Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Ameenah R. Farhan	NDS 107,1923 (2006)	30-Apr-2006

Q(β^-)=1353.1 *17*; S(n)=7979 *5*; S(p)=6851.5 *17*; Q(α)=−4374.8 *21* 2012Wa38
Note: Current evaluation has used the following Q record 1352.8 18 *7975* 4 *6851.4 17* −4374.826 2003Au03.
Additional information 1.
Nuclear structure calculation: 1995Al12, 1995Fe15, 1988Cr04, 1979Te06.
1997Is13: isomer (25 ns isomer at 259 keV) production in deep inelastic reaction: ^{198}Pt(^{76}Ge,X) at 600 MeV.

^{74}As Levels

Cross Reference (XREF) Flags

A	^{72}Ge(α,d)	D	^{74}Ge(p,n)
B	^{72}Ge(α,npγ)	E	^{74}Ge(p,nγ)
C	^{73}Ge(^{3}He,d)	F	^{75}As(p,d)

E(level)†	J$^\pi$‡	T$_{1/2}$#	XREF	Comments
0.0	2$^-$	17.77 d *2*	ABCDEF	%β^-=34 *2*; %ε+%β^+=66 *2* μ=−1.597 *3* (1972Ka35,1989Ra17) T$_{1/2}$: from 1972Em01 and 1962Ei02. Others: 1968Bo25, 1953Wa40, 1948Mc31. J$^\pi$: log *ft* value to 0$^+$ and shape factor of β^-, β^+ spectra which are characteristic of first-forbidden unique transitions (1971Bo01,1958Gr02,1951Jo06). μ: nuclear magnetic resonance (1972Ka35,1976St25). See also 2005St24 compilation. Configuration=$\pi f_{5/2}\nu g_{9/2}$ (1972Ka35).
173.135 *9*	(1)$^-$&		DE	J$^\pi$: M1 γ to 2$^-$.
183.055 *9*	(3)$^-$&	≤0.6 ns	BC E	J$^\pi$: M1 γ to 2$^-$.
202.130 *10*	(2)$^-$&		dE	J$^\pi$: M1 γ to 2$^-$.
206.558 *8*	(1)$^+$&		dEF	XREF: F(198). J$^\pi$: E1 γ to 2$^-$. E(level): 198 in (p,d) corresponds to this level rather than 202 level, because L(p,d)=1 gives positive parity.
259.187 *13*	(4)$^+$&	26.8 ns *5*	B dE	μ=+3.24 *4* (1971Ch10,1989Ra17) μ: TDPAD (time-differential PAD method in (p,nγ)) (1971Ch10,1976Ga23). See also 2005St24 compilation. J$^\pi$: M1 γ from (3)$^+$. T$_{1/2}$: γ(t) in (p,nγ) (1971Ch10). Others: 25.7 ns *20* (γce(t) in (p,nγ), 1976La10); 27 ns *2* (γ(t) in (α,pnγ),1976Ga23).
267.435 *20*	(3)$^-$&		cdEf	J$^\pi$: M1 γ to 2$^-$. E(level): 265 in (p,d) and 273 in (α,d) correspond to any of the 267 or 271 levels, because L(p,d)=4+2 and L(^{3}He,d)=1+3.
271.606 *17*	(4)$^-$&	1.0 ns *1*	Bc Ef	J$^\pi$: E2 γ to 2$^-$. T$_{1/2}$: γce(t) in (p,nγ) (1976La10).
278.298 *13*	(3)$^+$&	<0.3 ns	DE	J$^\pi$: E1 γ to 2$^-$. T$_{1/2}$: γce(t) in (p,nγ) (1976La10).
315.14 *6*	(5)@	<0.5 ns	B	T$_{1/2}$: γ(t) in (α,pnγ) (1976Ga23).
332.298 *22*	(4)$^-$&		cdEF	XREF: F(337). J$^\pi$: (E2) γ to 2$^-$; L(^{3}He,d)=1+3; L(p,d)=4.
335.28 *6*	(5$^-$)@	<0.5 ns	BcdE	T$_{1/2}$: γ(t) in (α,pnγ) (1976Ga23). J$^\pi$: L(^{3}He,d)=1+3 gives negative parity.
372.947 *23*	(4)$^-$&		dE	J$^\pi$: M1 γ's to (3)$^-$ and (4)$^-$.

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Adopted Levels, Gammas (continued)

^{74}As Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
385.141 *16*	$(2)^{-}$[&]		dE	Jπ: M1 γ to 2^{-}.
422.223 *11*	$(1)^{+}$[&]		cdE	Jπ: M1 γ to $(1)^{+}$; E1 γ to $(1)^{-}$.
425.946 *14*	$(2)^{+}$[&]	<0.3 ns	cdE	Jπ: E1 γ to 2^{-}; M1 γ to $(3)^{+}$. $T_{1/2}$: from γce(t) in (p,nγ) (1976La10).
446.768 *15*	$(2)^{+}$[&]		dEF	XREF: E(422). E(level): 442 in (p,d) is a broad peak, probably a doublet. Jπ: M1+E2 γ to $(1)^{+}$; M1 γ to $(3)^{+}$.
447.971 *23*	$(3)^{-}$[&]		dEF	Jπ: M1 γ to 2^{-}.
465.33 *3*	$(0)^{+}$[&]		DE	Jπ: M1 γ to $(1)^{+}$.
507.211 *25*	$(3,4)^{-}$[&]		dE	Jπ: E2(+M1) γ to 2^{-}; M1+E2 γ to $(4)^{-}$.
513.757 *18*	$(1)^{+}$[&]		dE	Jπ: E1 γ to 2^{-}; M1 γ to $(1)^{+}$.
516.34 *21*	(6)[@]		B	
527.25 *5*	(4^{-})[&]		dE	Jπ: (M1+E2) γ to $(4)^{-}$; γ to $(3)^{-}$.
533.66 *5*	$(4)^{-}$[&]		dE	Jπ: M1 γ to $(3)^{-}$.
546.88 *21*	$(6)^{-}$[@]		BC F	XREF: C(547)F(541). Jπ: parity from L(^{3}He,d)=1; L(p,d)=4(+2).
552.054 *20*	$(2)^{+}$[&]		DE	XREF: D(550). Jπ: E1 γ to 2^{-}; M1 γ to $(1)^{+}$; γ's to $(3)^{+}$ and $(3)^{-}$.
586.037 *22*	$(2)^{+}$[&]		DEF	XREF: D(584)F(578). Jπ: E1 γ to 2^{-}, M1 γ to $(1)^{+}$; γ's to $(3)^{+}$ and $(3)^{-}$; L(p,d)=1.
595.62 *22*	(7)[@]		B	
616.93 *5*	$(3)^{-}$[&]		E	Jπ: M1(+E2) γ to 2^{-}; γ to 4^{-}.
626.378 *22*	$(1)^{-}$[&]		CDE	XREF: C(633)D(625). Jπ: M1+E2 γ to $(3)^{-}$; γ to $(1)^{+}$; L(^{3}He,d)=1+3.
632.952 *23*	$(2)^{+}$[&]		EF	XREF: F(626). Jπ: M1 γ to $(3)^{+}$; γ to 1^{+}; L(p,d)=1+3.
650.029 *17*	$(1)^{-}$[&]		DE	XREF: D(647). Jπ: E1 γ's to $(1)^{+}$ and $(2)^{+}$.
674.40? *11*	$(4^{+},5^{+})$[&]		E	Jπ: (M1) γ to $(4)^{+}$.
683 *5*	$(6)^{-}$		A CD	XREF: A(670)C(687). Jπ: L(^{3}He,d)=1; configuration=$p_{3/2}g_{9/2}$.
686.87 *4*	$(3,4)^{+}$[&]		E	Jπ: M1 γ to $(4)^{+}$.
699.9 *3*	(7)[@]		B	
701.364 *20*	$(1)^{+}$[&]		DE	XREF: D(696). Jπ: M1 γ to $(1)^{+}$.
715.71? *13*			E	
716.234 *22*	$(2)^{-}$[&]		DE	XREF: D(710). Jπ: M1 γ's to 2^{-} and $(3)^{-}$.
719.87? *12*			E	
732.19 *4*	$(2)^{+}$[&]		cDEF	XREF: D(727)F(726). Jπ: M1 γ to $(2)^{+}$; (M1+E2) γ to $(3)^{+}$; L(p,d)=1+3 for unresolved doublet: 726 and 779.
734.18 *13*	(4,5)[&]		c E	Jπ: γ's to $(3)^{-}$ and $(5)^{-}$.
743.498 *18*	$(1)^{-}$[&]		DE	XREF: D(740). Jπ: M1 γ to 2^{-}.
746.80 *4*	$(3)^{+}$[&]		dE	Jπ: E2(+M1) γ to $(4)^{+}$; M1(+E2) γ to $(2)^{+}$.
753.459 *21*	$(1)^{+}$[&]		dE	Jπ: M1 γ to $(2)^{+}$; γ's to $(1)^{+}$ and $(1)^{-}$.
754.51 *3*	$(2)^{+}$[&]		E	Jπ: M1 γ's to $(1)^{+}$ and $(3)^{+}$.

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Adopted Levels, Gammas (continued)

^{74}As Levels (continued)

E(level)†	Jπ‡	XREF	Comments
756.96? *17*		E	
758.84 *3*	$(2)^{-}$&	E	Jπ: M1 γ's to $(3)^{-}$ and $(2)^{-}$.
776 *5*	$(3\text{ to }6)^{-}$	CD	XREF: C(774)D(776). Jπ: L(^{3}He,d)=1+3.
779.17 *6*	(2)&	EF	XREF: F(779). Jπ: γ's to $(3)^{-}$ and $(1)^{-}$; L(p,d)=3+1 for 726+779 suggests positive parity.
781.94 *7*	$(3)^{+}$&	E	Jπ: M1+E2 γ's to $(3)^{+}$ and $(4)^{+}$; γ to 2^{-}.
784.19 *5*	$(3,4)^{+}$&	E	Jπ: M1 γ to $(4)^{+}$.
794.75 *8*	(3,4)&	E	Jπ: γ's to 4^{-} and $(2)^{-}$.
798.94 *6*	(3)&	DE	XREF: D(794). Jπ: γ's to 2^{-} and $(1)^{-}$.
802.13 *4*	(2^{+})&	E	Jπ: (M1+E2) γ to $(1,2)^{+}$.
819.6? *3*		E	
823.326 *25*	$(1)^{+}$&	DE	XREF: D(819). Jπ: M1 γ to $(2)^{+}$; γ to $(0,1)^{+}$.
831 *5*	$(3\text{ to }6)^{-}$	CD	XREF: C(836). Jπ: L(^{3}He,d)=1.
835.76 *4*	$(2^{+},3^{+})$&	E	Jπ: (M1+E2) γ to $(2)^{+}$.
838.26 *14*	(3)&	E	Jπ: γ's to 2^{-} and $(3)^{-}$.
845 *5*	$(\leq 3)^{+}$	F	Jπ: L(p,d)=1.
883 *5*		D	
895 *5*	$(\leq 3)^{+}$	F	Jπ: L(p,d)=1.
903.3 *5*	$(3,4)^{-}$	C E	Jπ: from L(^{3}He,d)=1; γ-decay mode.
922 *5*		D	
955 *10*	$(1\text{ to }8)^{-}$	Cd	XREF: c(958). Jπ: L(^{3}He,d)=3.
958 *10*	$(^{+})$	d F	Jπ: L(^{3}He,d)=3; L(p,d)=1+3 suggest two closely−spaced levels of opposite parities.
1007 *10*	$(3\text{ to }6)^{-}$	C	Jπ: L(^{3}He,d)=1.
1021 *5*	$(\leq 3)^{+}$	D F	Jπ: L(p,d)=1.
1052 *5*		D	
1099 *5*		D F	
1112 *10*	$(9)^{+}$	A C	XREF: A(1060). Jπ: L(^{3}He,d)=4; configuration=$g^2_{9/2}$.
1129.0 *5*	(≤4)	DE	Jπ: γ to $(2)^{+}$.
1159 *5*		D	
1174 *5*		D	
1207 *5*		D	
1230 *5*		D	
1265 *5*		D	
1300 *5*	$(\leq 3)^{+}$	D F	Jπ: L(p,d)=1.
1332 *5*		D	
1372 *5*	$(1,2,3)^{+}$	CD F	XREF: C(1363)F(1375). E(level): 1375 in (p,d) is a broad peak, probably a doublet. Jπ: L(p,d)=1+3.
1400 *5*		D	
1431 *5*	$(\leq 3)^{+}$	D F	Jπ: L(p,d)=1.
1471 *10*	$(3\text{ to }6)^{-}$	C	Jπ: L(^{3}He,d)=1.
1530 *10*	$(3\text{ to }6)^{-}$	C F	Jπ: L(^{3}He,d)=1+3.
1627 *10*	$(1\text{ to }8)^{-}$	C F	Jπ: L(^{3}He,d)=3.
1676 *15*		F	
1755 *10*	$(1\text{ to }8)^{-}$	C F	Jπ: L(^{3}He,d)=3.
1875 *10*	$(\leq 3)^{+}$	C F	Jπ: L(p,d)=1.

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Adopted Levels, Gammas (continued)

^{74}As Levels (continued)

E(level)†	J$^{\pi}$‡	XREF	Comments
1913 *10*		C	
2061 *10*	(≤3)$^{+}$	C F	J$^{\pi}$: L(p,d)=1.
2108 *10*	(9)$^{+}$	A C	XREF: A(2070). J$^{\pi}$: L(^{3}He,d)=4; configuration=$g^{2}_{9/2}$.
2194 *10*	(1 to 8)$^{-}$	C	J$^{\pi}$: L(^{3}He,d)=3.
2720 *30*		A	

† For levels populated in γ-ray studies are from least squares fit to Eγ's. In other cases weighted average of available values has been taken.

‡ Below 850 keV, spin and parity assignments are mainly based on decay properties of levels and Hauser-Feshbach analysis in (p,nγ). Above 850 keV, J^{π}'s are from L transfers in (^{3}He,d) from 9/2^{+} target (^{73}Ge g.s.) and (p,d) from 3/2^{-} target (^{75}As g.s.).

For excited levels, values are from $\gamma\gamma$(t), γce(t) in (p,nγ).

@ Tentative assignments are from $\gamma(\theta)$ in (α,pnγ). It is assumed that in reactions of this type spins increase as the excitation energy increases.

& Also Hauser-Feshbach analysis in (p,nγ).

γ(^{74}As)

E$_i$(level)	J$_i^{\pi}$	E$_{\gamma}$†	I$_{\gamma}$†	E$_f$	J$_f^{\pi}$	Mult.‡	α@	Comments
173.135	(1)$^{-}$	173.14 *1*	100	0.0	2^{-}	M1	0.0212	
183.055	(3)$^{-}$	183.04& *1*	100	0.0	2^{-}	M1	0.0183	B(M1)(W.u.)>0.0059
202.130	(2)$^{-}$	202.13& *1*	100	0.0	2^{-}	M1	0.0142	
206.558	(1)$^{+}$	33.50 *8*	0.002 *1*	173.135	(1)$^{-}$			
		206.56 *1*	100 *5*	0.0	2^{-}	E1		
259.187	(4)$^{+}$	76.13 *1*	100	183.055	(3)$^{-}$	D		
		259.2[a] *3*	<4	0.0	2^{-}			
267.435	(3)$^{-}$	65.30 *7*	2.3 *5*	202.130	(2)$^{-}$			
		84.49 *6*	1.7 *6*	183.055	(3)$^{-}$			
		267.43 *3*	100 *8*	0.0	2^{-}	M1		
271.606	(4)$^{-}$	88.58 *3*	32 *2*	183.055	(3)$^{-}$	D		
		271.61 *3*	100 *5*	0.0	2^{-}	E2	0.0199	B(E2)(W.u.)=15.5 *17*
278.298	(3)$^{+}$	18.98 *10*	24 *8*	259.187	(4)$^{+}$	M1	10.7	B(M1)(W.u.)>0.53 Mult.: from T$_{1/2}$ and RUL.
		278.34 *2*	100 *5*	0.0	2^{-}	E1		B(E1)(W.u.)>1.5×10^{-5}
315.14	(5)	55.95 *5*	100	259.187	(4)$^{+}$	[D]	0.44 *2*	B(M1)(W.u.)>0.17; B(E1)(W.u.)>0.0030
332.298	(4)$^{-}$	60.84 *6*	11 *4*	271.606	(4)$^{-}$			
		64.95 *6*	55 *7*	267.435	(3)$^{-}$			
		149.20 *3*	73 *7*	183.055	(3)$^{-}$			
		332.29 *7*	100 *11*	0.0	2^{-}	(E2)		Mult.: E2+M1 from α(K)exp in (p,nγ); but ΔJ^{π} requires E2.
335.28	(5^{-})	63.68 *6*	100	271.606	(4)$^{-}$			
372.947	(4)$^{-}$	101.34 *3*	76 *7*	271.606	(4)$^{-}$	M1	0.087	
		105.51 *3*	100 *8*	267.435	(3)$^{-}$	M1	0.0781	
		189.95 *5*	56 *5*	183.055	(3)$^{-}$	M1(+E2)		
385.141	(2)$^{-}$	183.04&#a *1*	<1920#	202.130	(2)$^{-}$			
		202.13&#a *1*	<1080#	183.055	(3)$^{-}$			
		212.04 *8*	8.1 *14*	173.135	(1)$^{-}$			
		385.10 *2*	100 *6*	0.0	2^{-}	M1		
422.223	(1)$^{+}$	215.67 *1*	100 *5*	206.558	(1)$^{+}$	M1	0.0121	
		249.09 *2*	21 *1*	173.135	(1)$^{-}$	E1		

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Adopted Levels, Gammas (continued)

γ(^{74}As) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[@]	Comments
422.223	$(1)^+$	422.03 *16*	1.2 *3*	0.0	2^-			
425.946	$(2)^+$	147.65 *1*	100 *5*	278.298	$(3)^+$	M1	0.0318	B(M1)(W.u.)>0.021
		219.54 *10*	0.71 *21*	206.558	$(1)^+$			
		242.60 *30*	0.25 *17*	183.055	$(3)^-$			
		252.84 *4*	2.16 *28*	173.135	$(1)^-$			
		425.81 *10*	4.8 *4*	0.0	2^-	E1		B(E1)(W.u.)>6.9×10^{-7}
446.768	$(2)^+$	168.49 *2*	77 *6*	278.298	$(3)^+$	M1	0.0227	
		240.20 *2*	100 *7*	206.558	$(1)^+$	M1+E2		
		446.70 *10*	12.4 *13*	0.0	2^-			
447.971	$(3)^-$	176.35 *5*	10.4 *13*	271.606	$(4)^-$			
		447.97 *3*	100 *7*	0.0	2^-	M1		
465.33	$(0)^+$	258.77 *3*	100	206.558	$(1)^+$	M1		
507.211	$(3,4)^-$	122.12 *9*	20 *5*	385.141	$(2)^-$			
		174.95 *4*	69 *8*	332.298	$(4)^-$			
		235.60 *3*	100 *10*	271.606	$(4)^-$	M1+E2		
		239.80 *16*	22 *7*	267.435	$(3)^-$			
		324.06 *6*	42 *6*	183.055	$(3)^-$	M1		
		507.22 *16*	54 *6*	0.0	2^-	E2(+M1)		
513.757	$(1)^+$	307.09 *10*	10.2 *15*	206.558	$(1)^+$	M1		
		513.75 *2*	100 *6*	0.0	2^-	E1		
516.34	(6)	201.2 *2*	100	315.14	(5)	[D,E2]	0.04 *2*	
527.25	(4^-)	192.05 *15*	26 *9*	335.28	(5^-)			
		194.97 *13*	22 *9*	332.298	$(4)^-$			
		255.64 *6*	74 *12*	271.606	$(4)^-$	(M1+E2)		
		259.80 *8*	100 *14*	267.435	$(3)^-$		0.016 *8*	
533.66	$(4)^-$	160.80 *8*	12 *5*	372.947	$(4)^-$			
		262.04 *7*	28 *6*	271.606	$(4)^-$			
		350.54 *7*	100 *9*	183.055	$(3)^-$	M1		
546.88	$(6)^-$	211.6 *2*	100	335.28	(5^-)	[D,E2]	0.03 *2*	
552.054	$(2)^+$	273.69 *7*	6.9 *12*	278.298	$(3)^+$			
		284.87 *17*	1.9 *12*	267.435	$(3)^-$			
		345.50 *2*	100 *5*	206.558	$(1)^+$	M1		
		368.68 *12*	7.4 *15*	183.055	$(3)^-$	(E1)		
		378.89 *13*	5.6 *14*	173.135	$(1)^-$			
		552.09 *9*	12.4 *18*	0.0	2^-	E1		
586.037	$(2)^+$	163.90 *6*	22 *3*	422.223	$(1)^+$			
		307.75 *8*	100 *10*	278.298	$(3)^+$			
		318.59 *20*	7.6 *21*	267.435	$(3)^-$			
		379.47 *4*	64 *6*	206.558	$(1)^+$	M1		
		413.08 *10*	27 *3*	173.135	$(1)^-$			
		586.00 *3*	64 *5*	0.0	2^-	E1		
595.62	(7)	79.28 *5*	100	516.34	(6)	[D,E2]	1.1 *9*	
616.93	$(3)^-$	244.1 *3*	2.6 *21*	372.947	$(4)^-$			
		349.54 *12*	18 *4*	267.435	$(3)^-$			
		414.87 *15*	11 *3*	202.130	$(2)^-$			
		433.86 *13*	8 *4*	183.055	$(3)^-$			
		616.91 *5*	100 *10*	0.0	2^-	M1(+E2)		
626.378	$(1)^-$	241.18 *4*	93 *7*	385.141	$(2)^-$			
		358.86 *13*	6.7 *18*	267.435	$(3)^-$			
		419.90 *8*	7.2 *13*	206.558	$(1)^+$			
		424.07 *14*	12.2 *17*	202.130	$(2)^-$	M1+E2		
		443.23 *10*	27 *6*	183.055	$(3)^-$	(E2)		Mult.: M1+E2 from ce data, but ΔJ^π requires E2.
		626.42 *3*	100 *6*	0.0	2^-	M1(+E2)		
632.952	$(2)^+$	186.30 *12*	8.8 *14*	446.768	$(2)^+$			

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Adopted Levels, Gammas (continued)

γ(^{74}As) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[@]
632.952	$(2)^+$	354.65 *2*	100 *6*	278.298	$(3)^+$	M1	
		426.39 *12*	9.5 *16*	206.558	$(1)^+$		
650.029	$(1)^-$	136.27 *9*	9.2 *22*	513.757	$(1)^+$		
		202.20 *12*	19 *3*	447.971	$(3)^-$		
		224.07 *3*	100 *7*	425.946	$(2)^+$	E1	
		227.84 *3*	65 *4*	422.223	$(1)^+$	E1	
		264.85 *4*	18 *3*	385.141	$(2)^-$		
		443.45 *8*	96 *8*	206.558	$(1)^+$		
		447.88 *11*	21 *4*	202.130	$(2)^-$		
		476.84 *10*	21 *4*	173.135	$(1)^-$		
		650.02 *4*	28 *3*	0.0	2^-		
674.40?	$(4^+,5^+)$	415.21 *11*	100	259.187	$(4)^+$	(M1)	
686.87	$(3,4)^+$	240.00 *16*	16 *5*	446.768	$(2)^+$		
		408.55 *15*	16 *4*	278.298	$(3)^+$		
		427.69 *3*	100 *11*	259.187	$(4)^+$	M1	
699.9	(7)	153.0 *2*	100	546.88	$(6)^-$	[D,E2]	0.10 *7*
701.364	$(1)^+$	187.63 *6*	24 *2*	513.757	$(1)^+$		
		279.10 *5*	41 *4*	422.223	$(1)^+$		
		494.84 *3*	100 *5*	206.558	$(1)^+$	M1	
		528.20 *3*	38 *3*	173.135	$(1)^-$		
715.71?		267.74 *12*	100	447.971	$(3)^-$		
716.234	$(2)^-$	514.04 *13*	42 *6*	202.130	$(2)^-$		
		533.11 *3*	100 *6*	183.055	$(3)^-$	M1	
		716.30 *3*	80 *6*	0.0	2^-	M1	
719.87?		460.68 *12*	100	259.187	$(4)^+$		
732.19	$(2)^+$	285.35 *16*	4.8 *21*	446.768	$(2)^+$		
		306.24 *4*	100 *7*	425.946	$(2)^+$	M1	
		453.90 *13*	5.8 *14*	278.298	$(3)^+$	(M1+E2)	
		530.10 *30*	2.2 *12*	202.130	$(2)^-$		
734.18	(4,5)	398.85 *15*	30 *14*	335.28	(5^-)		
		551.22 *22*	100 *30*	183.055	$(3)^-$		
743.498	$(1)^-$	117.16 *9*	7.9 *22*	626.378	$(1)^-$		
		317.46 *20*	5.0 *22*	425.946	$(2)^+$		
		358.32 *4*	100 *7*	385.141	$(2)^-$	(M1+E2)	
		536.82 *6*	12 *3*	206.558	$(1)^+$		
		541.66 *19*	4.3 *22*	202.130	$(2)^-$		
		560.33 *16*	9.3 *22*	183.055	$(3)^-$		
		570.40 *3*	79 *7*	173.135	$(1)^-$	M1	
		743.50 *3*	68 *6*	0.0	2^-	M1(+E2)	
746.80	$(3)^+$	299.97 *5*	100 *16*	446.768	$(2)^+$	M1(+E2)	
		320.96 *6*	84 *16*	425.946	$(2)^+$		
		487.58 *7*	76 *14*	259.187	$(4)^+$	E2(+M1)	
753.459	$(1)^+$	120.52 *10*	3.1 *7*	632.952	$(2)^+$		
		327.52 *2*	100 *5*	425.946	$(2)^+$	M1	
		331.20 *10*	7.6 *18*	422.223	$(1)^+$		
		546.79 *14*	3.6 *11*	206.558	$(1)^+$		
		580.28 *7*	5.7 *10*	173.135	$(1)^-$		
		753.44 *6*	4.2 *10*	0.0	2^-		
754.51	$(2)^+$	202.30 *12*	28 *6*	552.054	$(2)^+$		
		240.68 *20*	8 *3*	513.757	$(1)^+$		
		476.24 *5*	100 *11*	278.298	$(3)^+$	M1	
		547.95 *4*	87 *7*	206.558	$(1)^+$	M1	
756.96?		421.68 *16*	100	335.28	(5^-)		
758.84	$(2)^-$	310.84 *5*	43 *9*	447.971	$(3)^-$	M1	
		373.58 *9*	100 *11*	385.141	$(2)^-$	M1	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

γ(^{74}As) (continued)

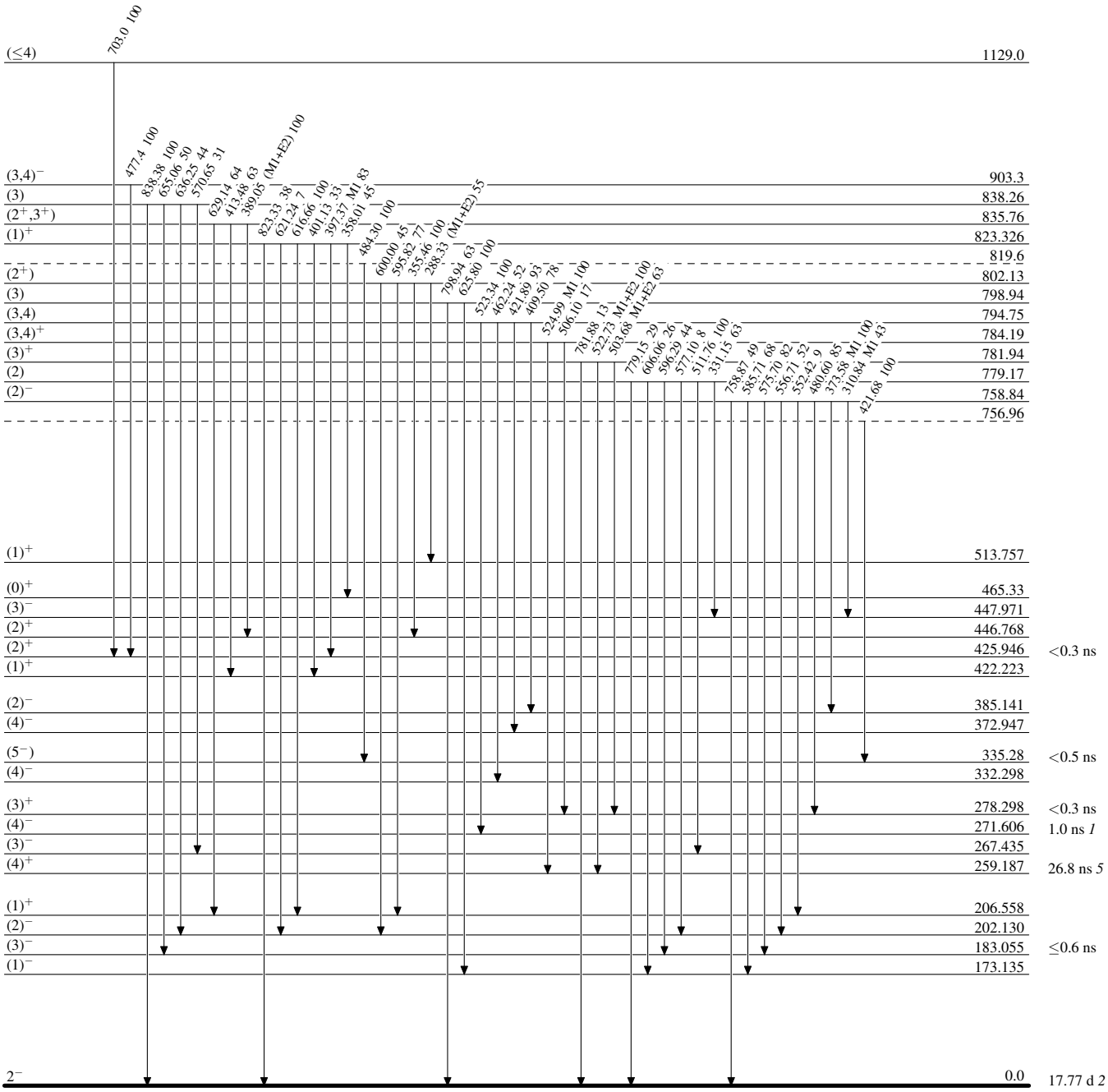
E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.‡
758.84	(2)$^-$	480.60 *5*	85 *11*	278.298	(3)$^+$	
		552.42 *30*	9 *8*	206.558	(1)$^+$	
		556.71 *10*	52 *9*	202.130	(2)$^-$	
		575.70 *7*	82 *11*	183.055	(3)$^-$	
		585.71 *9*	68 *13*	173.135	(1)$^-$	
		758.87 *6*	49 *9*	0.0	2$^-$	
779.17	(2)	331.15 *9*	63 *14*	447.971	(3)$^-$	
		511.76 *19*	100 *21*	267.435	(3)$^-$	
		577.10 *22*	8 *4*	202.130	(2)$^-$	
		596.29 *20*	44 *6*	183.055	(3)$^-$	
		606.06 *15*	26 *6*	173.135	(1)$^-$	
		779.15 *9*	29 *5*	0.0	2$^-$	
781.94	(3)$^+$	503.68 *11*	63 *12*	278.298	(3)$^+$	M1+E2
		522.73 *8*	100 *15*	259.187	(4)$^+$	M1+E2
		781.88 *26*	13 *7*	0.0	2$^-$	
784.19	(3,4)$^+$	506.10 *25*	17 *7*	278.298	(3)$^+$	
		524.99 *5*	100 *11*	259.187	(4)$^+$	M1
794.75	(3,4)	409.50 *15*	78 *30*	385.141	(2)$^-$	
		421.89 *16*	93 *33*	372.947	(4)$^-$	
		462.24 *16*	52 *22*	332.298	(4)$^-$	
		523.34 *14*	100 *22*	271.606	(4)$^-$	
798.94	(3)	625.80 *12*	100 *13*	173.135	(1)$^-$	
		798.94 *6*	63 *6*	0.0	2$^-$	
802.13	(2$^+$)	288.33 *4*	55 *7*	513.757	(1)$^+$	(M1+E2)
		355.46 *7*	100 *12*	446.768	(2)$^+$	
		595.82 *18*	77 *12*	206.558	(1)$^+$	
		600.00 *10*	45 *7*	202.130	(2)$^-$	
819.6?		484.30 *30*	100	335.28	(5$^-$)	
823.326	(1)$^+$	358.01 *9*	45 *6*	465.33	(0)$^+$	
		397.37 *4*	83 *7*	425.946	(2)$^+$	M1
		401.13 *6*	33 *4*	422.223	(1)$^+$	
		616.66 *10*	100 *9*	206.558	(1)$^+$	
		621.24 *26*	7 *3*	202.130	(2)$^-$	
		823.33 *4*	38 *4*	0.0	2$^-$	
835.76	(2$^+$,3$^+$)	389.05 *5*	100 *14*	446.768	(2)$^+$	(M1+E2)
		413.48 *14*	63 *13*	422.223	(1)$^+$	
		629.14 *5*	64 *13*	206.558	(1)$^+$	
838.26	(3)	570.65 *35*	31 *25*	267.435	(3)$^-$	
		636.25 *28*	44 *31*	202.130	(2)$^-$	
		655.06 *26*	50 *44*	183.055	(3)$^-$	
		838.38 *24*	100 *40*	0.0	2$^-$	
903.3	(3,4)$^-$	477.4 *5*	100	425.946	(2)$^+$	
1129.0	(≤4)	703.0 *5*	100	425.946	(2)$^+$	

† From (p,nγ) or (α,npγ).
‡ From ce data in (p,nγ).
# Expected to Be weak components of possible doublets at 183 and 202.
@ 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.
& Multiply placed.
a Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

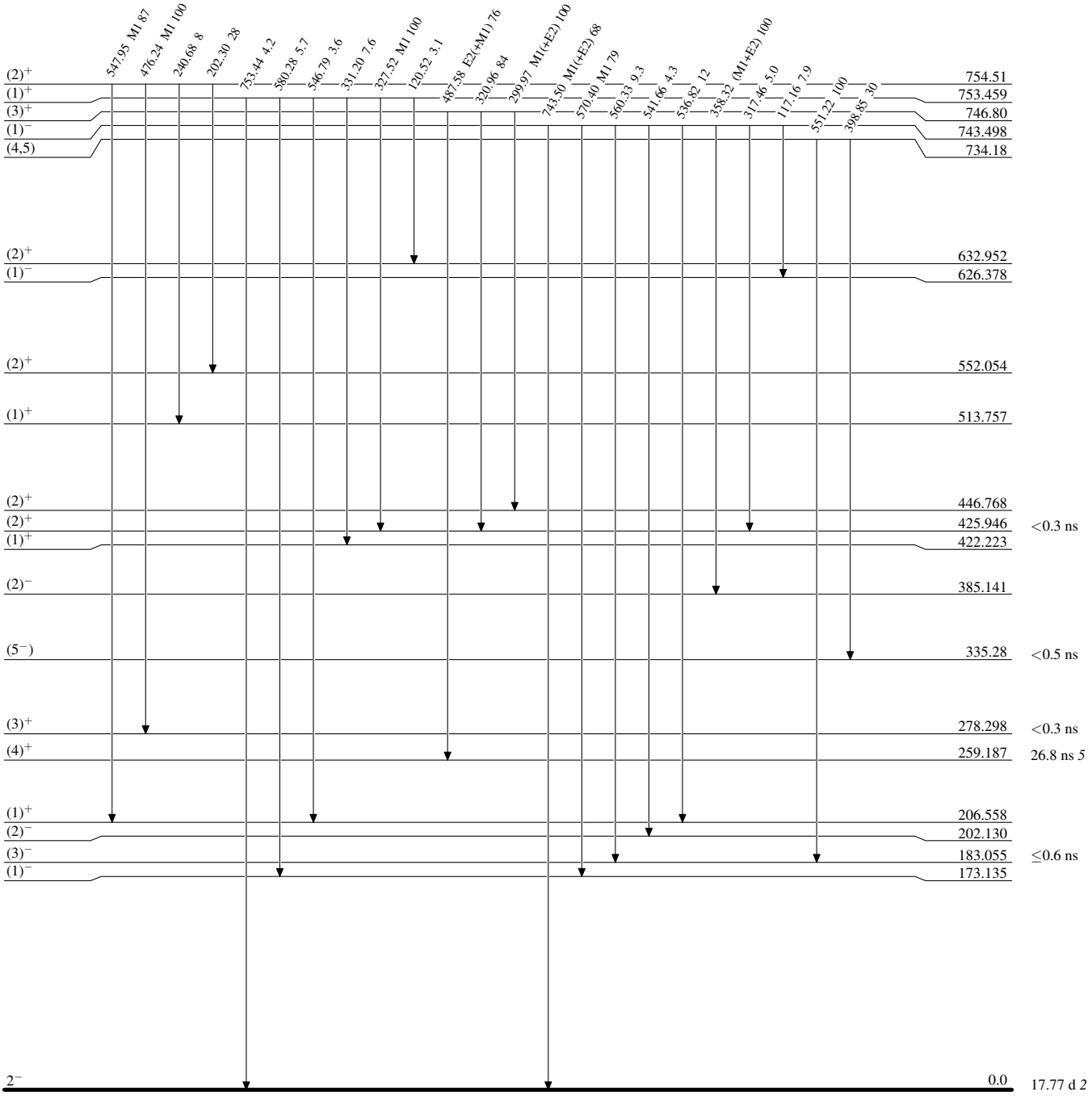


$^{74}_{33}As_{41}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

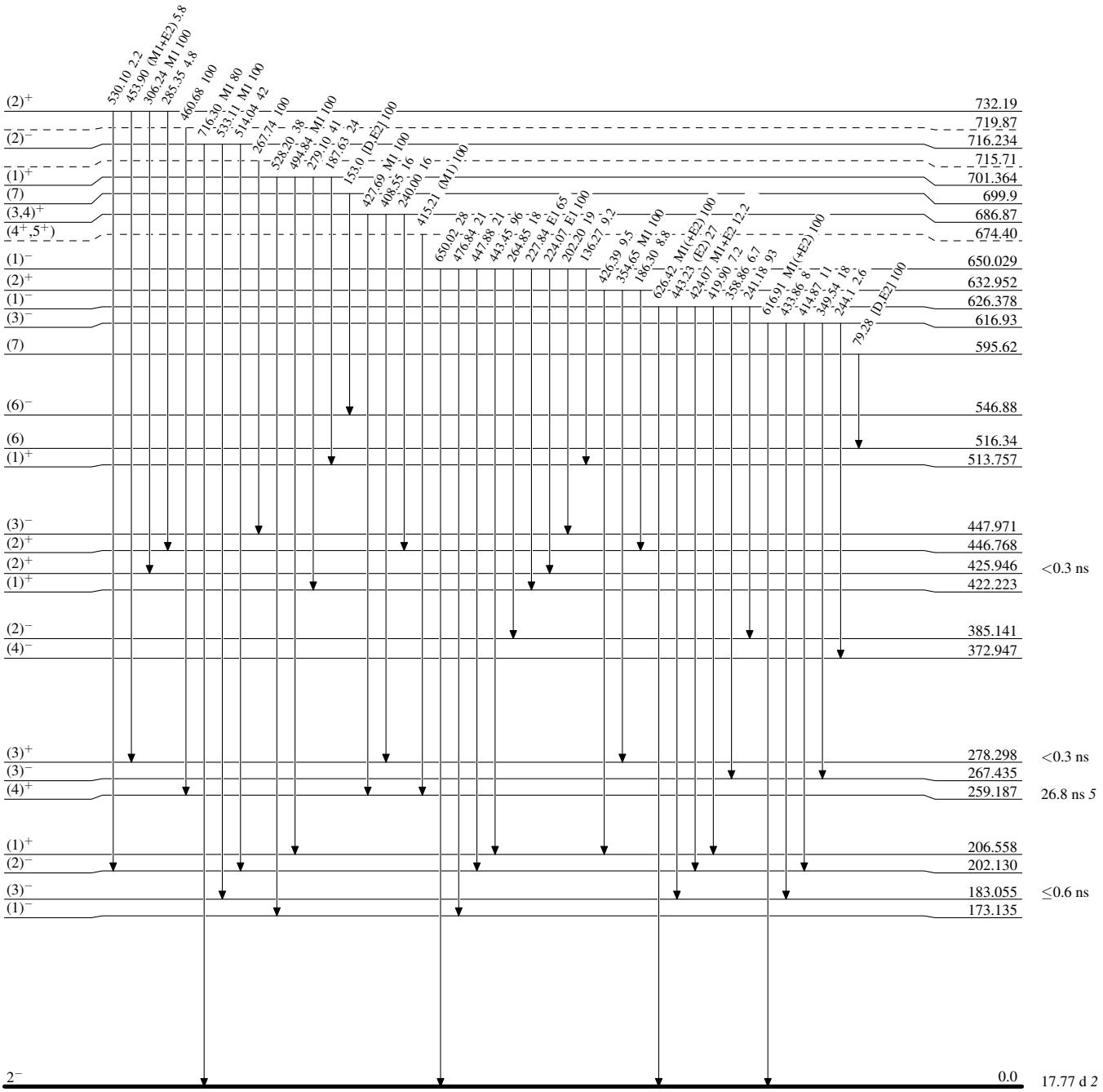


$^{74}_{33}As_{41}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{74}_{33}As_{41}$

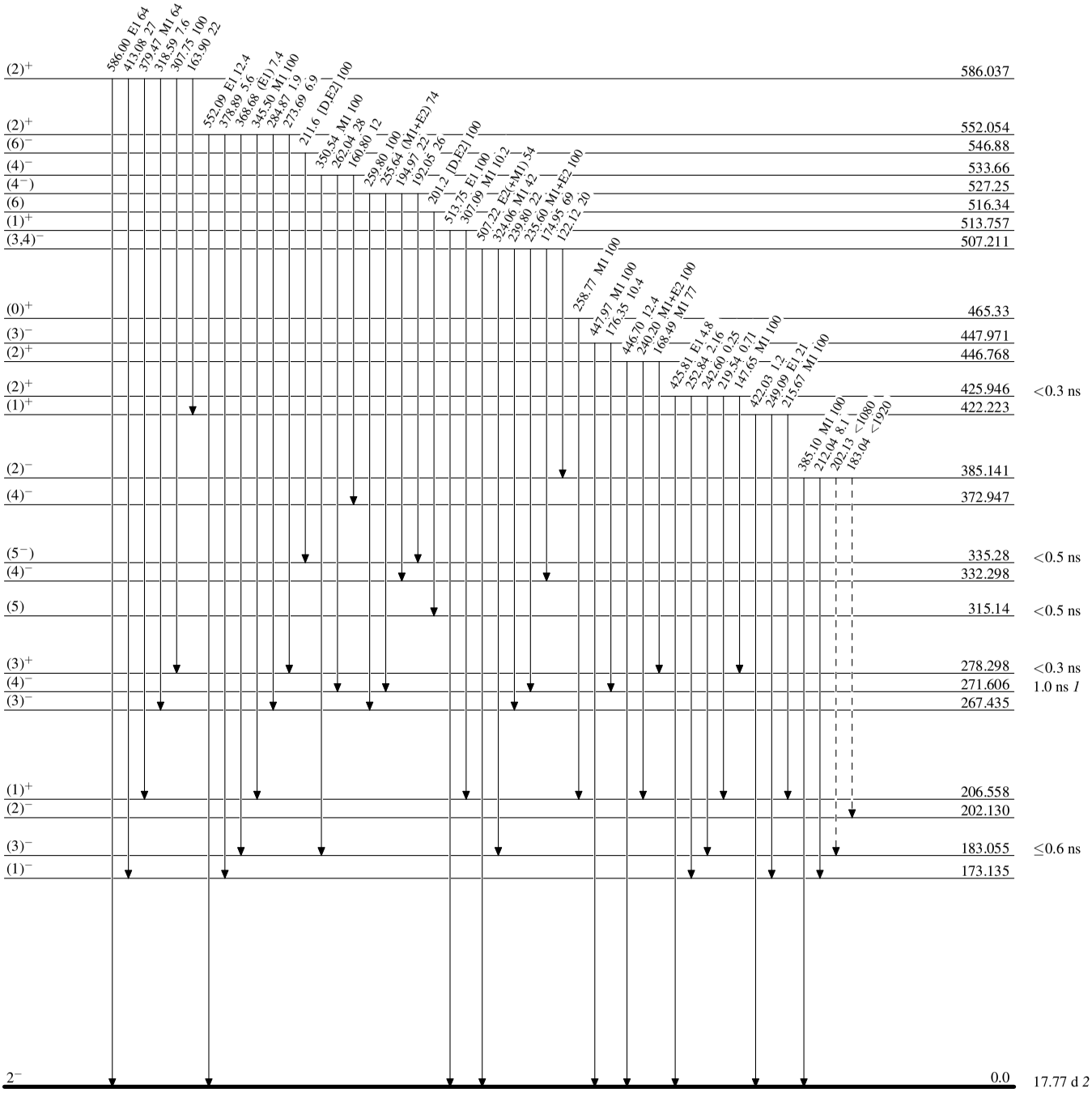
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)



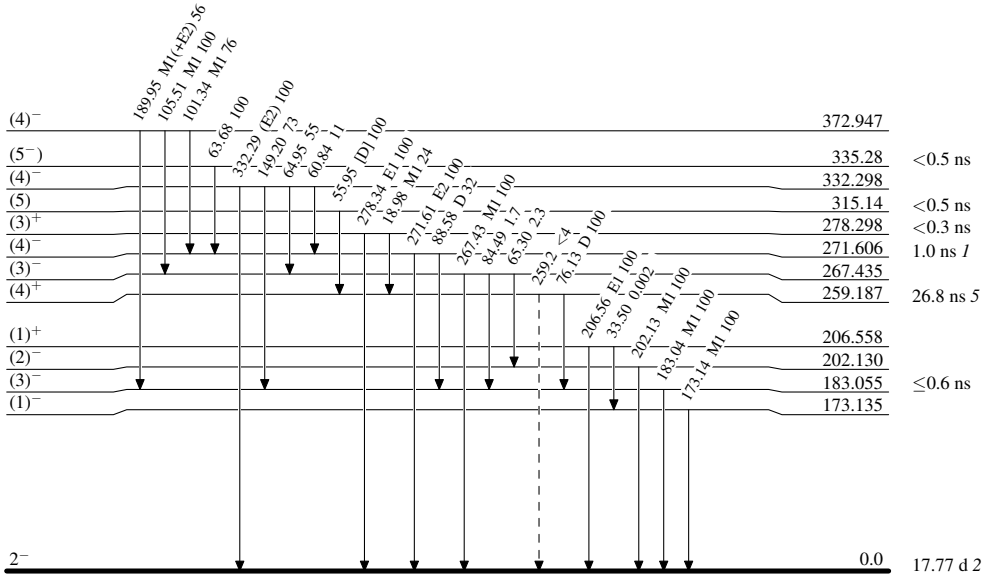
$^{74}_{33}As_{41}$

Adopted Levels, Gammas Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{74}_{33}As_{41}$