

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao		NDS 133, 221 (2016)	1-Dec-2015

$S(n)=1078\times 10^1$ 4; $S(p)=218\times 10^1$ 5; $Q(\alpha)=7349$ 4 [2012Wa38](#)

Identification: 600-MeV proton on thorium and mass-separated radon beams by means of a new high temperature thorium spallation target ([1984Ca32](#)).

 ^{198}Rn LevelsCross Reference (XREF) Flags

A ^{202}Ra α decay
B (HL,xn γ)

E(level) [#]	J $\pi^{\ddagger}$	T _{1/2}	XREF	Comments
0.0	0 ⁺ [†]	65 ms 3	AB	$\% \alpha = ?$; $\% \epsilon + \% \beta^+ = ?$ T _{1/2} : The measured half-lives are T _{1/2} =50 ms 9 (1984Ca32), 64 ms 2 (1995Bi17), and 66 ms +3-2 (1999Ta30), 22 ms +110-10 (2005Uu02), 38 ms +13-8 (2014Ka23). The unweighted average of 64 ms 2 and 66 ms +3-2 is 65 ms 3. The uncertainty is increased to cover both measurements, and T _{1/2} (^{198}Rn)=65 ms 3 is adopted here.
339.0 2	(2 ⁺)		B	
749.5 4	(4 ⁺)		B	
1231.0 5	(6 ⁺)		B	
1779.8 7	(8 ⁺)		B	
2383.8 11	(10 ⁺)		B	

[†] From ground state of even-even nuclide.

[‡] From systematics.

[#] From E γ using least-squares fit to E γ values.

 $\gamma(^{198}\text{Rn})$

All data are from (HL,xn γ).

E _i (level)	J $\pi_i^{\dagger}$	E γ	I $\gamma^{\dagger}$	E _f	J $\pi_f^{\dagger}$
339.0	(2 ⁺)	339.0 2	100	0.0	0 ⁺
749.5	(4 ⁺)	410.5 3	100	339.0	(2 ⁺)
1231.0	(6 ⁺)	481.5 3	100	749.5	(4 ⁺)
1779.8	(8 ⁺)	548.8 5	100	1231.0	(6 ⁺)
2383.8	(10 ⁺)	604.0 8	100	1779.8	(8 ⁺)

[†] Relative intensities from each level.

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Level Scheme

Intensities: Relative photon branching from each level

