

$^{144}\text{Sm}(^{12}\text{C},2\text{p}4\text{n}\gamma)$ 1979Ha29

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, A. A. Sonzogni		NDS 114, 435 (2013)	1-Apr-2013

E=80 MeV.

 ^{150}Dy Levels

E(level)	J^π	E(level)	J^π	E(level)	J^π	E(level)	J^π
0.0	0 ⁺	1851.0 17	6 ⁺	3835.0 24	12 ⁺	5072 3	18 ⁺
804.0 10	2 ⁺	2402.0 20	8 ⁺	4338 3	14 ⁺	5814 3	19 ⁻
1457.0 14	4 ⁺	3026.0 22	10 ⁺	4568 3	16 ⁺	6020 3	20 ⁻

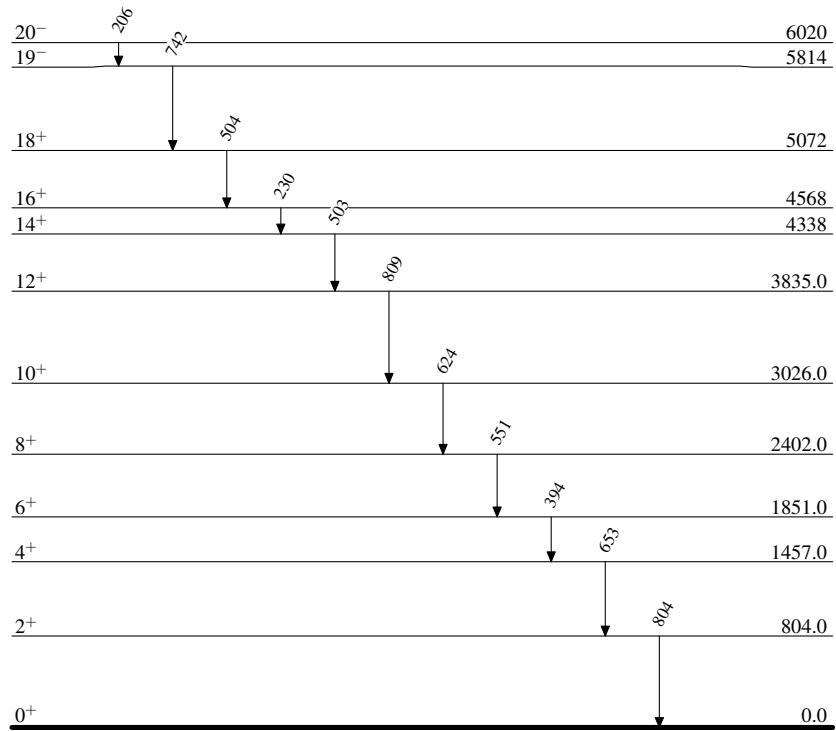
 $\gamma(^{150}\text{Dy})$

The authors show a number of peaks in a γ -ray spectrum obtained in the reaction $^{144}\text{Sm}+^{12}\text{C}(E=80\text{ MeV})$, which they identify as belonging to ^{150}Dy . The evaluators have placed these γ rays in a level scheme similar to that of [1980LuZV](#) in ($\alpha,6\text{n}\gamma$). Every labeled peak can be associated with a transition given by [1980LuZV](#). J^π are from Adopted Levels.

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Comments
206	6020	20 ⁻	5814	19 ⁻	
230	4568	16 ⁺	4338	14 ⁺	
394	1851.0	6 ⁺	1457.0	4 ⁺	
503	4338	14 ⁺	3835.0	12 ⁺	E_γ : the evaluators assume that a peak in 1979Ha29 labeled as 504 keV is a mixed peak of 503- and 504-keV γ -rays since 1980LuZV show the 503 transition to be twice as intense as the 504. If the 504 is seen, then the 503 should also be seen since it is below the 504 in a direct γ -ray cascade.
504	5072	18 ⁺	4568	16 ⁺	
551	2402.0	8 ⁺	1851.0	6 ⁺	
624	3026.0	10 ⁺	2402.0	8 ⁺	
653	1457.0	4 ⁺	804.0	2 ⁺	
742	5814	19 ⁻	5072	18 ⁺	E_γ : 1979Ha29 do not identify a 742 peak but the published spectrum contains an unlabeled 743-keV peak which could have a 742-keV component related to this transition. The transition directly above this one in the decay scheme is identified by 1979Ha29 .
804	804.0	2 ⁺	0.0	0 ⁺	
809	3835.0	12 ⁺	3026.0	10 ⁺	

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Level Scheme

 $^{150}_{66}\text{Dy}_{84}$