^{36}P β^- decay (5.6 s) 1986Du07,1987DuZU

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Ninel Nica, John Cameron and Balraj Singh	NDS 113, 1 (2012)	31-Dec-2011

Parent: ^{36}P: E=0; $J^\pi=4^-$; $T_{1/2}$=5.6 s *3*; Q(β^-)=10413 *13*; %β^- decay=100.0
^{36}P-Q(β^-): From 2011AuZZ, 2003Au03.
Data from 1986Du07 updated in private communication (J.P. Dufour to P.M. Endt). See also 1986Du11.
Theoretical calculations of β decay: 1987Wa10.

^{36}S Levels

E(level)†	J^π‡
0	0^+
3290.9 *3*	2^+
4192.7 *5*	3^-
4575.2 *7*	2^+
5021.5 *3*	4^-
5206.1 *3*	5^-
5251.2 *10*	3^-
5830.9 *7*	3^-
6514.4 *4*	4^+
7271.9 *3*	$(3^-,4^-,5^-)$

† From least-squares fit to Eγ data, assuming 0.3 keV uncertainty for each Eγ.
‡ From Adopted Levels.

β^- radiations

E(decay)	E(level)	Iβ^-†	Log *ft*	Comments
(3141 *13*)	7271.9	11.6 *12*	4.62 *5*	av Eβ= 1069 *29*
(3899 *13*)	6514.4	<0.7	>6.3	av Eβ= 1432 *29*
(4582 *13*)	5830.9	57.3 *15*	4.66 *3*	av Eβ= 1764 *29*
(5162 *13*)	5251.2	11.9 *8*	5.57 *4*	av Eβ= 2046 *29*
(5207 *13*)	5206.1	1.9 *3*	6.39 *8*	av Eβ= 2068 *29*
(5392 *13*)	5021.5	10.7 *7*	5.72 *4*	av Eβ= 2159 *29*
(5838 *13*)	4575.2	<0.4	>7.3	av Eβ= 2377 *29*
(6220 *13*)	4192.7	7 *3*	6.1 *2*	av Eβ= 2565 *29*
(7122 *13*)	3290.9	<2.3	>6.9	av Eβ= 3008 *30*

† Absolute intensity per 100 decays.

$\gamma(^{36}S)$

Eγ	Iγ†‡	E$_i$(level)	J_i^π	E$_f$	J_f^π	Mult.	δ
184.6	2.5 *1*	5206.1	5^-	5021.5	4^-		
579.7	0.4 *1*	5830.9	3^-	5251.2	3^-		
757.5	1.7 *2*	7271.9	$(3^-,4^-,5^-)$	6514.4	4^+		
809.4	5.4 *3*	5830.9	3^-	5021.5	4^-		
828.8	16.1 *3*	5021.5	4^-	4192.7	3^-		
901.8	70.4 *20*	4192.7	3^-	3290.9	2^+	E1(+M2)	0.00 *5*
1013.4	0.6 *2*	5206.1	5^-	4192.7	3^-		
1058.5	5.3 *3*	5251.2	3^-	4192.7	3^-		

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$\gamma(^{36}S)$ (continued)

E_γ	I_γ †‡	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	Comments
1255.7	4.5 *3*	5830.9	3^-	4575.2	2^+			
1284.3	4.1 *3*	4575.2	2^+	3290.9	2^+	M1+E2	+0.08 *5*	
1441.0	0.6 *2*	7271.9	$(3^-,4^-,5^-)$	5830.9	3^-			
1638.2	35.3 *10*	5830.9	3^-	4192.7	3^-			
1730.6	0.5 *3*	5021.5	4^-	3290.9	2^+			
1960.2	13.5 *5*	5251.2	3^-	3290.9	2^+			
2020.6	5.1 *3*	7271.9	$(3^-,4^-,5^-)$	5251.2	3^-			
2065.7	0.8 *2*	7271.9	$(3^-,4^-,5^-)$	5206.1	5^-			
2250.3	1.6 *2*	7271.9	$(3^-,4^-,5^-)$	5021.5	4^-			
2321.6	2.0 *3*	6514.4	4^+	4192.7	3^-			E_γ: see ^{36}S adopted gammas for comment about this transition.
2539.9	17.4 *8*	5830.9	3^-	3290.9	2^+			
3079.1	2.8 *10*	7271.9	$(3^-,4^-,5^-)$	4192.7	3^-			
3290.7	100 *6*	3290.9	2^+	0	0^+	E2		

† From private communication (J.P. Dufour to P.M. Endt).

‡ For absolute intensity per 100 decays, multiply by 1.00 *6*.

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Decay Scheme

Intensities: I_γ per 100 parent decays