^{151}Eu(n,γ) E=resonance 2006MuZX,1978Vo05

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$J^\pi(^{151}Eu)=5/2^+$. SN=6306.71 10.

Properties of 103 resonances from 0.321 eV to 98.61 eV are given in the compilation 2006MuZX. 1978Vo05 measured primary transitions from the 0.321, 0.460, 1.055, 2.717, and 3.368 resonances, all with $J^\pi=3^+$ except $J^\pi=2^+$ for the 3.368 resonance. properties of these resonances with known J^π are given below. all levels are populated by primary gammas from both 3^+ and 2^+, except where noted otherwise. Details, and uncertainties in Eγ are given in 1978VoZP.

From the resonances up to 1 keV, 2006MuZX give α resonance integral of 3300 b *300*, an average s wave resonance spacing of 0.73 eV *7*, and a neutron strength function of 3.4×10^{-4} *3*. the maxwellian-averaged cross-section at KT=30 keV is 3.46 b *10*.

^{152}Eu Levels

E(level)†	E(level)†	Jπ	L@&	S‡#
0	294.5 *5*			
77.4[d] *3*	300.7[a] *8*			
89.8[d] *4*	304.0[b] *16*			
106? *2*	309.3 *6*			
110.7[a] *11*	321.9[a] *5*			
118.4 *3*	324.1[a] *10*			
124.8[a] *9*	334.1[a] *6*			
141.3[a] *5*	336.8[b] *16*			
147.0[b] *16*	341.3[d] *7*			
150.2[a] *4*	343.3[a] *16*			
157.3[a] *10*	350.8 *5*			
160.7[c] *8*	361.4[b] *16*			
174.2 *7*	384.8 *3*			
179.2[ad] *6*	394.0[a] *9*			
199.7[ad] *16*	399.9 *6*			
201.0[a] *7*	412.5[a] *5*			
203.0[b] *10*	415.0[d] *10*			
214.2[b] *8*	436.6 *3*			
220.8 *4*	442.9 *6*			
223.2[a] *8*	462.2[a] *6*			
227.7 *7*	470.7 *5*			
237.5 *3*	491.6[a] *5*			
246.9 *4*	510.7[a] *5*			
249.1[bd] *8*	S(n)+0.321 *1*	3^+	79.5 20	0.0735 *20*
254.1[a] *11*	S(n)+0.460 *1*	3^+	87 2	0.572 *15*
265.0[a] *3*	S(n)+1.055 *3*	3^+	88 3	0.1095 *25*
266.9 *4*	S(n)+1.815 *7*	$2^+,3^+$		0.012 *3*
273.8 *11*	S(n)+2.717 *5*	3^+	94 3	0.075 *5*
285.5 *3*	S(n)+3.368 *6*	2^+	93 3	0.498 *25*

† Resonance energies, in eV, are given in the lab coordinate system.
‡ Label=g*WIDTHN.
# Reduced neutron widths in meV.
@ Label=$\Gamma_{\gamma 0}$.
& Units are meV.
[a] Populated by primary γ's only from 3^+ resonances.

Continued on next page (footnotes at end of table)

^{151}Eu(n,γ) E=resonance 2006MuZX,1978Vo05 (continued)

^{152}Eu Levels (continued)

[b] Populated by primary γ's only from 2^+ resonance.
[c] Primary γ from 2^+ resonance shows doublet structure.
[d] Probable doublet.