TypeAuthorCitationLiterature Cutofi DateFull EvaluationYu. Khazov, A. A. Rodionov and S. Sakharov, Balraj SinghNDS 104, 497 (2005)10-Feb-2005Parent: 132 I: E=0.0; $J^r=4^+$; $T_{1/2}=2.295$ h 13; $Q(\beta^-)=3581$ 6; $\%\beta^-$ decay=100.01078Ne08: Measured Ey, Iy. Results of Ey and Iy from previous studies (1971We15 and adopted values in 1970Ca04) combinedwith their own results and also with independent IP measurements from the Livermore group using a chemically-separated 132 Isource. The authors give averaged Ey and Iy as adopted values. Earlier papers from the same laboratory with some of the same authors: 1973Si29, 1972CaYF, 1970Ha11, 1970Ca04 and 1970Ha11.1973Si29: Detailed $\gamma\gamma$ coin data, which form the basis of the level scheme presented here.1980Gi07: $\gamma\gamma(\theta)$, $\gamma(\theta)$; oriented nuclei; Ge(Li) detectors.1970Ca04, 1970Ha11: Measured EY, IY, $\gamma\gamma$, ce with Ge(Li) detectors and magnetic spectrometer.1970Ca04, 1970Ha11: Measured EY, IY, $\gamma\gamma$, ce with Ge(Li) detectors and magnetic spectrometer.1970Ca14, 1970Ha11: Measured EY, IY, $\gamma\gamma$, ce with Ge(Li) detectors for three transitions.1970Ar12, 1969Ar05, 1967Ar12, 1967Yt01, 1966Ar15: measured EY, IY, $\gamma\gamma$.1969He18, 1967He03: γ , ce.Others:1999Fo01: $\beta\gamma$ coin, deduced Q value.1983So04: $\gamma\gamma(\theta)$ using Ge(Li) and Nal(TI) combination.1972Be20, 1969Fr05: $\gamma\gamma(\theta)$, deduced g factor.1972Be20, 1969Fr05: $\gamma\gamma(\theta)$.1963Ha34, 1962Wi14: ce.1963Ha34,	T		History		
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1973De42: $\gamma\gamma(\theta, H)$, deduced g factor. 1972Kr07, 1971Kr16: $\gamma(\theta)$, nuclear orientation; $\gamma\gamma(\theta)$ with Ge(Li) detectors. 1972Be90, 1969Fr05: $\gamma\gamma(\theta)$. 1965Jo13: E γ , I γ , ce, β , $\beta\gamma$. 1965Iv03: ce. 1965Bo23: T _{1/2} , ce. 1963Ha34, 1962Wi14: ce. 1962Ra04: $\gamma\gamma(\theta)$. 1961Ro04: γ , β , $\beta\gamma$, $\gamma\gamma$, $\gamma\gamma(\theta)$. 1961De17: γ , β , $\beta\gamma$, $\gamma\gamma$. 1954Fi36: γ , β , $\beta\gamma$, $\gamma\gamma$. Additional information 1. 1951Ma76: γ , $\gamma\gamma$.	1983SoO4 : $\gamma\gamma(\theta)$ using G	e(Li) and NaI(Tl) combination.			
1972Kr07, 1971Kr16: $\gamma(\theta)$, nuclear orientation; $\gamma\gamma(\theta)$ with Ge(Li) detectors. 1972Be90, 1969Fr05: $\gamma\gamma(\theta)$. 1965Jo13: E γ , I γ , ce, β , $\beta\gamma$. 1965Bo23: T _{1/2} , ce. 1963Ha34, 1962Wi14: ce. 1963Ha34, 1962Wi14: ce. 1962Ra04: $\gamma\gamma(\theta)$. 1961Ro04: γ , β , $\beta\gamma$, $\gamma\gamma$, $\gamma\gamma(\theta)$. 1961De17: γ , β , $\beta\gamma$, $\gamma\gamma$. 1954Fi36: γ , β , $\beta\gamma$, $\gamma\gamma$. Additional information 1. 1951Ma76: γ , $\gamma\gamma$.	1973De42: $\gamma\gamma(\theta, H)$, dedu	iced g factor.			
1972Be90, 1969Fr05: $\gamma\gamma(\theta)$. 1965Jo13: Eγ, Iγ, ce, β, βγ. 1965Iv03: ce. 1965Bo23: T _{1/2} , ce. 1963Ha34, 1962Wi14: ce. 1962Ra04: $\gamma\gamma(\theta)$. 1961Ro04: γ , β, βγ, $\gamma\gamma$, $\gamma\gamma(\theta)$. 1961De17: γ , β, βγ, $\gamma\gamma$. 1954Fi36: γ , β, βγ, $\gamma\gamma$. Additional information 1. 1951Ma76: γ , $\gamma\gamma$.	1972Kr07, 1971Kr16: γ(θ), nuclear orientation; $\gamma\gamma(\theta)$ with Ge(I	Li) detectors.		
1965Jo13: Eγ, Iγ, ce, β, βγ. 1965Iv03: ce. 1965Bo23: T _{1/2} , ce. 1963Ha34, 1962Wi14: ce. 1962Ra04: $\gamma\gamma(\theta)$. 1961Ro04: γ , β, βγ, γγ, $\gamma\gamma(\theta)$. 1961De17: γ , β, βγ, γγ. 1954Fi36: γ , β, βγ, γγ. Additional information 1. 1951Ma76: γ , γγ.	1972Be90, 1969Fr05: γγ	$(\theta).$			
1965Iv03: ce. 1965Bo23: $T_{1/2}$, ce. 1963Ha34, 1962Wi14: ce. 1962Ra04: $\gamma\gamma(\theta)$. 1961Ro04: γ , β , $\beta\gamma$, $\gamma\gamma$, $\gamma\gamma(\theta)$. 1961De17: γ , β , $\beta\gamma$, $\gamma\gamma$. 1954Fi36: γ , β , $\beta\gamma$, $\gamma\gamma$. Additional information 1. 1951Ma76: γ , $\gamma\gamma$.	1965Jo13 : $E\gamma$, $I\gamma$, ce , β ,	βγ.			
1965Bo23: $T_{1/2}$, ce. 1963Ha34, 1962Wi14: ce. 1962Ra04: γγ(θ). 1961Ro04: γ, β, βγ, γγ, γγ(θ). 1961De17: γ, β, βγ, γγ. 1954Fi36: γ, β, βγ, γγ. Additional information 1. 1951Ma76: γ, γγ.	1965Iv03: ce.				
1963Ha34, 1962Wi14: ce. 1962Ra04: $\gamma\gamma(\theta)$. 1961Ro04: γ , β , $\beta\gamma$, $\gamma\gamma$, $\gamma\gamma(\theta)$. 1961De17: γ , β , $\beta\gamma$, $\gamma\gamma$. 1954Fi36: γ , β , $\beta\gamma$, $\gamma\gamma$. Additional information 1. 1951Ma76: γ , $\gamma\gamma$.	1965Bo23: $T_{1/2}$, ce.				
1962Ra04: $\gamma\gamma(\theta)$. 1961Ro04: γ , β , $\beta\gamma$, $\gamma\gamma$, $\gamma\gamma(\theta)$. 1961De17: γ , β , $\beta\gamma$, $\gamma\gamma$. 1954Fi36: γ , β , $\beta\gamma$, $\gamma\gamma$. Additional information 1. 1951Ma76: γ , $\gamma\gamma$.	1963Ha34, 1962Wi14: ce	s.			
1961Ro04: γ, β, βγ, γγ, γγ(θ). 1961De17: γ, β, βγ, γγ. 1954Fi36: γ, β, βγ, γγ. Additional information 1. 1951Ma76: γ, γγ.	1962Ra04: $\gamma\gamma(\theta)$.				
1961De17: γ, β, βγ, γγ. 1954Fi36: γ, β, βγ, γγ. Additional information 1. 1951Ma76: γ, γγ.	1961Ro04: γ , β , $\beta\gamma$, $\gamma\gamma$,	$\gamma\gamma(\theta).$			
1954Fi36: γ , β , $\beta\gamma$, $\gamma\gamma$. Additional information 1. 1951Ma76: γ , $\gamma\gamma$.	1961De17: γ , β , $\beta\gamma$, $\gamma\gamma$.				
Additional information 1. 1951Ma76: γ , $\gamma\gamma$.	1954Fi36: γ , β , $\beta\gamma$, $\gamma\gamma$.				
1951Ma/6: $\gamma, \gamma\gamma$.	Additional information 1.				
	1951Ma/6: γ , $\gamma\gamma$.	10(5A 05 1059K 0(1055W 05 10	54E 07 04 1074C	AC 10(50:17 10(5D 2	2 10(0)/14
$1_{1/2}$ (Isotope): 1900/viabo, 1905/AnU5, 1958/Ke26, 1955/wa35, 1954/Em27. Others: 1974/Ca26, 1965/S117, 1965/B623, 1962/W114,	$1_{1/2}$ (1sotope): 1966Ma56	, 1903ATIUS, 1938Ke26, 1933Wa35, 19	54Em27. Others: 1974C	a20, 19058117, 1965B02	3, 1902W114,
195/A004, 1959A002, 1959Hal5. The level scheme is from detailed any coin study of 1073Si20, extension of that proposed earlier in any coin data of 1070Ua11	195/Aa04, 1939Ab02 The level scheme is from	2, 1939Hal3.	extension of that propose	d earlier in any coin data	of 1070Ha11

1970Ar12 (also 1967Ar12) and earlier work.

E(level)	\mathbf{J}^{π}	E(level)	\mathbf{J}^{π}	E(level)	J^{π}	E(level)	\mathbf{J}^{π}
0.0	0^{+}	2187.27 17	2+	2840.10 12	4 ⁽⁺⁾	3192.78 14	(3+)
667.7158 20	2^{+}	2303.46 15	(6^{+})	2890.69 11	(4^{+})	3213.95 20	$(3,4^{+})$
1297.916 <i>13</i>	2+	2350.63 9	5+	2916.85 13	$(2^+, 3, 4^+)$	3226.72 20	(3,4,5)
1440.323 10	4+	2394.99 7	4+	2935.2 4		3237.2 <i>3</i>	$(3,4^{+})$
1803.715 16	3+	2424.78 12	3+	2958.74 19	$(2^+, 3, 4^+)$	3260.9 <i>3</i>	$(3,4^{+})$
1962.98 6	4+	2583.78 10	5+	3058.14 11	(3 ⁺)	3320.4 4	$(3,4^{+})$
1985.641 5	2+	2588.69 9	(4^{+})	3076.42 17	(3 ⁺)	3353.4 <i>3</i>	$(4^+,5)$
2040.1? 4	(5 ⁻)	2613.44 9	5+	3084.4 5	$(3,4^{+})$	3385.2 6	$(3,4^{+})$
2110.26 6	4+	2669.99 11	3+	3112.08 20	$(3,4^{+})$		
2111.86 16	6+	2754.44 11	(4^{+})	3121.8 <i>3</i>	(4^{+})		
2167.10 15	5+	2838.85 7	5+	3155.6 3	$(3^+, 4^+)$		

¹³²Xe Levels

E(decay) E(level) $ \beta^{-1} $ Log fr is v Eβ=53.6 /8 Comments (196 6) 3385.2 0.0035 5 7.51 8 av Eβ=53.6 /8 (228 6) 3353.4 0.10 2 6.26 /0 av Eβ=53.3 /9 (320 6) 320.4 0.015 3 7.71 0 av Eβ=973.3 /9 (320 6) 3226.9 0.019 4 6.46 /0 av Eβ=99.9 20 (334 6) 3226.72 0.45 6 6.23 7 av Eβ=107.5 20 (386 6) 319.78 0.18 2 6.89 6 av Eβ=114.6 21 (425 6) 3155.6 0.18 2 6.89 6 av Eβ=127.2 21 (469 6) 3112.8 0.083 /17 7.36 6 av Eβ=138.9 21 (469 6) 3112.8 0.083 /17 7.36 6 av Eβ=154.8 22 (505 6) 3076.42 0.75 6 6.52 4 av Eβ=213.1 23 (694 6) 2800.69 0.90 6 6.91 4 av Eβ=223.0 23 (741 6) 2800.10 1.78 av Eβ=231.1 23 6.83 av Eβ=242.7 23 (697 6) 2583.85 1 1.08 8 3 av Eβ=231.9 25 6.87 2 av Eβ=331.9 25 (741 6) 260.99 3.4 2<			13	$^{2}\mathbf{I}\beta^{-}$ decay	(2.295 h) 1978Ne08,1973Si29,1980Gi07 (continued)
E(decay)E(level) lp^{-1} Log fr Comments(196 6)3385.20.0035 57.51 8av E β =53.6 18(228 6)3353.40.10 26.26 10av E β =63.1 19(261 6)320.40.015 37.27 10av E β =9.2.2 20(344 6)327.20.069 137.00 9av E β =9.2.2 20(354 6)3226.720.45 66.23 7av E β =9.9.2 0(354 6)321.3950.22 46.59 9av E β =107.5 20(388 6)3192.780.14 26.87 7av E β =117.5 20(459 6)312.180.083 117.34 6av E β =142.2 21(497 6)3084.40.024 57.99 10av E β =18.9 21(497 6)3084.40.024 57.99 10av E β =113.1 23(664 ⁴ 6)2916.85<0.10>7.8av E β =121.1 23(664 ⁴ 6)2916.85<0.10>7.8av E β =213.1 23(690 6)280.690.90 66.91 4av E β =213.1 23(691 6)288.8513.0 85.86.3av E β =213.2 3(742 6)283.8513.0 85.86.3av E β =343.9 25(742 6)283.8513.0 85.86.3av E β =343.9 25(997 6)258.692.73 127.00 2av E β =343.9 25(997 6)258.697.91 43av E β =343.9 25(116)66.91.99s.1 4av E β =343.9 25(116)66.99.993.4 26.73 av E β =343.9 25(116)269.990.56.44 2av E β			_		β^- radiations
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	E(decay)	E(level)	$I\beta^{-\dagger}$	Log <i>ft</i>	Comments
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(196 6)	3385.2	0.0035 5	7.51 8	av $E\beta = 53.6 \ 18$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	(228 6)	3353.4	0.10 2	6.26 10	av $E\beta = 63.1 \ 19$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	(261 6)	3320.4	0.015 3	7.27 10	av $E\beta = 73.3$ 19
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	(320 6)	3260.9	0.19 4	6.46 10	av E β =92.2 20
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	(344 6)	3237.2	0.069 13	7.00 9	av E β =99.9 20
$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(354 6)	3226.72	0.45 6	6.23 7	av E β =103.3 20
$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(367 6)	3213.95	0.22 4	6.59 9	av E β =107.5 20
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	(388 6)	3192.78	0.14 2	6.87 7	av E β =114.6 21
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	(425 6)	3155.6	0.18 2	6.89 6	av E β =127.2 21
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	(459 6)	3121.8	0.083 11	7.34 6	av E β =138.9 21
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	(469 6)	3112.08	0.16 3	7.09 9	av E β =142.2 21
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	(497 6)	3084.4	0.024 5	7.99 10	av $E\beta = 151.9\ 22$
	(505 6)	3076.42	0.75 6	6.52 4	av E β =154.8 22
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	(523 6)	3058.14	0.66 6	6.63 5	av E β =161.3 22
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	(664 [‡] 6)	2916.85	< 0.10	>7.8	av E β =213.1 23
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(690 6)	2890.69	0.90 6	6.91 4	av E β =223.0 23
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(741 6)	2840.10	1.28 5	6.87 2	av E β =242.3 23
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	(742 6)	2838.85	13.0 8	5.86 <i>3</i>	av E β =242.7 23
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	(827 6)	2754.44	0.35 4	7.60 5	av E β =275.6 24
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(911 6)	2669.99	3.4 2	6.77 <i>3</i>	av E β =309.1 24
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	(968 6)	2613.44	8.2 4	6.48 <i>3</i>	av E β =331.9 25
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(992 6)	2588.69	2.73 12	7.00 2	av E β =341.9 25
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(997 6)	2583.78	3.2 2	6.94 <i>3</i>	av E β =343.9 25
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	(1156 6)	2424.78	2.5 2	7.28 4	av E β =409.6 26
$\begin{array}{llllllllllllllllllllllllllllllllllll$	(1186 6)	2394.99	19.0 5	6.44 2	av E β =422.1 26
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	(1230 6)	2350.63	0.7 2	7.94 <i>13</i>	av E β =440.8 26
1414 6) 2167.10 0.8 6 8.1 4 av $E\beta$ =519.2 27 1471 6) 2110.26 9.1 9 7.12 5 av $E\beta$ =543.8 26 1541 6) 2040.1? <0.12	(1394 [‡] 6)	2187.27	< 0.08	>9.1	av E β =510.5 26
$(1471 \ 6)$ 2110.26 $9.1 \ 9$ $7.12 \ 5$ av $E\beta$ =543.8 26 $(1541 \ 6)$ $2040.1?$ <0.12 >9.1 av $E\beta$ =574.3 27 $(1618 \ 6)$ 1962.98 $12.3 \ 6$ $7.15 \ 2$ av $E\beta$ =608.1 27 $(16777^{\ddagger} \ 6)$ 1803.715 $0.5 \ 5$ $8.7 \ 5$ av $E\beta$ =678.6 27 $(2141 \ 6)$ 1440.323 190.20 $7.44 \ 5$ av $E\beta$ =841.8 28	(1414 6)	2167.10	0.8 6	8.1 4	av E β =519.2 27
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(1471 6)	2110.26	9.1 9	7.12 5	av E β =543.8 26
(1618 6) 1962.98 12.3 6 (1777 [‡] 6) 1803.715 0.5 5 (2141 6) 1440.323 19.0 20 (1777 [‡] 6) 1803.715 0.5 5 (2141 6) 1440.323 19.0 20 (1961 D 17) 2140 20 (1961 D 17	(1541 6)	2040.1?	< 0.12	>9.1	av E β =574.3 27
E(decay): 1609 25 (1961De17). (1777 [‡] 6) 1803.715 0.5 5 8.7 5 av $E\beta$ =678.6 27 (2141 6) 1440.323 19.0 20 7.44 5 av $E\beta$ =841.8 28 E(1=2) 2156 15 (1961D 17) 2140 20 (1961D 01) 2110 15 (1965D 12)	(1618 6)	1962.98	12.3 6	7.15 2	av E β =608.1 27
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					E(decay): 1609 25 (1961De17).
(2141 6) 1440.323 19.0 20 7.44 5 av $E\beta$ =841.8 28	(1777 [‡] 6)	1803.715	0.5 5	8.7 5	av E β =678.6 27
E(1) 015C 15 (10C1D 17) 0140 20 (10C1D 04) 0110 15 (10C5T 10)	(2141 6)	1440.323	19.0 20	7.44 5	av E β =841.8 28
E(decay): 2156 IS (1961De17), 2140 SU (1961Ro04), 2118 IS (1965Jo13).					E(decay): 2156 15 (1961De17), 2140 30 (1961Ro04), 2118 15 (1965Jo13).

[†] Absolute intensity per 100 decays.
[‡] Existence of this branch is questionable.

132 I β^- decay (2.295 h) 1978Ne08,1973Si29,1980Gi07 (continued)

 $\gamma(^{132}\text{Xe})$

I γ normalization: From $\Sigma I(\gamma + ce) = 100$ to g.s.

 $\alpha(\exp)=Ice/I\gamma$ normalized to 667.7, 772.6 and 809.5 E2 transitions. Ice(K) from 1970Ca04 and 1972CaYF. 1970Ca04 obtained averaged results from their measurements and those from 1969He18, 1965Jo13, 1965B023 and 1963Ha34.

 $\gamma(\theta)$: oriented nuclei (1980Gi07).

A₂ and A₄ values from $\gamma(\theta,T)$ and $\gamma\gamma(\theta)$ are from 1980Gi07, unless otherwise stated. In $\gamma\gamma(\theta)$, the last E γ stated In the cascade corresponds to the gate position.

A 351.8 γ with I γ =0.08 2 reported In 1970Ca04 is either an energy error or from background (1978Ne08). IT is not seen In $\gamma\gamma$ coin data of 1973Si29, thus omitted here.

The following γ 's from 1970Ca04 have been omitted since these are not confirmed In later studies: 1016.2 20 (0.05 3), 1065.5 7 (0.034 11), 1503.6 6 (0.009), 1738.0 (<0.018), 1747.0 (<0.018), 1803 (<0.002).

E_{γ}^{\dagger}	$I_{\gamma}^{\dagger d}$	E_i (level)	J_i^{π}	\mathbf{E}_{f}	\mathbf{J}_{f}^{π}	Mult. ^b	δ ^C	α^{e}	Comments
136.7 ^{<i>f</i>} 4	0.08 ^f 1	2303.46	(6 ⁺)	2167.10	5+	M1,E2		0.48 13	
136.7 ^{<i>f</i>} 4	0.08^{f} 1	2890.69	(4^{+})	2754.44	(4^{+})	M1,E2		0.48 13	α (K)exp=0.31 14
147.4 <i>1</i>	0.24 2	2110.26	4+	1962.98	4+	M1		0.279	$\alpha(K) = 0.2399; \ \alpha(L) = 0.0314; \ \alpha(M) = 0.00633; \ \alpha(N+) = 0.00160$
									α (K)exp=0.14 3
183.6 <i>3</i>	0.14 2	2350.63	5+	2167.10	5+	M1,E2		0.18 4	α (K)exp=0.15 4
^x 194.3 ^{&} 5	0.09 ^{&}								I_{γ} : $\leq 0.08 \ (1978 \text{Ne}08).$
234.3 6	0.03 1	3192.78	(3+)	2958.74	$(2^+, 3, 4^+)$				
^x 241.2 ^{@&} 5	$0.05^{\&}$								I_{γ} : 0.25 2 (1978Ne08).
250.8 ^f 6	0.018 ^f 5	2838.85	5+	2588.69	(4^{+})				,
250.8 ^f 6	0.018^{f} 5	2840.10	$4^{(+)}$	2588.69	(4^{+})				
255.1 ⁸ 2	0.24 ⁸ 2	2838.85	5+	2583.78	5+	M1,E2			α (K)exp=0.061 15
255.1 <mark>8</mark> 3	< 0.02 ^g	3213.95	$(3,4^{+})$	2958.74	$(2^+, 3, 4^+)$,			
262.9 1	1.30 10	2613.44	5+	2350.63	5+	M1+E2	-0.16 5	0.0583	α (K)=0.05016 5; α (L)=0.00653 6; α (M)=0.00131; α (N+)=0.00033
									α (K)exp=0.047 7
f	f								$\gamma(\theta)$: A ₂ =-0.34 4, A ₄ =-0.06 6.
278.4 ^J 4	0.04 1	3213.95	$(3,4^{+})$	2935.2					
278.4 ¹ 4	0.04^{f} 1	3237.2	$(3,4^{+})$	2958.74	$(2^+, 3, 4^+)$				
284.9 1	0.72 7	2394.99	4+	2110.26	4+	M1+E2	-0.26 3	0.0473	α (K)=0.04057; α (L)=0.00533 <i>3</i> ; α (M)=0.00107; α (N+)=0.00027
									α (K)exp=0.034 7
									$\gamma(\theta)$: A ₂ =-0.235 23, A ₄ =-0.02 14.
^x 296.5 ^{&} 6	≈0.016 ^{&}								$I_{\gamma}: \leq 0.02 \ (1978 \text{Ne}08).$
302.0 <mark>&h</mark> 7	≈0.005 <mark>&</mark>	3192.78	(3+)	2890.69	(4^{+})				
306.7f 4	$0.10f^{2}$	2110.26	\mathcal{A}^+	1803 715	3+				

				$^{132}\mathbf{I}\beta^{-}$	decay (2.29	5 h) 1978	Ne08,1973Si	29,1980Gi0	07 (continued)
						$\gamma(^{132}\text{Xe}$	(continued)	<u>)</u>	
${\rm E_{\gamma}}^{\dagger}$	$I_{\gamma}^{\dagger d}$	E _i (level)	\mathbf{J}_i^{π}	E_{f}	J_f^π	Mult. ^b	δ^{c}	α^{e}	Comments
306.7 ^{<i>f</i>} 4	0.10 ^f 2	2890.69	(4+)	2583.78	5+				
310.1 ^{<i>f</i>} 4	0.09 ^f 2	2613.44	5+	2303.46	(6 ⁺)				
310.1 ^{<i>f</i>} 4	0.09 ^f 2	3226.72	(3,4,5)	2916.85	$(2^+, 3, 4^+)$				
316.7 4	0.13 2	3155.6	$(3^+, 4^+)$	2838.85	5+				
343.7 4	$0.09\ 2$	3260.9	(3,4+)	2916.85	$(2^+, 3, 4^+)$				
$355.2^{fn}_{fn} 4$	$0.05^{\text{J}}_{\text{c}} 2$	2394.99	4+	2040.1?	(5 ⁻)				
355.2 ^{Jn} 4	0.05^{J} 2	3192.78	(3+)	2838.85	5+				
363.347 5	0.5 1	1803.715	3+	1440.323	4+	(M1+E2)	+1.10 20	0.0239	$\alpha(K)=0.02023\ 25;\ \alpha(L)=0.00292\ 3;\ \alpha(M)=0.00059;\ \alpha(N+)=0.00015$ Additional information 5. δ : other: -0.23 2 (1983So04). $\gamma(\theta):\ A_2=+1.11\ 7,\ A_4=+0.2\ 11.$ (363 γ)(773 γ)(θ): A ₂ =-0.12 2, A ₄ =-0.02 4 (1983So04).
^x 376.6 4	0.010 5								
387.9 ^{<i>f</i>} 3	0.30 ^f 5	2350.63	5+	1962.98	4+	(M1+E2)			δ: -1.54 22 or -0.45 8. $ γ(θ): A_2=+0.94 3, A_4=+0.26 24. $
387.9 ^ƒ 3	0.30 ^f 5	3058.14	(3 ⁺)	2669.99	3+				
387.9 ^ƒ 3	0.30 ^f 5	3226.72	(3,4,5)	2838.85	5+				
^x 402.6 ^{&} 6	0.023 ^{&}								$I_{\gamma}: \leq 0.02 \ (1978 \text{Ne08}).$
416.8 3	0.48 5	2583.78	5+	2167.10	5+	(M1+E2)	-1.70 23	0.0158	α (K)=0.01335 <i>16</i> ; α (L)=0.00194; α (M)=0.00040 $\gamma(\theta)$: A ₂ =+0.336 <i>20</i> , A ₄ =-0.33 <i>9</i> .
431.8 <i>3</i>	0.48 5	2394.99	4+	1962.98	4+	(M1+E2)	+0.06 4	0.01616	α (K)=0.01394; α (L)=0.00177; α (M)=0.00036 γ (θ): A ₂ =+0.477 23, A ₄ =-0.01 16.
445.0 ^{&h} 6	0.1 ^{&}	2840.10	4 ⁽⁺⁾	2394.99	4+				I_{γ} : ≤ 0.1 (1978Ne08).
446.2 3	0.61 5	2613.44	5+	2167.10	5+	M1,E2			α (K)exp=0.012 4
473.6 4	0.17 4	2583.78	5^+	2110.26	4 ⁺				
470.24	0.174	2000.09	(4) 5 ⁺	2110.20	4 5+				
$488.0^{f} 4$ $488.0^{f} 4$	0.42^{f} 5	2838.83 3076.42	3 (3 ⁺)	2588.69	(4^+)	(M1+E2)	+0.69 72		$\gamma(\theta)$: A ₂ =-0.56 <i>15</i> , A ₄ =0.0 7.
505.79 [‡] 3	5.0 2	1803.715	3+	1297.916	2+	M1+E2	+7.5 6	0.00882	α(K)=0.003 to +1.40. α(K)=0.00740; α(L)=0.00107 α(K)exp=0.0063 9 Additional information 6. δ: others: -0.1 to -3 (1972Kr07), -1.3 4 (1971Kr16). Alternative $δ=+0.40 2$ (1980Gi07) from $γ(θ)$ is inconsistent with $γγ(θ)$ data. $ γ(θ): A_2=-0.366 24, A_4=+0.4 24. $ $ (506γ)[630γ](668γ)(θ): A_2=+0.13 3, A_4=+0.04 4 $ (1971Kr16)
522.65 9	16.2 5	1962.98	4+	1440.323	4 ⁺	M1+E2	-0.09 1	0.01014	$\alpha(K)=0.00869; \alpha(L)=0.00109$

From ENSDF

 $^{132}_{54} \mathrm{Xe}_{78}$ -4

				132 I β^- deca	y (2.29	95 h) 197 8	3Ne08,1973S	i29,1980Gi	i07 (continued)
						γ (¹³² X	e) (continued	<u>d)</u>	
${\rm E}_{\gamma}^{\dagger}$	$I_{\gamma}^{\dagger d}$	E _i (level)	\mathbf{J}_i^{π}	\mathbb{E}_{f}	\mathbf{J}_f^{π}	Mult. ^b	δ^{c}	α^{e}	Comments
535.4 3	0.52 5	2838.85	5+	2303.46	(6 ⁺)	(M1+E2)	+0.09 2	0.00956	$\begin{aligned} &\alpha(\mathbf{K})\exp=0.0079 \ 4\\ \delta: \ \text{others:} \ -0.23 \ 16 \ (1983\text{So04}), \ -0.28 \ \text{to} \ -0.54 \ (1980\text{Gi07});\\ &-0.25 \ 15 \ (1971\text{Kr16}).\\ &\gamma(\theta): \ A_2=-0.369 \ 8, \ A_4=-0.042 \ 25.\\ \text{Additional information } 8.\\ &(523\gamma)[773\gamma](668\gamma)(\theta): \ A_2=+0.27 \ 5, \ A_4=-0.06 \ 7.\\ &(523\gamma)(773\gamma)(\theta): \ A_2=+0.270 \ 20, \ A_4=+0.028 \ 24.\\ &\alpha(\mathbf{K})=0.00819; \ \alpha(\mathbf{L})=0.00103 \end{aligned}$
£1.	£								$\gamma(\theta)$: A ₂ =+0.30 3, A ₄ =+0.02 6.
$539.7^{jn} 4$	0.11 2	2890.69	(4 ⁺)	2350.63	5+				
539.7 5 <i>4</i> 547.2 2	0.11 <i>J</i> 2 1.15 8	3121.8 2350.63	(4 ⁺) 5 ⁺	2583.78 1803.715	5+ 3+	E2		0.00708	$\alpha(K)=0.00596; \ \alpha(L)=0.00084$ $\alpha(K)\exp\leq 0.004$ $\alpha(G): A_{1}=0.016, 24, A_{2}=0.22, 10$
559.7 4	0.09 2	2669.99	3+	2110.26	4+				$\gamma(0)$. $A_2 = -0.410\ 24, A_4 = -0.22\ 10.$
572.5 <i>fh</i> 4	0.06^{f} 2	2613.44	5+	2040.1?	(5 ⁻)				
572.5 ^{fh} 4	0.06^{f} 2	3155.6	$(3^+, 4^+)$	2583.78	5+				
591.1 ^ƒ 6	0.07 ^f 3	2394.99	4+	1803.715	3+				
591.1 ^{<i>f</i>} 6	0.07 ^f 3	3260.9	$(3,4^{+})$	2669.99	3+				
600.0 ^f 6	0.13 ^f 3	2040.1?	(5 ⁻)	1440.323	4+				
$600.0^{f} 6$ $x_{609.8}^{\#a} 5$	0.13 ^f 3 0.04 ^a 1	3213.95	(3,4+)	2613.44	5+				
620.9 2	0.4 2	2583.78	5+	1962.98	4+				
621.2 3	1.6 2	2424.78	3+	1803.715	3+	M1(+E2)			α (K)exp=0.0088 23
630.19 [‡] 2	13.5 4	1297.916	2+	667.7158	2+	M1+E2	+4.07 16	0.00497	$\alpha(K)=0.00420; \alpha(L)=0.00057$ $\alpha(K)\exp=0.0044$ 3 Additional information 2. δ : others: +6.1 +65-25 (1983S004); +4.5 +20-10 (1980Gi07); +2 +3-2 (1972Kr07); +5.3 +21-10 (1971Kr16). Alternative δ =-0.180 9 from $\gamma(\theta)$ (1980Gi07) is inconsistent with $\gamma\gamma(\theta)$ data. $\gamma(\theta)$: A ₂ =-0.187 12, A ₄ =-0.2 9 (1980Gi07); A ₂ =+0.45 32 (1972Kr07). (630 γ)(668 γ)(θ): A ₂ =-0.27 3, A ₄ =+0.26 5.
^x 642.4 ^{&} 5 650.5 2	0.035 ^{&} 2.6 2	2613.44	5+	1962.98	4+	M1+E2	-0.36 3	0.00580	I_{γ} : ≤0.04 (1978Ne08). α (K)=0.00497; α (L)=0.00063 α (K)exp=0.0067 27 Additional information 16. γ (θ): A ₂ =+0.85 3, A ₄ =+0.10 4.
$x^{x}659.0^{\#} 7$ 667.714 [‡] 2	≤0.2 100	667.7158	2+	0.0	0^{+}	E2		0.00421	$\alpha(K)=0.00356; \ \alpha(L)=0.00048$

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From ENSDF

 $^{132}_{54} \mathrm{Xe}_{78}$ -5

				132 I β^- dec	ay (2.	295 h) 19	978Ne08,1	973Si29,198	0Gi07 (continued)
						$\gamma(^{132}$	² Xe) (cont	inued)	
E_{γ}^{\dagger}	$I_{\gamma}^{\dagger d}$	E _i (level)	\mathbf{J}_i^π	E_f	\mathbf{J}_f^{π}	Mult. ^b	δ^{c}	α^{e}	Comments
669.8 2	4.7 6	2110.26	4+	1440.323	4+	M1+E2			$\alpha(K)\exp=0.0035\ 2$ $\gamma(\theta):\ B_2U_2A_2=-0.052\ 5,\ B_4U_4A_4=-0.009\ 6\ (1972Kr07).$ $\alpha(K)\exp=0.0052\ 16$ $\delta:\ +0.86\ 16\ or\ +0.05\ 9.$
671.4 2	3.5 10	2111.86	6+	1440.323	4+	E2		0.00415	$\gamma(\theta)$: A ₂ =-0.47 6, A ₄ =-0.24 26. $\alpha(K)$ =0.00351; $\alpha(L)$ =0.00048 $\alpha(K)$ exp=0.0060 25
684.4 [@] <i>h</i> 2	0.04 1	2669.99	3+	1985.641	2+				E_{γ}, I_{γ} : average of 1971We15 and livermore data In 1978Ne08. I γ =0.16 In spectrum of 1978Ne08.
687.8 <i>5</i> 706.4 <i>7</i>	0.04 2 ≈0.02	3112.08 2669.99	(3,4 ⁺) 3 ⁺	2424.78 1962.98	3+ 4+				-,
121.0 3	2.2 6	2167.10	5+	1440.323	4+	M1+E2			I_{γ} : 3.2 6 for 727.0 and 2.2 6 for 727.2 quoted In 1978Ne08 are reverse of those In 1973Si29, from which the values are ADOPTED. α (K)exp=0.0032 7 for a doublet: 727.0+727.2.
727.2 3	3.2 6	2838.85	5+	2111.86	6+	M1+E2			α (K)exp=0.0032 7 for a doublet. δ : 1971Kr16 give -0.32 4, but 727 γ is a doublet: 727.0+727.2. Additional information 20. (727 γ)[671 γ](773 γ)(θ): A ₂ =+0.11 4, A ₄ =0.00 5 (1971Kr16).
728.42	1.6 4	2838.85	5^+	2110.26	4 ⁺	(M1+E2)	-4.1 4		$\gamma(\theta): A_2 = +0.45 4, A_4 = +0.53 17.$
772.60 1	0.02 2	2958.74	$(2^{+}, 3, 4^{+})$	2187.27	2 · 2+	F2		0.00294	E_{γ}, I_{γ} : from 19735129. $\alpha(K) = 0.00250; \alpha(L) = 0.00033$
772.00* 1	70.0 15	1440.323	4	007.7156	2	L2		0.00294	$\alpha(K)=0.00250; \alpha(L)=0.00055$ $\alpha(K)\exp=0.0028 2; \alpha(L)\exp=0.00040 9; \alpha(M)\exp=0.00018 4$ Additional information 4. $\gamma(\theta)$: B ₂ U ₂ A ₂ =-0.063 5, B ₄ U ₄ A ₄ =-0.007 6 (1972Kr07).
780.0 2	1.20 4	2583.78	5+	1803.715	3+	(E2)		0.00288	$(773\gamma)(668\gamma)(\theta)$: A ₂ =+0.092 <i>11</i> , A ₄ =+0.023 <i>16</i> . α (K)=0.00244; α (L)=0.00032
784.4 4	0.39 4	2588.69	(4+)	1803.715	3+	(M1+E2)	+1.2 5	0.0032 3	$\gamma(\theta)$: A ₂ =-0.421 19, A ₄ =-0.24 8. $\alpha(K)$ =0.00277 23; $\alpha(L)$ =0.00036 δ : +0.72 to +1.72. $\gamma(\theta)$: A ₂ =-0.77 7, A ₄ =+0.20 26.
791.2 4	0.102	2754.44	$(4^+)_{5^+}$	1962.98	$4^+_{2^+}$	E2		0.00262	$\alpha(K) = 0.00224$, $\alpha(L) = 0.00020$
809.3 2	2.0 5	2013.44	5.	1803.713	2	EZ		0.00205	$\alpha(K)=0.00224; \ \alpha(L)=0.00050$ $\alpha(K)\exp=0.00327$ $\gamma(\theta): A_2=-0.42923, A_4=-0.2510.$
812.0 2	5.6 4	2110.26	4+	1297.916	2+	E2		0.00262	$\begin{aligned} &\alpha(K) = 0.00223; \ \alpha(L) = 0.00029 \\ &\alpha(K) \exp = 0.0023 \ 3 \\ &\gamma(\theta): \ A_2 = -0.450 \ 10, \ A_4 = -0.36 \ 6. \\ &(812\gamma)[630\gamma](668\gamma)(\theta): \ A_2 = +0.04 \ 5, \ A_4 = +0.05 \ 7. \\ &(812\gamma)(630\gamma)(\theta): \ A_2 = +0.07 \ 6, \ A_4 = +0.02 \ 8. \end{aligned}$
	0.025.10	2226 72	(2, 4, 5)	2204.00	4+				Auunonal Information 10.

6

				132 I β^- de	ecay (2.	295 h) 19	78Ne08,197	3Si29,1980Gi	i07 (continued)
						$\gamma(^{132}$	² Xe) (continu	ued)	
E_{γ}^{\dagger}	$I_{\gamma}^{\dagger d}$	E _i (level)	\mathbf{J}_i^{π}	E_f	\mathbf{J}_f^{π}	Mult. ^b	$\delta^{\mathcal{C}}$	α^{e}	Comments
847.9 <i>5</i> 863.0 <i>2</i>	0.017 <i>5</i> 0.57 <i>5</i>	2958.74 2303.46	$(2^+,3,4^+)$ (6 ⁺)	2110.26 1440.323	4 ⁺ 4 ⁺	(E2)		0.00227	$\alpha(K)=0.00194; \ \alpha(L)=0.00025$ $\gamma(\theta): A_2=-0.382.25, A_4=-0.18.11$
866.0 ^{<i>f</i>} 6	0.036 ^f 14	2669.99	3+	1803.715	3+				(0). 11 <u>2</u> 0.002 20, 11 <u>4</u> 0.10 11.
866.0 ^J 6	0.036 ^J 14	3260.9	(3,4 ⁺)	2394.99	4+				
876.6 2	1.05 4	2840.10	4 ⁽⁺⁾	1962.98	4+	(M1+E2)	-1.2 5	0.00251	$\alpha(K)=0.00214 \ I8; \ \alpha(L)=0.00027$ $\delta: \text{ from } (877\gamma)[523\gamma](773\gamma)(\theta): \ A_2=+0.13 \ 7, \ A_4=+0.15$ $II \ (1983So04).$
886.1 5	0.025 8	3237.2	$(3,4^{+})$	2350.63	5+				
888.7 ^{<i>f</i>} 5	0.035 ^f 8	2187.27	2+	1297.916	2+				I_{γ} : (n, γ) results suggest that most of the intensity of 889 γ is from 2187 level.
888.7 ^f 5	0.035 ^f 8	3076.42	(3 ⁺)	2187.27	2^{+}				
904.4 5	0.013 4	2890.69	(4 ⁺)	1985.641	2+				
910.1 2	0.94 3	2350.63	5+	1440.323	4+	(M1+E2)	-1.27 22	0.00228 7	$\alpha(K)=0.00195\ 6;\ \alpha(L)=0.00025$ $\gamma(\theta):\ A_2=+1.02\ 6,\ A_4=+0.29\ 12.$ $(910\gamma)[773\gamma](668\gamma)(\theta):\ A_2=-0.32\ 20,\ A_4=+0.05\ 31.$ $(910\gamma)(773\gamma)(\theta):\ A_2=-0.33\ 12,\ A_4=-0.11\ 16.$ Additional information 12.
927.4 3	0.42 4	2890.69	(4 ⁺)	1962.98	4+	(M1+E2)	-0.27 6	0.00255	α (K)=0.00219; α (L)=0.00027 $\gamma(\theta)$: A ₂ =-0.22 5, A ₄ =-0.10 15.
947.2 6 954.55 9	0.045 <i>14</i> 17.8 5	3058.14 2394.99	(3 ⁺) 4 ⁺	2110.26 1440.323	4+ 4+	M1+E2	-0.07 1	0.00243	$\begin{aligned} &\alpha(\text{K}) = 0.00208; \ \alpha(\text{L}) = 0.00026 \\ &\alpha(\text{K}) \exp = 0.0020 \ 2 \\ &\delta: \ \text{others:} \ -0.03 \ 3 \ (1983\text{So04}); \ -0.12 \ 6 \ (1980\text{Gi07}); \ -0.15 \ 5 \\ &(1971\text{Kr16}). \\ &\gamma(\theta): \ A_2 = -0.386 \ 6, \ A_4 = -0.03 \ 4. \\ &\text{Additional information} \ 13. \\ &(955\gamma)[773\gamma](668\gamma)(\theta): \ A_2 = +0.28 \ 4, \ A_4 = +0.01 \ 6. \\ &(955\gamma)(773\gamma)(\theta): \ A_2 = +0.222 \ 13, \ A_4 = +0.005 \ 16. \end{aligned}$
965.8 5	0.035 8	3076.42 2424 78	(3^+) 3 ⁺	2110.20	4 · 4+	$(M1\pm F2)$	_0.28_1	0.00222	$\alpha(K) = 0.00191; \alpha(L) = 0.00024$
J0 1 .2 2	0.00 4	2424.70	5	1440.525	7	(WII + L2)	0.20 1	0.00222	$\gamma(\theta): A_2 = -0.214 \ 7, \ A_4 = +0.01 \ 4.$
995.8 5	0.03 1	2958.74	$(2^+, 3, 4^+)$	1962.98	4+				
1002.5 ^f 6	0.026 ^f 7	3112.08	(3,4+)	2110.26	4+				
1002.5 ^f 6	0.026 ^f 7	3353.4	$(4^+, 5)$	2350.63	5+				
1005.4 6	0.016 5	3192.78	(3 ⁺)	2187.27	2^{+}				
1009.0 4	0.047 7	3121.8	(4^+)	2111.86	6^+			0.00150	
1035.0 2	0.52 5	2838.85	5	1803.715	3-	(E2)		0.00152	$\alpha(\mathbf{K})=0.00130; \ \alpha(\mathbf{L})=0.00017$ $\gamma(\theta): \ A_2=-0.43, \ A_4=-0.25, 19$
1049.6 <i>4</i>	0.047 12	3353.4	(4 ⁺ ,5)	2303.46	(6 ⁺)				/////···//////////////////////////////
1081.8 ^{<i>f</i>} 4	0.035 ^f 8	3121.8	(4 ⁺)	2040.1?	(5 ⁻)				
1081.8 ^f 4	$0.035^{f} 8$	3192.78	(3 ⁺)	2110.26	4+				

7

From ENSDF

¹³²₅₄Xe₇₈-7

¹³²₅₄Xe₇₈-7

	132 I β^- decay (2.295 h) 1978Ne08,1973Si29,1980Gi07 (continued)										
						γ (¹³² X	(continued	<u>d)</u>			
E_{γ}^{\dagger}	$I_{\gamma}^{\dagger d}$	E _i (level)	\mathbf{J}_i^{π}	E_{f}	\mathbf{J}_f^{π}	Mult. ^b	δ^{c}	α^{e}	Comments		
$ \begin{array}{r} 1086.2 \ 4 \\ 1096.9 \ 4 \\ 1112.4 \ 4 \\ 1126.5^{f} \ 4 \end{array} $	$\begin{array}{c} 0.08 \ 2 \\ 0.045 \ 8 \\ 0.066 \ 15 \\ 0.05 \ f \ 2 \end{array}$	2890.69 2394.99 2916.85 2424.78	$(4^+) 4^+ (2^+,3,4^+) 3^+ $	1803.715 1297.916 1803.715 1297.916	3 ⁺ 2 ⁺ 3 ⁺ 2 ⁺						
$1126.5^{j} 4$ $1136.00^{\ddagger} 2$	0.05 ^J 2 3.05 14	3112.08 1803.715	(3,4 ⁺) 3 ⁺	1985.641 667.7158	2+ 2+	M1+E2	+0.34 2	0.00159	$\alpha(K)=0.00137; \ \alpha(L)=0.00017$ $\alpha(K)\exp=0.0015 \ 3$ Additional information 7. δ : others: +0.45 5 (1983So04); +0.22 +15-11 (1980Gi07); +0.9 3 (1971Kr16). $\gamma(\theta): A_2=-0.29 \ 3, A_4=-0.01 \ 7.$ (1136x)(668a)(θ): $A_2=+0.09 \ 8, A_4=+0.18 \ 12$		
1143.3 2	1.37 6	2583.78	5+	1440.323	4+	M1+E2	-0.20 2	0.00160	$\begin{aligned} \alpha(K) &= 0.00137; \ \alpha(L) = 0.00017 \\ \alpha(K) &= 0.0021 \ 4 \\ \delta: \ others: \ -0.04 \ +4-9 \ (1971Kr16); \ -0.22 \ 11 \ (1980Gi07). \\ \gamma(\theta): \ A_2 &= +0.64 \ 3, \ A_4 &= +0.03 \ 4. \\ (1143\gamma)[773\gamma](668\gamma)(\theta): \ A_2 &= -0.24 \ 12, \ A_4 &= -0.16 \ 18. \\ (1143\gamma)(773\gamma)(\theta): \ A_2 &= -0.21 \ 8, \ A_4 &= +0.04 \ 10. \end{aligned}$		
1147.8 <i>5</i> 1172.9 <i>2</i>	0.27 <i>5</i> 1.10 <i>7</i>	2588.69 2613.44	(4 ⁺) 5 ⁺	1440.323 1440.323	4+ 4+	M1+E2	-0.57 2	0.00143	$\begin{aligned} &\alpha(\mathbf{K}) = 0.00123; \ \alpha(\mathbf{L}) = 0.00015 \\ &\alpha(\mathbf{K}) \exp = 0.0012 \ 4 \\ &\delta: \ \text{others:} \ -0.6 \ 4 \ \text{or} \ -2.0 \ +9-60 \ (1983\text{So04}); \ -0.53 \ +22-11 \\ &(1980\text{Gi07}); \ -0.40 \ 15 \ (1971\text{Kr16}). \\ &\gamma(\theta): \ \mathbf{A}_2 = +1.025 \ 12, \ \mathbf{A}_4 = +0.16 \ 6. \\ &(1173\gamma)[773\gamma](668\gamma)(\theta): \ \mathbf{A}_2 = -0.48 \ 14, \ \mathbf{A}_4 = +0.16 \ 28. \\ &(1173\gamma)(773\gamma)(\theta): \ \mathbf{A}_2 = -0.42 \ 11, \ \mathbf{A}_4 = -0.16 \ 14. \end{aligned}$		
$x_{1206.7}^{\&@} 6$	0.017 ^{&}								I_{γ} : 0.12 (1978Ne08).		
$1212.3^{\circ} 4$ $1242.6^{\otimes h} 7$ $1254.1 4$	0.012 3 0.012 ^{&} 0.060 7	3353.4 3058.14	(4 ⁺ ,5) (3 ⁺)	2110.26 1803.715	4+ 3+	(M1+E2)	+1.71 9	0.00109	I_{γ} : ≤0.009 (1978Ne08). α (K)=0.00093; α (L)=0.00012 γ (θ): A ₂ =−0.319 23, A ₄ =−0.26 13.		
1263.6 <i>5</i> 1272.8 <i>4</i>	0.027 <i>6</i> 0.17 <i>2</i>	3226.72 3076.42	(3,4,5) (3 ⁺)	1962.98 1803.715	4+ 3+	(M1+E2)	+1.89 13	0.00105	$\alpha(K) = 0.00090; \ \alpha(L) = 0.00011$ $\alpha(K) = 0.28 \ 3 \ A_{2} = 0.42 \ 15$		
1290.8 2	1.14 5	2588.69	(4+)	1297.916	2+	(E2)		0.00096	$\begin{array}{l} \alpha(K) = 0.0082; \ \alpha(L) = 0.00010 \\ \text{Additional information 15.} \\ \gamma(\theta): \ A_2 = -0.455 \ 12, \ A_4 = -0.31 \ 9. \\ (1291\gamma)[630\gamma](668\gamma)(\theta): \ A_2 = +0.09 \ 11, \ A_4 = -0.12 \ 12. \\ (1201\gamma)(620\gamma)(61) \ A_4 = -0.12 \ 12. \\ (1201\gamma)(61) \ A_4$		
1295.1 2	1.90 7	1962.98	4+	667.7158	2+	(E2)		0.00095	$(1291\gamma)(030\gamma)(\theta)$: A ₂ =+0.1/13, A ₄ =+0.10 16. α (K)=0.00081; α (L)=0.00010		

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				132 I β^- decay	(2.2	95 h) 197	8Ne08,1973	3Si29,19800	Gi07 (continued)
						$\gamma(^{132}X)$	(continu	ed)	
E_{γ}^{\dagger}	$I_{\gamma}^{\dagger d}$	E _i (level)	\mathbf{J}_i^{π}	E_f	\mathbf{J}_{f}^{π}	Mult. ^b	δ^{c}	α^{e}	Comments
									$\gamma(\theta)$: A ₂ =-0.437 8, A ₄ =-0.31 5. (1295 γ)(668 γ)(θ): A ₂ =+0.12 9, A ₄ =+0.26 14. Additional information 9.
1297.91 [‡] 2	0.90 7	1297.916	2+	0.0	0^+				Additional information 3.
1314.0 5	0.060 9	2754.44	(4+)	1440.323	4+				
1317.918+ 6	0.120 15	1985.641	2*	667.7158	2+	(M1+E2)	-0.16 6		$\alpha(K)=0.00100; \ \alpha(L)=0.00012$ $\delta: +3.7 + 10-6$ is inconsistent with that from $\gamma\gamma(\theta)$ In (n, γ). $\gamma(\theta): A_2=-0.22$ 7, $A_4=-0.2$ 7.
1360.0 5 1372.07 <i>13</i>	0.006 2 2.5 <i>1</i>	2669.99	3+	1297.916	2+	M1+E2	-0.13 <i>I</i>	0.00107	$ \begin{array}{l} \alpha(\mathrm{K}) = 0.00092; \ \alpha(\mathrm{L}) = 0.00011 \\ \alpha(\mathrm{K}) \exp = 0.0010 \ 2 \\ \text{Additional information 19.} \\ \gamma(\theta): \ \mathrm{A}_2 = + 0.583 \ 6, \ \mathrm{A}_4 = + 0.009 \ 25. \\ (1372\gamma) [630\gamma] (668\gamma)(\theta): \ \mathrm{A}_2 = -0.07 \ 5, \ \mathrm{A}_4 = + 0.01 \ 7 \\ (1971\mathrm{Kr16}). \end{array} $
1390.7 [@] h 7 1398.57 <i>10</i>	0.015 <i>10</i> 7.1 2	3353.4 2838.85	(4 ⁺ ,5) 5 ⁺	1962.98 1440.323	4 ⁺ 4 ⁺	M1+E2	+0.07 1	0.00103	$\begin{aligned} &\alpha(K) = 0.00088; \ \alpha(L) = 0.00011 \\ &\alpha(K) \exp = 0.00095 \ 10 \\ &\delta: \ others: \ +0.04 \ 2 \ (1983So04); \ +0.08 \ 3 \ (1980Gi07); \ +0.07 \ 2 \\ &(1971Kr16). \\ &\gamma(\theta): \ A_2 = +0.162 \ 12, \ A_4 = 0.00 \ 6. \\ &(1399\gamma)[773\gamma](668\gamma)(\theta): \ A_2 = -0.06 \ 4, \ A_4 = +0.04 \ 6. \\ &(1399\gamma)(773\gamma)(\theta): \ A_2 = -0.009 \ 23, \ A_4 = -0.01 \ 3. \end{aligned}$
1410.6 <i>3</i> 1442.56 <i>10</i>	0.044 7 1.42 5	3213.95 2110.26	(3,4 ⁺) 4 ⁺	1803.715 667.7158	3 ⁺ 2 ⁺	E2		0.00076	α (K)=0.00066 α (K)exp=0.0014 8 Additional information 11. $\gamma(\theta)$: A ₂ =-0.455 10, A ₄ =-0.32 7. (1443x)(668x)(\theta): A ₂ =+0.16 11 A ₄ =-0.28 16
1450.0 5	0.008 2	2890.69	(4^{+})	1440.323	4+				$(1+37)(0007)(0)$. $R_2 = +0.10$ 11, $R_4 = -0.20$ 10.
1456.5 2	0.050 7	2754.44	(4 ⁺)	1297.916	2+				
1476.7 2	0.132 9	2916.85	$(2^+,3,4^+)$	1440.323	4^+	$(\mathbf{M}1 + \mathbf{E}2)$			S. + 2.4.5 0.02.7
1519.6 2	0.080 5	2187.27	21	667.7158	21	(M1+E2)			δ : +2.4 5 or -0.03 7. $\gamma(\theta)$: A ₂ =-0.39 9, A ₄ =-0.2 8.
x1531.9 5 1542.3 6 x1559.0 4	0.006 2 0.016 2 0.009 2	2840.10	4 ⁽⁺⁾	1297.916	2+				
1592.9 3	0.048 4	2890.69	(4 ⁺)	1297.916	2^{+}				
1617.9 2	0.010 5	3058.14	(3^+)	1440.323	4^+				
1618.93	0.0075	2916.85	$(2^+,3,4^+)$	1297.916	2+ 2+				
1636.5 6	0.012J 4	2935.2		1297.916	2*				

From ENSDF

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	132 I β^- decay (2.295 h) 1978Ne08,1973Si29,1980Gi07 (continued)										
						$\gamma(^{132}Xe$	e) (continued	<u>)</u>			
${\rm E_{\gamma}}^\dagger$	$I_{\gamma}^{\dagger d}$	E _i (level)	\mathbf{J}_i^{π}	E_f	\mathbf{J}_f^{π}	Mult. ^b	δ^{c}	Comments			
$1636.5^{f} 6$ $x_{1639.1} 5$	$0.012^{f} 4$ 0.008 2	3076.42	(3+)	1440.323	4+						
1644.0 6	0.013 4	3084.4	$(3,4^{+})$	1440.323	4+						
1661.4 5	0.016 3	2958.74	$(2^+, 3, 4^+)$	1297.916	2^{+}						
1671.3 4	0.022 4	3112.08	$(3,4^{+})$	1440.323	4^{+}						
^x 1679.3 6	0.006 2										
1715.4 4	0.056 4	3155.6	$(3^+, 4^+)$	1440.323	4+						
*1720.6 5	0.055 4	2204.00	4+	((7.7.7.1.50	a +						
1/2/.2 4	0.068 0	2394.99	(2^+)	667.7158	2	(E2)		$\gamma(\theta)$: A ₂ =-0.4 / 8, A ₄ =-0.3 5.			
1/52.3 /	0.025 8	3192.78	(3^{+})	1440.323	4 2+	(M1 + E2)	0 10 1	$x(0): A_{1} = 10,152,24, A_{2} = 10,02,12$			
1757.4 2	0.30 3	2424.70	(3^+)	1207.016	$\frac{2}{2^{+}}$	$(\mathbf{W}\mathbf{I}\mathbf{I}+\mathbf{E}\mathbf{Z})$	± 0.10 I	$\gamma(6)$. $A_2 = +0.155\ 24$, $A_4 = +0.05\ 12$.			
x1768 5 8	0.00 2	5050.14	(3)	1297.910	2						
1778.5 4	0.080 8	3076.42	(3^{+})	1297.916	2^{+}						
1786.5f 6	$0.011f_{2}$	3084.4	(34^+)	1297 916	2+						
1786.5f 6	$0.011^{f} 2$	200670	(3,1)	1440 323	2 1+						
1814.0.5	0.011^{3} 2	3112.08	(3,4,3)	1207.016	4 2+						
x1830.1.5	0.028 5	5112.00	(3,4)	1297.910	2						
1879.2.5	0.014 3	3320.4	(3.4^{+})	1440.323	4^{+}						
1913.7 5	0.03 1	3353.4	$(4^+,5)$	1440.323	4 ⁺						
1921.08 12	1.25 6	2588.69	(4 ⁺)	667.7158	2+	(E2)		$\gamma(\theta)$: A ₂ =-0.453 4, A ₄ =-0.33 3.			
$x_{1925.7}^{\#}$ 10	0.002 /		. ,								
x1939.5 7	0.005 2										
1985.625 [‡] 6	0.012 2	1985.641	2+	0.0	0^{+}						
2002.2 5	1.15 8	2669.99	3+	667.7158	2^{+}	(M1+E2)	-0.73 11	$\gamma(\theta)$: A ₂ =+1.086 7, A ₄ =+0.19 3.			
2086.82 15	0.26 2	2754.44	(4^{+})	667.7158	2^{+}	(E2)		$\gamma(\theta)$: A ₂ =-0.445 20, A ₄ =-0.31 12.			
2172.68 15	0.21 2	2840.10	4 ⁽⁺⁾	667.7158	2^{+}	(E2)		$\gamma(\theta)$: A ₂ =-0.46 3, A ₄ =-0.28 17.			
2187.0 6	0.007 3	2187.27	2^{+}	0.0	0^+						
^x 2204.2 ^{#a} 6	0.003 ^{<i>a</i>} 2										
2223.17 15	0.12 2	2890.69	(4^{+})	667.7158	2^{+}	(E2)		$\gamma(\theta)$: A ₂ =-0.46 4, A ₄ =-0.29 21.			
2249.1 <i>3</i>	0.034 2	2916.85	$(2^+, 3, 4^+)$	667.7158	2^{+}						
2290.6 6	0.0036 8	2958.74	$(2^+, 3, 4^+)$	667.7158	2^{+}						
^x 2304.4 ^{&} 8	≈0.015 <mark></mark>							I_{γ} : 0.0018 6 (1978Ne08).			
2390.48 15	0.19 2	3058.14	(3 ⁺)	667.7158	2^{+}						
2408.6 4	0.0095 8	3076.42	(3+)	667.7158	2^{+}						
2417.1 ^{@h} 4	0.0014 6	3084.4	(3,4+)	667.7158	2^{+}			E_{γ}, I_{γ} : from 1978Ne08. I_{γ} =0.01 (1971We15).			
2444.0 6	0.0057 8	3112.08	$(3,4^{+})$	667.7158	2^{+}						
2454.8 4	0.0021 5	3121.8	(4+)	667.7158	2+						
2487.8 6	0.0008 2	3155.6	$(3^+, 4^+)$	667.7158	2+		o 1				
2525.14 15	0.040 4	3192.78	(3^+)	667.7158	2+	(M1+E2)	+0.46 5	$\gamma(\theta)$: A ₂ =-0.45 6, A ₄ =+1.1 3.			
2546.5 6	0.0016 5	3213.95	(3,4 ⁺)	667.7158	2^{+}						

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From ENSDF

 $^{132}_{54}\mathrm{Xe}_{78}$ -10

 $^{132}_{54}$ Xe₇₈-10

132 I β^- decay (2.295 h) 1978Ne08,1973Si29,1980Gi07 (continued)

$\gamma(^{132}\text{Xe})$ (continued)

E_{γ}^{\dagger}	$I_{\gamma}^{\dagger d}$	E_i (level)	\mathbf{J}_i^{π}	$E_f \qquad J_f^{\pi}$	Comments
2569.8 4	0.005 1	3237.2	$(3,4^{+})$	667.7158 2+	
2593.8 8	0.0012 3	3260.9	$(3,4^{+})$	667.7158 2+	
x2603.2 5	0.0015 3				
^x 2607.2 6	0.0010 3				
^x 2614.5 ^{#a} 4	0.0036 ^a 12				
2653.8 6	0.0010 3	3320.4	$(3,4^{+})$	667.7158 2+	
^x 2690.8 7	0.0010 3				
2717.5 6	0.0035 5	3385.2	$(3,4^{+})$	667.7158 2+	
^x 2757.8 7	0.0009 4				
^x 2766.1 ^{&} 8	0.0004 <mark>&</mark>				I_{γ} : <0.0004 (1978Ne08).

[†] Adopted values from 1978Ne08, unless otherwise stated. The adopted values in 1978Ne08 are from a weighted average of results of their own measurements, from 1971We15 and averaged results in 1970Ca04. The values in 1970Ca04 were an average of their results and from 1969He18, 1967He03, 1967Yt01 and 1966Ar15.

- [‡] From ¹³²Cs ε decay. Corresponding values from ¹³²I decay agree but are less precise.
- [#] Uncertain γ ray.

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- [@] Since intensities reported by different groups differ significantly, this γ May Be suspect.
- [&] From 1971We15, considered As uncertain.
- ^a May Be from background.
- ^b From $\alpha(K)$ exp. The assignments given in parentheses are implied from $\Delta(J^{\pi})$ and $\gamma\gamma(\theta)$ and/or $\gamma(\theta,T)$ data.
- ^{*c*} From $\gamma(\theta, T)$ data of 1980Gi07, unless otherwise stated.
- ^d For absolute intensity per 100 decays, multiply by 0.987.
- ^{*e*} Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ -ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
- ^f Multiply placed with undivided intensity.
- ^g Multiply placed with intensity suitably divided.
- ^h Placement of transition in the level scheme is uncertain.
- $x \gamma$ ray not placed in level scheme.

Decay Scheme





¹³²Ι β⁻ decay (2.295 h) 1978Ne08,1973Si29,1980Gi07



¹³²I β^- decay (2.295 h) 1978Ne08,1973Si29,1980Gi07





Decay Scheme (continued)



¹³²₅₄Xe₇₈