^{157}Gd(p,t) 1973Lo08

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 160, 1 (2019)	21-Oct-2019

E(p)=18 MeV. Enriched (93.7% ^{157}Gd) target having thickness of ≈50 μg/cm^2 evaporated on carbon foil of thickness ≈50 μg/cm^2. Tritons were analyzed in an Enge split-pole spectrograph at angles of 10°, 25° and 40°.

Measured Q(p,t)=−6850 keV *7*. Two-neutron separation energy=15332 keV *7* was calculated from measured Q(p,t) values for odd-A Gd isotopes.

^{155}Gd Levels

E(level)	Jπ#	L	S†‡	E(level)	Jπ#	L	S†‡	E(level)	Jπ#	S†‡
0.0@	3/2−	0	493	450& *2*	3/2−		8	650a *2*	5/2−	10
61@ *2*	5/2−		48	558b *2*	1/2−		8	729a *2*	(7/2−)	4
148@ *2*	7/2−		21	594a *2*	3/2−	0	82	1030 *2*		23
288 *2*	3/2−		≈4	618 *2*			4			

† Label=dσ/dΩ(μb/sr).
‡ Values at θ=25°.
# From Adopted Levels.
@ Band(A): 3/2(521) g.s. band.
& Band(B): 1/2(521) band.
a Band(C): "β-vibrational" band built on g.s. (Kπ=3/2−).
b Band(D): 1/2(521) band.

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Band(C): "β-vibrational' ' band built on g.s. ($K^{\pi}=3/2^{-}$)

$(7/2^{-})$ 729

$5/2^{-}$ 650

$3/2^{-}$ 594

Band(D): 1/2(521) band

$1/2^{-}$ 558

Band(B): 1/2(521) band

$3/2^{-}$ 450

Band(A): 3/2(521) g.s. band

$7/2^{-}$ 148

$5/2^{-}$ 61

$3/2^{-}$ 0.0