> (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 30°=7. 272.1 (p,d) intensity at 30°=40.	214.1 <sup>‡</sup>		
224.2 (d,t) intensity at $60^{\circ} = 59$ . (p,d) intensity at $30^{\circ} = 6$ . 227.5 (p,d) intensity at $30^{\circ} = 19$ . 237.4 <sup>‡</sup> (p,d) intensity at $30^{\circ} = 14$ . 248.7 <sup>‡</sup> (d,t) intensity at $60^{\circ} = 353$ . (p,d) intensity at $30^{\circ} = 286$ . 253.2 (p,d) intensity at $30^{\circ} = 73$ . 265.3 (p,d) intensity at $30^{\circ} = 10$ . 267.1 (d,t) intensity at $30^{\circ} = 7$ . 272.1 (p,d) intensity at $30^{\circ} = 40$ .		(p,d) intensity at $30^\circ = 25$ .	
(p,d) intensity at $30^{\circ} = 6$ . 227.5 (p,d) intensity at $30^{\circ} = 19$ . 237.4 <sup>‡</sup> (p,d) intensity at $30^{\circ} = 14$ . 248.7 <sup>‡</sup> (d,t) intensity at $60^{\circ} = 353$ . (p,d) intensity at $30^{\circ} = 286$ . 253.2 (p,d) intensity at $30^{\circ} = 73$ . 265.3 (p,d) intensity at $30^{\circ} = 10$ . 267.1 (d,t) intensity at $60^{\circ} = 45$ . (p,d) intensity at $30^{\circ} = 7$ . 272.1 (p,d) intensity at $30^{\circ} = 40$ .			
227.5 (p,d) intensity at $30^{\circ}=19$ . 237.4 <sup>‡</sup> (p,d) intensity at $30^{\circ}=14$ . 248.7 <sup>‡</sup> (d,t) intensity at $60^{\circ}=353$ . (p,d) intensity at $30^{\circ}=286$ . 253.2 (p,d) intensity at $30^{\circ}=73$ . 265.3 (p,d) intensity at $30^{\circ}=10$ . 267.1 (d,t) intensity at $60^{\circ}=45$ . (p,d) intensity at $30^{\circ}=7$ . 272.1 (p,d) intensity at $30^{\circ}=40$ .	224.2		
237.4 <sup>‡</sup> (p,d) intensity at 30°=14. 248.7 <sup>‡</sup> (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.	227.5		
248.7 <sup>‡</sup> (d,t) intensity at $60^{\circ}=353$ . (p,d) intensity at $30^{\circ}=286$ . 253.2 (p,d) intensity at $30^{\circ}=73$ . 265.3 (p,d) intensity at $30^{\circ}=10$ . 267.1 (d,t) intensity at $60^{\circ}=45$ . (p,d) intensity at $30^{\circ}=7$ . 272.1 (p,d) intensity at $30^{\circ}=40$ .			
(p,d) intensity at $30^{\circ}=286$ . 253.2 (p,d) intensity at $30^{\circ}=73$ . 265.3 (p,d) intensity at $30^{\circ}=10$ . 267.1 (d,t) intensity at $60^{\circ}=45$ . (p,d) intensity at $30^{\circ}=7$ . 272.1 (p,d) intensity at $30^{\circ}=40$ .			
253.2 (p,d) intensity at $30^{\circ}=73$ . 265.3 (p,d) intensity at $30^{\circ}=10$ . 267.1 (d,t) intensity at $60^{\circ}=45$ . (p,d) intensity at $30^{\circ}=7$ . 272.1 (p,d) intensity at $30^{\circ}=40$ .	248.74		
265.3       (p,d) intensity at $30^\circ = 10$ .         267.1       (d,t) intensity at $60^\circ = 45$ .         (p,d) intensity at $30^\circ = 7$ .         272.1       (p,d) intensity at $30^\circ = 40$ .	253.2		
267.1 (d,t) intensity at $60^\circ$ =45. (p,d) intensity at $30^\circ$ =7. 272.1 (p,d) intensity at $30^\circ$ =40.			
$(p,d)$ intensity at $30^\circ = 7$ . 272.1 $(p,d)$ intensity at $30^\circ = 40$ .			
		(p,d) intensity at $30^\circ = 7$ .	
283.3 (d,t) intensity at $60^{\circ} = 119$ .			
	283.3	$(d,t)$ intensity at $60^\circ = 119$ .	

## <sup>153</sup>Eu(p,d), <sup>153</sup>Eu(d,t) 1978Vo05 (continued)

## <sup>152</sup>Eu Levels (continued)

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

 $^\dagger$  From  $^{153}\text{Eu}(p,d).$  Levels seen in (d,t) have an entry in the intensity column.  $^\ddagger$  The peaks contain more than one level.