^{160}Dy(d,d′) 1968Gr08

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 176, 1 (2021)	1-May-2021

Additional information 1.

E(d)=12 MeV. Isotope-separated targets (>99% ^{160}Dy) of thickness ≈ 40 μg/cm^2. Broad-range magnetic spectrograph having an energy resolution (FWHM) of ≈8 keV. Measured absolute inelastic cross sections at θ=60°, 90° and 125°.

^{160}Dy Levels

The quantity R represents the ratio of the 90° to 125° cross sections. Values of R≈1.4 are generally indicative of E3 excitations and those ≈2.1 of E2 excitations, while ratios <1 usually indicate multiple excitations (1968Gr08).

E(level)	Jπ†	dσ/dΩ(μb/sr)‡	Comments
0	0$^+$	50900	R=4.75.
86	2$^+$	6120	B(E2)↑=4.75 B(E2)↑: deduced by 1968Gr08 from the measured cross section assuming dσ/dΩ(θ=90°)=1290×B(E2). R=2.34.
284	4$^+$	145	R=1.21.
581	6$^+$	11	R=0.56.
966	2$^+$	130	B(E2)↑=0.148 B(E2)↑: deduced by 1968Gr08 from the measured cross section at 90° assuming dσ/dΩ=880×B(E2). R=2.88.
1156	4$^+$	30	R=1.00.
1288	3$^-$	163	B(E3)↑=0.123 B(E3)↑: deduced by 1968Gr08 from measured cross section at 90° assuming dσ/dΩ=1400×B(E3). R=1.35.
1350		21	R=2.20.
1408	5$^-$		R<1. dσ/dΩ(θ=125°)=13 μb/sr, but level not observed in (d,d′) spectrum at 90°. Jπ: 1968Gr08 report J^π=(5$^-$).
1578		7	R=1.77.
1643		14	R=0.79.
1656		10	R=1.15.
1875		7	R=0.75.
1904		4	R=0.64.
2129		8	
2143		13	
2190		8	R=1.81.
2359		15	

† Listed assignments are those of 1968Gr08 and are based on measured R values and considerations of level structure in doubly even deformed nuclei. These are the same as the Adopted Values, except where noted otherwise.

‡ Values at θ=90°.