

<sup>193</sup>Ir(d,t) **1994Ga05,1991Ke10**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 113, 1871 (2012)	15-Jun-2012

J<sup>π</sup>(target)=3/2<sup>+</sup>.

Other: [1983Ch57](#) Instrumentation paper; [1983Ch57](#) only show energy spectrum for E(d)=14 MeV, θ=45°.

[1991Ke10](#): E(d)=14, 15, 22 MeV; 99.5% <sup>193</sup>Ir target, Q3d spectrograph with multiwire detector and scin; θ(lab)=45°, 120°;

FWHM=3.4 keV or 6-8 keV; measured E, dσ/dΩ.

[1994Ga05](#): E(d)=18 MeV; 98.7% and 99.35% <sup>193</sup>Ir targets 30, 45 μgm/cm<sup>2</sup> thick; magnetic spectrograph with photographic plates; θ(lab)=6-10° (2° steps), 12.5-27.5° (2.5° steps), 30-50° (5° steps), 60° and 70°; FWHM≈5.7 keV (best value 4.5 keV); measured σ(θ). DWBA analysis.

<sup>192</sup>Ir Levels

For band structure, supported by spectroscopic strengths in this and other transfer reactions, see Adopted Levels.

E(level) <sup>†</sup>	L <sup>‡</sup>	S <sup>‡</sup>	Comments
56.9 <sup>#</sup> 3	1,3	0.097,0.06	
62 <sup>#</sup> 1			Absent in <a href="#">1994Ga05</a> ; peak is probably spurious, so level is not adopted.
66.3 2	3	0.216 8	
72? <sup>#</sup> 2			
83.8 3	5	0.55 4	L,S: L=3 (S<0.011) contribution possible ( <a href="#">1994Ga05</a> ).
104.5 1	1	0.061 2	
115.6 <sup>#</sup> 2			E=116.5 1, L=1,3 (S=0.38 2, 0.30 9) for 116+119 doublet ( <a href="#">1994Ga05</a> ).
118.8 <sup>#</sup> 4			E=116.5 1, L=1,3 (S=0.38 2, 0.30 9) for 116+119 doublet ( <a href="#">1994Ga05</a> ).
128.6 3	1	0.039 2	
131? <sup>#</sup> 2			
143.5 2	1,3	0.010,0.027	
192.6 2	1	0.114 3	
198? <sup>#</sup> 2			
212.6 2	1	0.093 3	
225.7 3	1,3	0.066,0.065	
240.2 3	1	0.089 3	
256.8 2	1,3	0.51 3	L,S: L=1 (S<0.022) contribution possible ( <a href="#">1994Ga05</a> ).
266.8 3	1,3	0.026,0.021	
278.2 10	5	0.34 5	
288.1 <sup>#</sup> 3	1	0.173 5	E=288.5 3 for unresolved 288+294 doublet in <a href="#">1994Ga05</a> ; evaluator assigns L and S deduced for doublet to the 288 component because, in <a href="#">1991Ke10</a> , the 294 level contributes only 8% and 14%, respectively, to doublet's dσ/dΩ(15 MeV, 45°) and dσ/dΩ(22 MeV, 120°).
294 <sup>#</sup> 2			
310.5 4	1	0.066 3	
319.7 4	1,3	0.144,0.10	
331.7 4	1	0.159 5	E(level),L,S: for unresolved doublet. E=331.0 2 in <a href="#">1991Ke10</a> .
341? <sup>#</sup> 2			
367.2 4	1,3	0.037,0.245	E(level),L,S: for unresolved doublet.
389.5 <sup>#</sup> 5			E(level): resolved only at E(d)=14 MeV ( <a href="#">1991Ke10</a> ). L=1,3 and S=0.046 4, 0.096 19 for 390+391 doublet ( <a href="#">1994Ga05</a> ).
391.4 <sup>#</sup> 5			E(level): resolved only at E(d)=14 MeV ( <a href="#">1991Ke10</a> ). L=1,3 and S=0.046 4, 0.096 19 for 390+391 doublet ( <a href="#">1994Ga05</a> ).
407.3 <sup>#</sup> 10			
415.0 5	1,3	0.015,0.051	
437.6 5	1,3	0.025,0.067	

Continued on next page (footnotes at end of table)

$^{193}\text{Ir}(\text{d,t})$  **1994Ga05,1991Ke10 (continued)** $^{192}\text{Ir}$  Levels (continued)

E(level) <sup>†</sup>	L <sup>‡</sup>	S <sup>‡</sup>	Comments
444.6 5	1	0.050 2	
451.9 5	1,3	0.014,0.170	
471.3 5	1,3	0.042,0.194	
480.4 <sup>#</sup> 9			
490.9 6	1,3	0.028,0.122	
508.1 5	1,3	0.053,0.089	
517.2 6	1,3	0.031,0.110	
532.5 6	1,3	0.015,0.123	E(level): 530.6 7 in <a href="#">1991Ke10</a> .
537.3 <sup>#</sup> 10			
543.4 <sup>#</sup> 10	1	0.022 2	E(level),L: E=540.4 7 in <a href="#">1994Ga05</a> , suggesting that the 537 and 543 levels are unresolved in <a href="#">1994Ga05</a> ; if so, L and S may be unreliable.
582.6 6	1,3	0.020,0.070	
603.7 7	1	0.019 1	
615.5 7	1	0.014 1	
628.0 7	1,3	0.013,0.209	
646.0 6	1	0.101 3	
662.0 7	1,3	0.049,0.036	
679.0 8	1,3	0.043,0.048	
686.1 8	1,3	0.007,0.131	
702.3 9	1	0.042 2	
712.8 8	1	0.112 4	
737.6 8	1,3	0.046,0.051	
751.9 8	1	0.118 4	
766.0 9	1,3	0.012,0.022	
778.9 9	1	0.023 1	
791.1 9	1	0.024 1	
813.3 9	1,3	0.047,0.121	
825.0 9	1,3	0.027,0.219	
841.7 9	1	0.054 2	
850.3 9	1	0.138 5	
862.7 20	1	0.042 2	
874.1 17	1,3	0.32,0.208	
885.1 16	1,3	0.055,0.40	
901.1 22	1,3	0.020,0.113	
918.0 21	1,3	0.006,0.047	
938.3 16	1	0.013 1	
967.2 22	1	0.017 1	
1001.3 19	1	0.015 1	
1015.0 19	1	0.031 2	
1023.6 24	1,3	0.031,0.048	
1053 3	1,3	0.004,0.067	
1060.5 25			
1078.2 16			
1091 3			

<sup>†</sup> From [1994Ga05](#), except as noted. Uncertainties include systematic uncertainty arising from spectrograph calibration. Values are relative to E=56.7 for the 57 level.

<sup>‡</sup> From comparison of experimental  $\sigma(\theta)$  with  $\sigma(\theta)$ (DWBA) ([1994Ga05](#)); normalization factor=3.33. See [1994Ga05](#) for uncertainties in S whenever two S values are listed.

<sup>#</sup> From [1991Ke10](#); average of authors' data from (d,t) and (d,p).