

$^{81}\text{Br}(\text{p},\text{p}'\gamma)$ 1979To08

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia		NDS 199,271 (2025)	1-Sep-2024

$E(\text{p})=4.0$ MeV, 99.6% ^{81}Br target, Ge(Li) detector; measured E_γ , I_γ .

In the course of a study of the $^{81}\text{Br}(\text{p},\text{n}\gamma)$ reaction, authors assign a number of observed γ rays to the $^{81}\text{Br}(\text{p},\text{p}'\gamma)$ reaction but do not place them in a level scheme. The evaluator has tentatively placed all but one of these in a manner consistent with Adopted Levels, Gammas.

 ^{81}Br Levels

$E(\text{level})^\dagger$	Comments
0	
276.2 1	
537.9	
767.0 1	
837.10 15	
1023.7	E(level): no γ observed by 1979To08 to deexcite this level.
1238.11 15	
1350.4 10	
1670.8 3	

† From E_γ .

 $\gamma(^{81}\text{Br})$

E_γ	$I_\gamma^\dagger$	$E_i(\text{level})$	E_f	Comments
276.2 1	31.5 8	276.2	0	
326.0 4	1.4 4	1350.4	1023.7	
537.9		537.9	0	E_γ, I_γ : unresolved from transition in ^{81}Kr .
560.9 1	5.6 5	837.10	276.2	
(747.5)		1023.7	276.2	E_γ : from Adopted Levels; γ expected but not reported in 1979To08.
767.0 1	5.2 5	767.0	0	
835.2		837.10	0	E_γ, I_γ : unresolved from transition in ^{81}Kr . From adopted branching and $I(561\gamma)$ here, $I(835\gamma)=2.3$ 4 is expected for this transition. $I_\gamma=17.7$ 8 for doublet.
961.9 1	3.7 6	1238.11	276.2	
^x 1310.0 3	5.4 6			
1670.8 3	3.1 6	1670.8	0	

† Relative intensity (1979To08).

^x γ ray not placed in level scheme.

⁸¹Br(p,p'γ) 1979To08

Level Scheme

Intensities: Relative I_γ

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- - - - -> γ Decay (Uncertain)

