

^{82}Br β^- decay (6.13 min) 1983Me08

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. K. Tuli, E. Browne		NDS 157, 260 (2019)	1-Mar-2019

Parent: ^{82}Br : $E=45.9492$ 10; $J^\pi=2^-$; $T_{1/2}=6.13$ min 5; $Q(\beta^-)=3093.1$ 10; $\% \beta^-$ decay=2.4 3

^{82}Br - $\% \beta^-$ decay: 2.4% deduced from $\Sigma I\beta$ (6.13 min)/ $\Sigma I\beta$ (35.30 h) (1965Em02). Uncertainty assumed by the evaluators.

1983Me08:Ge(Li), measured E_γ , I_γ , $\gamma\gamma$.

Other: 1970Ra38.

 ^{82}Kr Levels

E(level) [‡]	J^π [†]	E(level) [‡]	J^π [†]	E(level) [‡]	J^π [†]	E(level) [‡]	J^π [†]
0	0 ⁺	1487.56 8	0 ⁺	2093.98 3	3 ⁺	2547.88 7	(3 ⁻)
776.524 10	2 ⁺	1820.6? 4	4 ⁺	2171.64 20	0 ⁺	2556.20 9	(4 ⁺)
1474.901 13	2 ⁺	1956.801 22	(2 ⁺)	2479.71 5	2 ⁺	2655.865 17	2 ⁺

[†] From Adopted Levels.

[‡] From least-squares fit to E_γ .

 β^- radiations

E(decay)	E(level)	$I\beta^-$ [‡]	Log ft	Comments
(483.2 10)	2655.865	0.00111 24	7.58 11	av $E\beta=$ 151.7 6
(582.8 10)	2556.20	0.00047 6	8.42 ^{1u} 8	av $E\beta=$ 211.6 6
(591.2 10)	2547.88	0.0021 3	7.61 9	av $E\beta=$ 192.0 6
(659.3 10)	2479.71	0.00053 8	8.37 9	av $E\beta=$ 218.3 6
(967.4 10)	2171.64	0.00005 3	10.5 ^{1u} 3	av $E\beta=$ 364.8 7
(1045.1 10)	2093.98	0.003 3	8.4 5	av $E\beta=$ 375.9 7
(1182.2 10)	1956.801	0.0056 8	8.29 9	av $E\beta=$ 434.7 7
(1651.5 10)	1487.56	0.00140 20	10.40 ^{1u} 9	av $E\beta=$ 658.2 7
(1664.1 10)	1474.901	0.049 7	7.93 9	av $E\beta=$ 648.7 7
(2362.5 10)	776.524	0.22 3	7.91 8	av $E\beta=$ 971.0 7
(3139.0 10)	0	2.1 3	8.88 ^{1u} 9	av $E\beta=$ 1341.4 7

[†] From intensity imbalance.

[‡] Absolute intensity per 100 decays.

 $\gamma(^{82}\text{Kr})$

I_γ normalization: $I_\gamma(776.5\gamma)=0.258\%$ deduced from growth and decay measurements (1983Me08). Others: 0.23% (1965Em02), 0.15% (1965An01).

E_γ	I_γ [†]	E_i (level)	J_i^π	E_f	J_f^π	E_γ	I_γ [†]	E_i (level)	J_i^π	E_f	J_f^π
619.09 4	0.9 10	2093.98	3 ⁺	1474.901	2 ⁺	1168.50 11	0.14 1	2655.865	2 ⁺	1487.56	0 ⁺
698.37 1	13.1 3	1474.901	2 ⁺	776.524	2 ⁺	^x 1173.4	0.002				
711.2 1	0.68 3	1487.56	0 ⁺	776.524	2 ⁺	1180.27 2	1.52 7	1956.801	(2 ⁺)	776.524	2 ⁺
735.6 3	0.013 15	2556.20	(4 ⁺)	1820.6? 4	4 ⁺	1180.95 1	0.10 7	2655.865	2 ⁺	1474.901	2 ⁺
776.52 1	100.0	776.524	2 ⁺	0	0 ⁺	1317.44 3	0.43 2	2093.98	3 ⁺	776.524	2 ⁺
1072.99 7	0.79 4	2547.88	(3 ⁻)	1474.901	2 ⁺	1395.1 2	0.02 1	2171.64	0 ⁺	776.524	2 ⁺
1081.29 8	0.17	2556.20	(4 ⁺)	1474.901	2 ⁺	1474.88 4	7.64 17	1474.901	2 ⁺	0	0 ⁺

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 ^{82}Br β^- decay (6.13 min) 1983Me08 (continued)

 $\gamma(^{82}\text{Kr})$ (continued)

<u>E_γ</u>	<u>I_γ^\dagger</u>	<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>
1703.19 5	0.11 1	2479.71	2 ⁺	776.524	2 ⁺
1771.0 3	0.03 3	2547.88	(3 ⁻)	776.524	2 ⁺
1879.5 1	0.16 1	2655.865	2 ⁺	776.524	2 ⁺
1956.75 7	0.64 3	1956.801	(2 ⁺)	0	0 ⁺
2479.6 1	0.093 5	2479.71	2 ⁺	0	0 ⁺
2656.0 1	0.028 5	2655.865	2 ⁺	0	0 ⁺

[†] For absolute intensity per 100 decays, multiply by 0.0026 3.

^x γ ray not placed in level scheme.

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Decay Scheme

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

Legend

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

