^{146}Dy IT decay (150 ms) 1982Gu07

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov, A. Rodionov and G. Shulyak	NDS 136, 163 (2016)	14-Jul-2016

Parent: ^{146}Dy: E=2934.5 *4*; J^π=(10$^+$); $T_{1/2}$=150 ms *20*; %IT decay=100.0
^{146}Dy-E from 'Adopted Levels', J^π, $T_{1/2}$ and %IT from 1982Gu07.
1982Gu07: ^{146}Dy(IT) [from ^{90}Zr(^{58}Ni,2p), E=233, 250 MeV]; measured Eγ, Iγ, $\gamma\gamma$, γ(ce) coin, $T_{1/2}$. Deduced levels, J^π, α(exp), isomer. Ge(Li), Si(Li) detectors, solenoidal β spectrometer, pulsed beam.

^{146}Dy Levels

E(level)[†]	J^π[‡]	$T_{1/2}$[‡]
0.0	0$^+$	
682.62 *18*	2$^+$	
1607.75 *21*	(4$^+$)	
1782.8 *3*	(3$^-$)	
2281.24 *23*	(5$^-$)	
2519.1 *4*	(7$^-$)	
2808.7 *6*	(7$^-$)	
2934.5 *4*	(10$^+$)	150 ms *20*

† From 'Adopted Levels'.
‡ From 1982Gu07.

γ(^{146}Dy)

Iγ normalization: from Σ(Iγ(1+α) to g.s.)=100.
α(exp): normalized to α(K)(721γ) for M4 transition in isomeric ^{145}Gd (1982Gu07).

E$_\gamma$[†]	I$_\gamma$[†@]	E$_i$(level)	J_i^π	E$_f$	J_f^π	Mult.[‡]	α[#]	Comments
127.0 *3*	3	2934.5	(10$^+$)	2808.7	(7$^-$)	E3	13.34 *25*	α(K)exp=4.6 *25*; α(L)exp=8.7 *17*; α(M)exp=1.6 *6* α(K)=2.16 *4*; α(L)=8.51 *17*; α(M)=2.13 *5* α(N)=0.481 *10*; α(O)=0.0569 *11*; α(P)=0.0001219 *20*
237.2 *3*	101	2519.1	(7$^-$)	2281.24	(5$^-$)	E2	0.1350	α(K)exp=0.07 *3* α(K)=0.0957 *14*; α(L)=0.0304 *5*; α(M)=0.00708 *11* α(N)=0.001602 *24*; α(O)=0.000206 *3*; α(P)=4.75×10^{-6} *7*
289.7 *3*	40	2808.7	(7$^-$)	2519.1	(7$^-$)	M1,E2	0.10 *3*	α(K)exp=0.09 *3* α(K)=0.08 *3*; α(L)=0.0147 *5*; α(M)=0.00330 *5* α(N)=0.000756 *15*; α(O)=0.000105 *8*; α(P)=4.6×10^{-6} *19*
416.5 *3*	54	2934.5	(10$^+$)	2519.1	(7$^-$)	(E3)	0.0799	α(K)exp=0.06 *3*; α(L)exp=0.04 *2* α(K)=0.0532 *8*; α(L)=0.0206 *3*; α(M)=0.00488 *7* α(N)=0.001109 *16*; α(O)=0.0001434 *21*; α(P)=3.22×10^{-6} *5*
499.0 *3*	13	2281.24	(5$^-$)	1782.8	(3$^-$)			
673.7 *3*	90	2281.24	(5$^-$)	1607.75	(4$^+$)			
682.9 *3*	100	682.62	2$^+$	0.0	0$^+$	E2	0.00703	α(K)=0.00580 *9*; α(L)=0.000960 *14*; α(M)=0.000213 *3* α(N)=4.90×10^{-5} *7*; α(O)=6.92×10^{-6} *10*; α(P)=3.31×10^{-7} *5*

Continued on next page (footnotes at end of table)

^{146}Dy IT decay (150 ms) 1982Gu07 (continued)

$\gamma(^{146}Dy)$ (continued)

E_γ †	I_γ †@	E_i(level)	J_i^π	E_f	J_f^π
925.3 *3*	106	1607.75	(4^+)	682.62	2^+
1100.0 *3*	16	1782.8	(3^-)	682.62	2^+

† Data are taken from fig. 8 in 1982Gu07. The $\Delta E\gamma$ are assumed by the evaluators to be 0.3 keV as with β decay measurements (1982Gu07).
‡ From α(exp), for 682.9γ is assumed E2 as the transition $2+\rightarrow 0^+$.
# Additional information 1.
@ For absolute intensity per 100 decays, multiply by 0.993 *10*.

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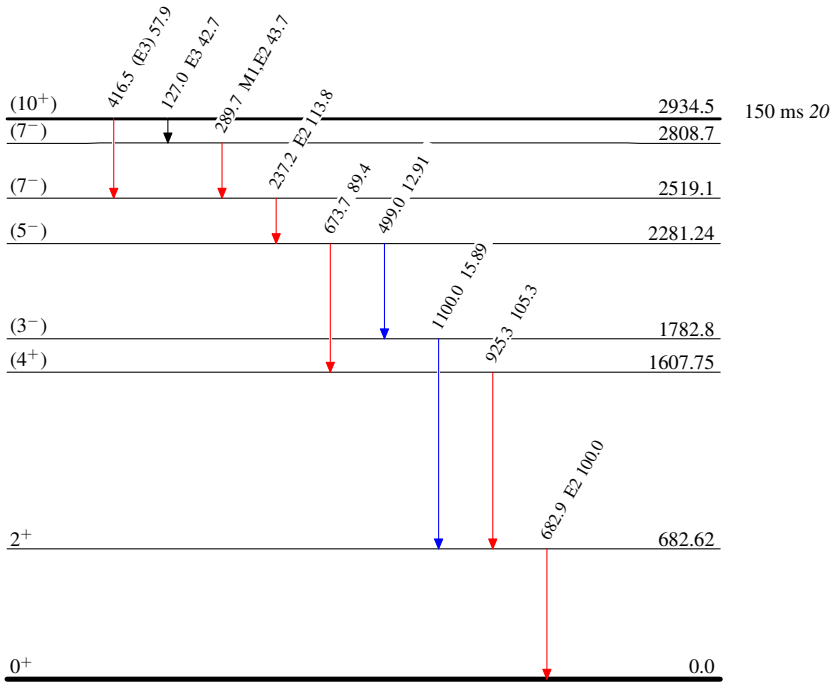
Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
%IT=100.0

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



$^{146}_{66}Dy_{80}$