

¹⁴⁸Nd(⁷Li,5n γ) **1983Ba70**

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

1983Ba70: ¹⁴⁸Nd(⁷Li,5n), E=50 MeV, measured E γ , I γ , $\gamma(\theta)$, γ - γ coinc. The high spin adopted data for ¹⁵⁰Eu is based on the far more comprehensive ¹³⁶Xe(¹⁹F,5n γ) dataset. The band structure is as given by **1983Ba70** and should be used simply to better display the level scheme.

¹⁵⁰Eu Levels

E(level)	J π	T _{1/2}	E(level)	J π	E(level)	J π
588.8 [‡]	8 ⁺	45 ns 3	1371.8+x [@]	(12 ⁻)	2629 [†]	(16 ⁺)
718.2 [‡]	9 ⁺		1786.9+x [@]	(14 ⁻)	2986.5+x [@]	(18 ⁻)
778.8 [†]	10 ⁺		1829 [†]	(14 ⁺)	3097 [#]	(17 ⁻)
1208.0 [‡]	10 ⁺		1837.8 [#] I3	13 ⁽⁻⁾	3704.9+x [@]	(20 ⁻)
1235.7 [†]	12 ⁺		2343.90+x [@] I3	(16 ⁻)		
1371.8 [#]	11 ⁽⁻⁾		2430 [#]	(15 ⁻)		

- [†] Band(A): Cascade 1.
- [‡] Band(B): Cascade 2.
- [#] Band(C): Cascade 3.
- [@] Band(D): Cascade 4.

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

E γ	I γ [†]	E _i (level)	J π _i	E _f	J π _f	E γ	I γ [†]	E _i (level)	J π _i	E _f	J π _f
x [‡]		1371.8+x	(12 ⁻)	1371.8	11 ⁽⁻⁾	556.7	258	2343.90+x	(16 ⁻)	1786.9+x	(14 ⁻)
129.38	270	718.2	9 ⁺	588.8	8 ⁺	592.8		1371.8	11 ⁽⁻⁾	778.8	10 ⁺
163.66	297	1371.8	11 ⁽⁻⁾	1208.0	10 ⁺	592.8		1829	(14 ⁺)	1235.7	12 ⁺
190.34	375	778.8	10 ⁺	588.8	8 ⁺	592.8		2430	(15 ⁻)	1837.8	13 ⁽⁻⁾
415.10	234	1786.9+x	(14 ⁻)	1371.8+x	(12 ⁻)	619.0	222	1208.0	10 ⁺	588.8	8 ⁺
428.99	83	1208.0	10 ⁺	778.8	10 ⁺	642.9	59	2986.5+x	(18 ⁻)	2343.90+x	(16 ⁻)
456.93	254	1235.7	12 ⁺	778.8	10 ⁺	666.9		3097	(17 ⁻)	2430	(15 ⁻)
465.97	158	1837.8	13 ⁽⁻⁾	1371.8	11 ⁽⁻⁾	718.4	33	3704.9+x	(20 ⁻)	2986.5+x	(18 ⁻)
490.0	106	1208.0	10 ⁺	718.2	9 ⁺	800.0	51	2629	(16 ⁺)	1829	(14 ⁺)

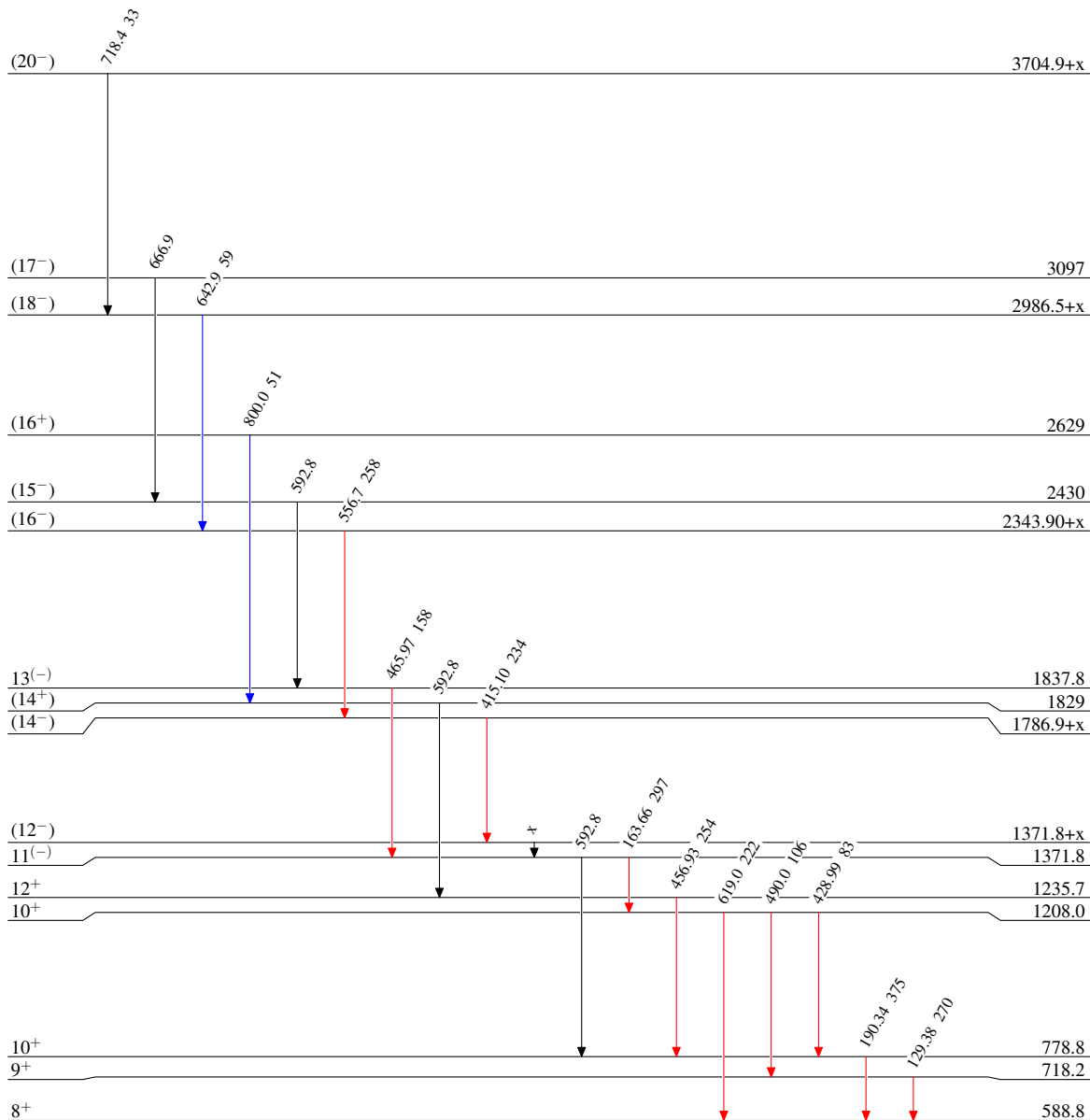
- [†] Per 1000 decays of the 588 level.
- [‡] Placement of transition in the level scheme is uncertain.

$^{148}\text{Nd}(^7\text{Li},5n\gamma)$ 1983Ba70

Legend

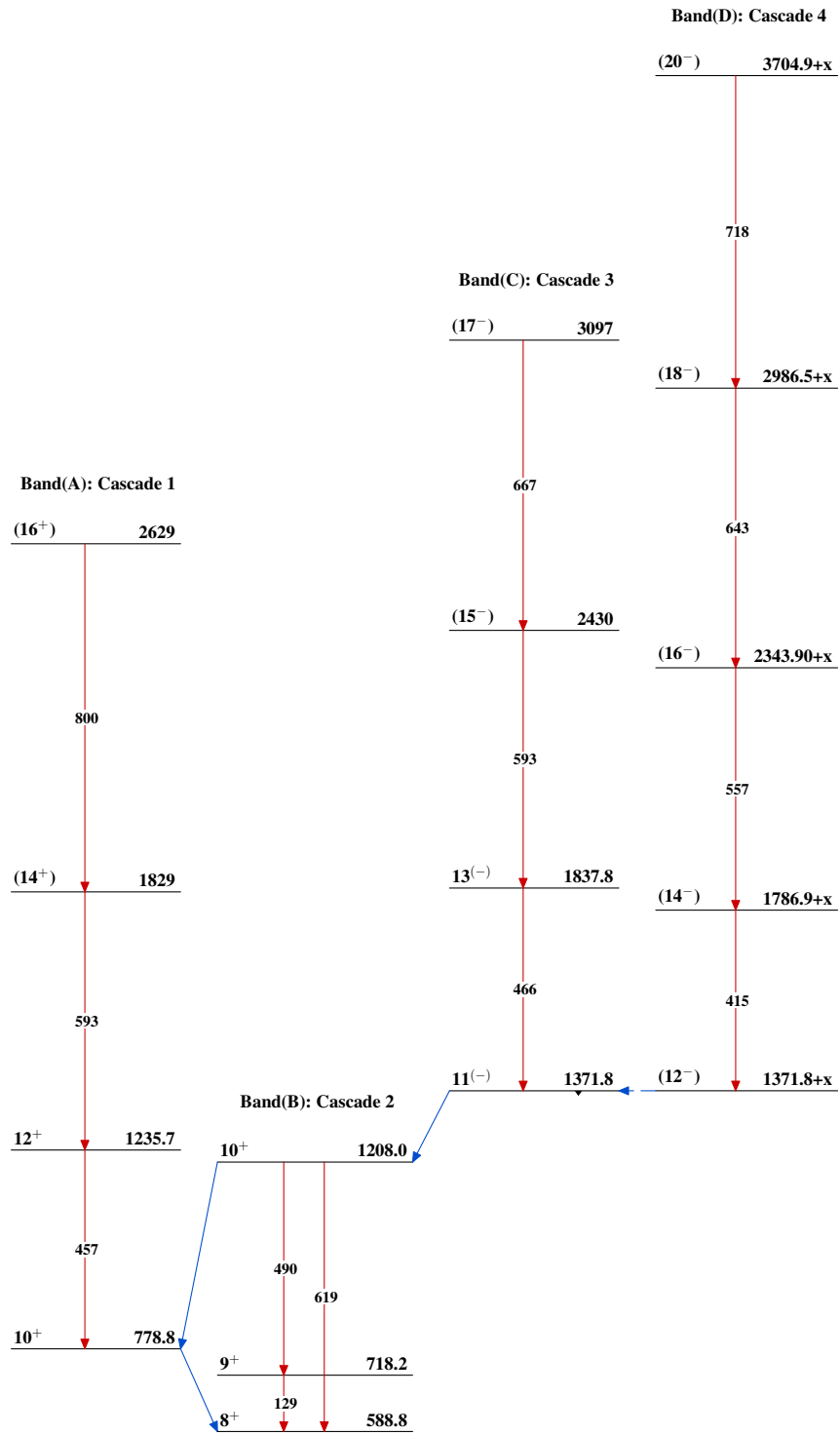
Level Scheme
 Intensities: Type not specified

- ▶ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- ▶ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- ▶ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
- - -▶ γ Decay (Uncertain)



$^{150}_{63}\text{Eu}_{87}$

45 ns 3

$^{148}\text{Nd}(^7\text{Li},5\text{n}\gamma)$ **1983Ba70** $^{150}_{63}\text{Eu}_{87}$