^{161}Dy(^{58}Ni,^{160}Dyγ) 1995Wu01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 151, 1 (2018)	1-Apr-2018

E(^{58}Ni)=265 MeV, 95.9% ^{161}Dy target; γ detector array (8 Compton-suppressed Ge + 12 NaI), position-sensitive parallel-plate avalanche counter covering 120°<θ<154°; measured Eγ, Iγ, for Dy-like particles and for Ni-like particles, γ(^{59}Ni)-γ(^{160}Dy) coin; DWBA calculations.

^{59}Ni Levels

E(level)†
0.0
339
465
878
1170?‡
1189
1302
1338
1680
1948

† From spectrum in fig. 2 of 1995Wu01.

‡ No other firm evidence exists for this level. Considering its low excitation energy, one would expect it to have already been seen in some other studies. 1995Wu01 suggest that it could be the 1160 level reported in (α,^{3}He), but the evaluator does not consider that the available evidence warrants the adoption of an additional level at such low excitation and assumes that (α,^{3}He) excited the well-established 1190 level (even though the tentative L is not consistent with that level's adopted J$^\pi$).

γ(^{59}Ni)

E$_\gamma$†	E$_i$(level)	E$_f$	Comments
339	339	0.0	
465	465	0.0	
878	878	0.0	
999	1338	339	
1170‡ *3*	1170?	0.0	E$_\gamma$: from text of 1995Wu01. Identified as ^{59}Ni line through its correlation with known ^{160}Dy γ's. However, see comment on 1170 level energy.
1189	1189	0.0	
1302	1302	0.0	
1338	1338	0.0	
1341	1680	339	
1948	1948	0.0	

† From level-energy difference, except as noted; authors do not report uncertainties.

‡ Placement of transition in the level scheme is uncertain.

Legend

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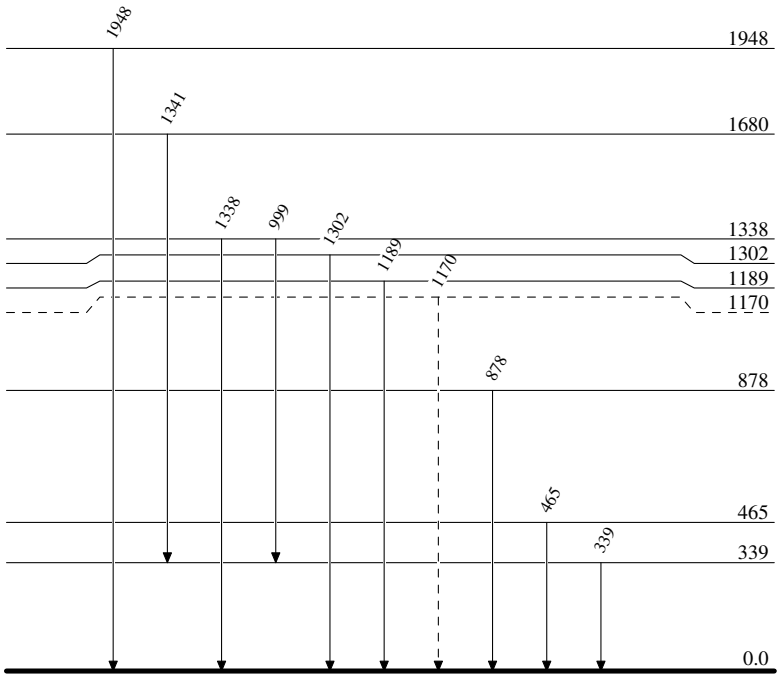
Level Scheme

γ Decay (Uncertain)



$^{59}_{28}Ni_{31}$