

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Jun Chen and Ameenah R. Farhan		NDS 194,3 (2024)	8-Jan-2024

$Q(\beta^-)=2960.6$ 9; $S(n)=7328.50$ 7; $S(p)=7723.4$ 9; $Q(\alpha)=-6128.0$ 12 [2021Wa16](#)

$Q(\epsilon)=921.5$ 9, $S(2n)=17574.0$ 19, $S(2p)=18820$ 3 ([2021Wa16](#)).

Mass Measurement: [2022Ge07](#) (mass excess= -72292.683 75, JYFL).

[Additional information 1](#).

Other reactions:

[2006Eg04](#): $^{76}\text{Se}(\mu^-, n\nu^-)$, E at rest, measured E_γ , I_γ .

See ' $^{75}\text{As}(n,\gamma),(n,n)$:resonances' dataset for a list of 247 neutron resonances up to 11.96 keV. These define excitations in ^{76}As between 7328 and 7340 keV excitation energy.

Structure calculations: [1999Sa25](#) (levels, J, π), [1989Va16](#) (IBA model), [1988Cu04](#) (levels), [1981Ga20](#), [1980Ki01](#) (configuration of levels).

 ^{76}As LevelsCross Reference (XREF) Flags

A	$^{75}\text{As}(n,\gamma)$ E=thermal	E	$^{76}\text{Ge}(p,n)$	I	$^{76}\text{Se}(n,p)$
B	$^{75}\text{As}(n,\gamma)$ E=2,24 keV	F	$^{76}\text{Ge}(p,n\gamma)$	J	$^{76}\text{Se}(d,^2\text{He})$
C	$^{75}\text{As}(n,\gamma),(n,n)$:resonances	G	$^{76}\text{Ge}(^3\text{He},t)$		
D	$^{75}\text{As}(d,p)$	H	$^{76}\text{Se}(\mu^-, \gamma)$		

E(level) [†]	J ^π	T _{1/2}	XREF	Comments
0.0	2 ⁻	26.254 h 11	AB DEFGH j	$\% \beta^- = 100$; $\% \epsilon \approx 0.027$ (2014Do08) $\mu = (-)0.9023$ 10 (1999Oh01, 2019StZV) $Q = 7$ 8 (1961Ch10, 2014StZZ) $\% \epsilon \approx 0.027$, preliminary measured value from 2014Do08. Others: no ϵ decay observed: $\% \epsilon(K) < 0.02$ (1957Sc23). 1963Ba30, 1954Mu22, 1951Mi16, 1949Ma03, 1948Wu02, and 1947Ba08 searched for positron decays from ^{76}As, but none detected and upper limits were suggested. From $Q(\epsilon) = 921.5$ keV (2021Wa16), positron emission is forbidden. μ: measured $\mu = -0.9028$ 10 from nuclear magnetic resonance on oriented nuclei (NMR/ON) followed by γ and β detection (1999Oh01), sign is from 1958Pi43 measurement. 2019StZV re-evaluated to 0.9023 10. Measured value in 1999Oh01 is consistent with a configuration of $3/2^-$ for protons and $7/2^+$ for neutrons (1999Oh01). Other configuration = $\pi 1f_{5/2}^+ \otimes \nu(2p_{1/2}, 1g_{9/2}^{+5})$ (1980Ki01). Other: -0.906 5 (1958Pi43, nuclear orientation method). Q: atomic beam magnetic resonance (1961Ch10). No values given in 2021StZZ and 2016St14 evaluations of quadrupole moments. J^π: spin from atomic-beam method (1961Ch10). Parity from L(d,p)=2 from $3/2^-$ target; and L($^3\text{He},t$)=1 from 0^+ target. T_{1/2}: weighted average of 26.261 h 16 (2004Un01, ionization chamber), 26.251 h 11 (2003Li62, from 559γ+564γ timing, weighted average of eight measurements using five Ge detectors). Others: 25.87 h 5 (1994Mi03, this value seems discrepant by several standard deviations), 26.321 h 1 (1989Ab22, quoted uncertainty is unrealistically low), 26.32 h 7 (1972Em01, weighted average of seven different measurements), 26.4 h 1 (1970Mc01), 26.30 h 4 (1969Na11), 26.8 h 1 (1957Wr37), 26.5 h 2 (1955Dz48), 26.4 h 2 (1953Hu47), 26.1 h 3 (1948Ph08), 26.8 h 2 (1942We01) and 26.3 h 3 (1940Mi04). Weighted average of all the above measurements (with uncertainty of 0.020 for 1989Ab22) gives 26.263 h 24 with reduced $\chi^2 = 9.4$, whereas NRM weighted average is 26.266 h 14 with reduced $\chi^2 = 2.7$. Others: 1967Or04, 1966La22, 1935Am01.

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Adopted Levels, Gammas (continued) ^{76}As Levels (continued)

E(level) [†]	J ^π	T _{1/2}	XREF	Comments
44.4254 7	(1) ⁺	1.84 μs 6	AB DEF j	μ=+0.559 5 (1971BeWJ,2020StZV) μ: perturbed angular distribution (PAD) method using $^{76}\text{Ge}(p,n\gamma)$ and $^{75}\text{As}(d,p\gamma)$ reactions (1971BeWJ,1975Re06). Configurations consistent with measured magnetic moment are: $\pi 1f_{5/2}^1 \otimes \nu 2p_{3/2}^{-1}$ and $\pi 2p_{3/2}^{-1} \otimes \nu 2p_{3/2}^{-1}$ (1975Re06). Measured g factor in 1971BeWJ in agreement with 1 ⁺ , 2 ⁺ , 3 ⁺ . J ^π : L(d,p)=1+3 from 3/2 ⁻ gives 1 ⁺ , 2 ⁺ , 3 ⁺ ; systematics of neighboring nuclides support 1 ⁺ . Other: J=2 is proposed in 2015CoZV from (157γ)(426γ)(θ) data from 628,2 ⁺ → 471,3 ⁺ → 44,2 ⁺ sequence, in (p,nγ), but details of these data are not available. T _{1/2} : weighted average of 1.93 μs 6 (1968He15,γγ(t) in (n,γ),E=thermal) and 1.80 μs 4 (1975Re06,γ(t) in (p,nγ)). Other: 2.1 μs 3 (1966Tu02,γ(t) in (p,nγ)).
86.7876 7	1 ⁺		AB DEFG	J ^π : L(d,p)=1+3 from 3/2 ⁻ ; spin=1 from σ(θ) in (^3He ,t). Reduced γ intensity in (n,γ),E=2 keV gives 1 ⁺ , 2 ⁺ ; excitation function in (p,nγ) favors 1 ⁺ .
120.2582 7	1 ⁺		AB DeFGH	J ^π : E1 γ to 2 ⁻ and M1+E2 γ to (1) ⁺ ; spin=1 from σ(θ) in (^3He ,t). Excitation function in (p,nγ) favors 1 ⁺ . T _{1/2} : 2.1 ns from 121γ(t) in (p,nγ) (1966Tu02). This T _{1/2} is for 120 and/or 122 level.
122.2481 8	(1) ⁻		AB eF H	J ^π : M1+E2 γ to 2 ⁻ . Excitation function in (p,nγ) favors 1 ⁻ .
165.0488 7	(3) ⁻		AB DEF H	J ^π : M1 γ to 2 ⁻ and L(d,p)=4 from 3/2 ⁻ ; γ(θ) and excitation function in (p,nγ) consistent with 3 or 4.
203.5422 11	(0,1) ⁺		AB eF H	J ^π : γ to (1) ⁺ is M1 (from (n,γ)) or M1+E2 (from (p,nγ)). Excitation function in (p,nγ) is consistent with 0 ⁺ , 1 ⁺ . Reduced γ intensities in (n,γ),E=2, 24 keV agree better with 0 ⁺ .
211.1467 10	(4) ⁻		AB DeF	J ^π : E2 (from ce data) γ to 2 ⁻ and excitation function in (p,nγ). Reduced γ intensities in (n,γ),E=2, 24 keV are consistent with 4 ⁻ .
264.8069 9	1 ⁺		AB DEFG	J ^π : M1+E2 γ to 1 ⁺ ; L(d,p)=3 from 3/2 ⁻ ; spin=1 from σ(θ) in (^3He ,t).
280.3026 11	(1,2) ⁺		AB eF H	J ^π : M1+E2 γ to (1) ⁺ . Reduced γ intensities in (n,γ),E=2, 24 keV give (1,2,3) ⁺ . But excitation function of 236γ in (p,nγ) suggests 3 ⁻ .
286.0186 13	(3,4) ⁻		A De	J ^π : M1+E2 γ to (4) ⁻ and γ from 550 level (J ^π =(1 ⁻ ,2 ⁻)) also L(d,p)=4 from 3/2 ⁻ for a 285 5 group.
292.5586 17	(2,3,4) ⁻		A e H	J ^π : M1+E2 γ (3) ⁻ .
300.4607 8	(2,3) ⁺		AB eF	J ^π : dipole γ to (3) ⁻ and γ to (1) ⁺ ; excitation function in (p,nγ) gives 3 or 4. Reduced γ intensities in (n,γ),E=2, 24 keV suggest 0 ⁺ , 3 ⁺ and only marginally agree with 2 ⁻ .
308.3202 7	(2) ⁺		AB DeF	J ^π : M1(+E2) γ to 1 ⁺ and γ to (3) ⁻ ; L(d,p)=1+3 from 3/2 ⁻ . But excitation function in (p,nγ) suggests 3 ⁺ , 4 ⁺ .
328.4790 13	(3,4) ⁻		AB DE H	J ^π : M1(+E2) γ to (4) ⁻ and weak primary γ rays in (n,γ) from (1,2,3 ⁺) capture state.
352.3625 20	(3) ⁻		AB F H	J ^π : M1 γ to 2 ⁻ and M1+E2 γ to (4) ⁻ .
363.9067 10	(2 ⁻)		AB deFG	J ^π : (M1) γ to 2 ⁻ , γ to (1) ⁺ . L(d,p)=3+4 from 3/2 ⁻ suggests a doublet with opposite parities; σ(θ) in (^3He ,t) supports 2 ⁻ ; L=4 may (J ^π =2 ⁻ to 6 ⁻) may correspond to 364 or 366 level. Excitation function of 242γ and 364γ in (p,nγ) give 3,4. But 364γ in (p,nγ) may be doubly placed.
366.2297 13	(2 ⁻ to 5 ⁻)		A de	J ^π : γs to (3) ⁻ and (4) ⁻ . J=2,3 are less likely since no primary γs (from 1 ⁻ , 2 ⁻ , and (1,2,3 ⁺) capture states) are observed.
377.3847 15	(2) ⁻		A	J ^π : M1+E2 γ to (3,4) ⁻ and γ from 1 ⁺ .
401.8332 11	(1,2) ⁺		AB DEF H	J ^π : M1+E2 γ to (1) ⁺ . L(d,p)=1+3 from 3/2 ⁻ .
436.8037 12	(1,2,3) ⁻		AB D H	J ^π : γ to (3) ⁻ ; L(d,p)=2 from 3/2 ⁻ . Primary γ in (n,γ),E=thermal (from 1 ⁻ , 2 ⁻ capture state) and reduced γ intensities in (n,γ),E=2, 24 keV disfavor J=4.
447.1712 17	(1,2) ⁺		AB DeF H	J ^π : M1(+E2) γ to (1) ⁺ and L(d,p)=1+3 from 3/2 ⁻ .

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Adopted Levels, Gammas (continued) ^{76}As Levels (continued)

E(level) [†]	J ^π	XREF	Comments
457.3505 18	(2 ⁻ ,3 ⁺)	AB e	J ^π : γs to 2 ⁻ and (4) ⁻ ; 607.1γ from 1 ⁺ . Reduced γ intensities in (n,γ) E=2, 24 keV disfavors J=4.
471.0018 9	(2) ⁻	AB D F H	J ^π : L(d,p)=2 from 3/2 ⁻ ; γ rays to (1) ⁺ and (4) ⁻ .
479.2969 19	(2,3,4) ⁻	A D	J ^π : L(d,p)=4 from 3/2 ⁻ ; γ rays to (2) ⁻ , (3) ⁻ , and (4) ⁻ . J=2,3 are less likely since no primary γ rays (from 1 ⁻ ,2 ⁻ ,0 ⁺ ,1 ⁺ ,2 ⁺ ,3 ⁺ capture states) are observed.
499.5812 20	(1 ⁺ ,2 ⁺)	AB DEFGH J	J ^π : (M1) γ to (1) ⁺ and possible γ to 2 ⁻ . Reduced γ intensities in (n,γ),E=2, 24 keV support 1 ⁺ ,2 ⁺ but L(d,p)=0+2 for a 500 5 group gives 1 ⁻ ,2 ⁻ . Level at 0.5 MeV in (d, ² He) with proposed 1 ⁺ ,2 ⁻ is probably a doublet. L(³ He,t) supports (1 ⁺ ,2 ⁻).
505.2058 19	(2,3) ⁺	AB eF H	J ^π : E1 γ to (3) ⁻ ; γ to (1) ⁺ . γ reduced intensities in (n,γ),E=2,24 keV give 1 ⁺ ,2 ⁺ ,3 ⁺ .
508.6891 13	(2,3,4) ⁻	A e	J ^π : E2(+M1) γ to (3,4) ⁻ ; γs to (2) ⁻ and (4) ⁻ .
517.5798 11	(1 ⁺ ,2 ⁺)	AB deF H	J ^π : (M1) γ to (1) ⁺ . Reduced γ intensities in (n,γ) E=2, 24 keV give 1 ⁺ ,2 ⁺ . L(d,p)=1+3 from 3/2 ⁻ for a 516 5 group gives 1 ⁺ , 2 ⁺ , 3 ⁺ which corresponds to 518 and/or 520 levels.
519.6090 16	(1 ⁻ ,2,3 ⁺)	A de	J ^π : γ rays to 1 ⁺ and (3) ⁻ .
544.0244 23	(2) ⁻	AB deF H	J ^π : M1(+E2) γ to (3) ⁻ and γ to (1 ⁻ ,2 ⁻). Reduced γ intensities in (n,γ), E=2, 24 keV disfavors 3 ⁻ .
550.4363 23	(1 ⁻ ,2 ⁻)	AB deF	J ^π : (M1) γ to (1) ⁻ ; 264.4γ-74.9γ(M1+E2) cascade to (4) ⁻ .
554.39 17	(1,2,3) ⁺	deF	J ^π : γ rays to 2 ⁻ and (2) ⁺ ; probable 153.2γ (M1+E2) to (1,2) ⁺ .
600.21 25	(≤3) [‡]	A e	
609.9723 34	(3 ⁺)	AB De H	E(level): doublet in (d,p) with L=(1+4) from 3/2 ⁻ . J ^π : γ rays to (1) ⁺ , (2) ⁺ and 2 ⁻ . Reduced γ intensities in (n,γ), E=2, 24 keV disfavor J=1,2.
628.7467 13	(1 ⁺ ,2 ⁺)	AB eFG	J ^π : dipole γ to (2) ⁻ , γ to (1) ⁻ ; 306.6γ from 1 ⁺ . Reduced γ intensities in (n,γ) E=2, 24 keV support 1 ⁺ , 2 ⁺ .
637.2506 27	(1 ⁺ ,2 ⁺)	AB eF	J ^π : (M1+E2) γ to 1 ⁺ . Also supported by reduced γ intensities in (n,γ),E=2, 24 keV.
640.123 10	(1 ⁻ ,2 ⁻)	A DeF H	XREF: D(639). E(level): 639 group in (d,p) is associated with 640 level only due to parity considerations. J ^π : L(d,p)=0+2 from 3/2 ⁻ .
669.1158 34	(1 ⁺ ,2 ⁺) [#]	AB DEF H	
681.0 7	(≤4)	F H	J ^π : γ to 2 ⁻ .
686.1296 33	(1 ⁻ to 4)	AB D	XREF: D(687). J ^π : L(d,p)=(2) from 3/2 ⁻ gives 1 ⁻ to 4 ⁻ ; γ to (3) ⁻ . But reduced γ intensities in (n,γ),E=2, 24 keV suggest 0 ⁺ ,3 ⁺ .
703.250 5	(1 ⁻ ,2 ⁻ ,3 ⁺)	AB e	J ^π : γ rays to (2) ⁻ and (3,4) ⁻ . Reduced γ intensities in (n,γ), E=2, 24 keV suggest 0 ⁺ ,1 ⁻ ,2 ⁻ ,3 ⁺ .
707.92 8	(≤3) [‡]	A e	
716.08 33	(1,2,3) ⁺	AB De	J ^π : L(d,p)=1+3 from 3/2 ⁻ . Reduced γ intensities in (n,γ),E=2, 24 keV suggest 0 ⁺ ,3 ⁺ .
727.80 5	(≤3) [‡]	A	
734.3916 16	(1,2) ⁻	A H	J ^π : M1+E2 γ to (2,3,4) ⁻ , γ to (2) ⁻ ; 330γ from 1 ⁺ .
741.465 9	(≤3) [‡]	AB de	
742.7 4	(0 ⁻ to 3)	deF	J ^π : possible γs to 2 ⁻ and (1 ⁺ ,2 ⁺).
744.947 4	(1 ⁺ ,2 ⁺) [#]	AB de G	J ^π : L(d,p)=1+3 from 3/2 ⁻ (J ^π =1 ⁺ ,2 ⁺ ,3 ⁺) for a 744 5 group probably corresponds to this level.
751.8 4	(0 ⁻ ,1,2)	eF H	J ^π : γ rays to 1 ⁺ , (1) ⁻ and 2 ⁻ .
756.5762 15	(0 ⁺ ,3 ⁺) [#]	AB H	
774.411 7	(3) ⁺	AB D GH	J ^π : L(d,p)=1+3 from 3/2 ⁻ . Reduced γ intensities in (n,γ),E=2, 24 keV support 3 ⁺ , not 1 or 2.
785.835 5	(≤3 ⁺) [‡]	AB eF	J ^π : γ to (0,1) ⁺ ; reduced γ intensities in (n,γ),E=2, 24 keV give 0,1 ⁻ ,3,4 ⁻ .
793.5718 27	(1,2,3) ⁺	AB De H	J ^π : L(d,p)=1+3 from 3/2 ⁻ . Reduced γ intensities in (n,γ),E=2, 24 keV support (1,2,3) ⁺ .
802.454 10	(1 ⁻ ,2 ⁻ ,3 ⁺) [#]	AB H	

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Adopted Levels, Gammas (continued) ^{76}As Levels (continued)

E(level) [†]	J ^π	XREF	Comments
863.31 13	1 ⁺	AB DE GH	J ^π : L(d,p)=1+3 from 3/2 ⁻ ; σ(θ) in (³ He,t). Reduced γ intensities in (n,γ),E=2, 24 keV give J=(1 ⁺ ,2 ⁺).
893.814 8	(1 ⁻ ,2 ⁻ ,3 ⁺) [#]	AB E H	J ^π : L(d,p)=1 from 3/2 ⁻ suggests ≤3 ⁺ but reduced γ intensities in (n,γ),E=2, 24 keV support 1 ⁺ ,2 ⁺ .
909.176 11	(1,2) ⁺	AB DE	
924.760 8	(≤3 ⁻) [‡]	AB de H	J ^π : 0 ⁺ and 3 ⁻ are less likely from γ rays to (2) ⁻ and (1) ⁺ . If this level corresponds to 928 5 group in L(d,p)=1+3 suggests 1 ⁺ ,2 ⁺ ,3 ⁺ but (E1) primary γ from 1 ⁻ ,2 ⁻ gives negative parity.
935.385 8	1 ⁺ [‡]	A deFG	J ^π : σ(θ) in (³ He,t); 0 ⁺ and 3 ⁻ are less likely from γs to 2 ⁻ and (1) ⁺ .
939.752 5	(1,2,3) [#]	AB de H	
947.90 24	(≤3) [‡]	A de	J ^π : L(d,p)=1+3 from 3/2 ⁻ . Same J ^π supported by reduced γ intensities in (n,γ),E=2, 24 keV.
958.397 4	(≤3) [‡]	A e H	
964.15 30	(≤3) [‡]	A de	
970.98 8	(≤3) [‡]	A de	
985.542 12	(1,2,3) ⁺	AB DE H	
1013.8 6	(≤3 ⁺) [‡]	A E	
1023.17 4	(1 ⁺ ,2 ⁺) [#]	AB E G	
1027.8 4	(1 ⁺ ,2 ⁺) [#]	AB H	XREF: B(1028.28). J ^π : 1 ⁺ less likely from possible γ to (3) ⁻ .
1034.269 10	1 ⁺	AB D H J	XREF: J(1030). J ^π : L(d,p)=1+3 from 3/2 ⁻ . Reduced γ intensities in (n,γ),E=2,24 keV support 1 ⁺ ,2 ⁺ ; 1 ⁺ from σ(θ) shape for a 1030 group in (d, ² He).
1064.494 7	1 ⁺	AB DE GH	J ^π : from σ(θ) in (³ He,t); (1 ⁺ ,2 ⁺) from (n,γ),E=2,24 keV data.
1090.0 5	(≤3) [‡]	A dE	J ^π : L(d,p)=1+3 from 3/2 ⁻ for a 1096 10 group suggests 1 ⁺ ,2 ⁺ ,3 ⁺ for 1090 or 1097 level.
1097.31 5	1 ⁺ @	A dE G	J ^π : L(d,p)=0+2 from 3/2 ⁻ for a 1155 10 group suggests 1 ⁻ ,2 ⁻ for 1148 or 1156 level.
1105.50 4	(≤3) [‡]	A D	
1124.99 6	(≤3) [‡]	A DE	J ^π : parity from (E1) γ from 1 ⁻ ,2 ⁻ .
1148.42 6	(≤3) [‡]	A de	
1156.58 14	1 ⁺ @	A de G	XREF: E(1177).
1185.78 4	(≤3) [‡]	A DE	
1201.99 20	(≤3) [‡]	A D	XREF: D(1212).
1220	(2 ⁻)	e J	
1235 1	1 ⁺ @	De G	J ^π : σ(θ) shape in (d, ² He).
1244.72 19	(≤3) [‡]	A	J ^π : parity from (E1) γ from 1 ⁻ ,2 ⁻ .
1260.13 23	(≤3) [‡]	A dE	
1269.096 31	(≤3 ⁻) [‡]	A d	
1301.059 31	(≤3) [‡]	A e	
1309.41 17	(≤3) [‡]	A de	
1314.59 12	(≤3) [‡]	A de	
1322.24 7	(≤3) [‡]	A d	
1341.93 4	(≤3) [‡]	A e	
1352.40 8	1 ⁺ @	A de G	
1358.46 7	(≤3) [‡]	A de	
1369.4 4	(≤3) [‡]	A	

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Adopted Levels, Gammas (continued) ^{76}As Levels (continued)

E(level) [†]	J ^π	XREF	Comments
1385.63 14	(≤3) [‡]	A e	
1397.38 14	(≤3) [‡]	A de	J ^π : L(d,p)=0+2 from 3/2 ⁻ for a 1399 10 group suggests 1 ⁻ ,2 ⁻ for 1397 or 1404 level.
1404.09 30	(≤3) [‡]	A d	
1422.35 13	(≤3) [‡]	A D	
1443.88 5	(≤3) [‡]	A de	J ^π : L(d,p)=0+2 from 3/2 ⁻ for a 1450 10 group suggests 1 ⁻ ,2 ⁻ for 1444, 1451 or 1459 level.
1450.93 9	(≤3) [‡]	A de	
1458.95 9	(≤3) [‡]	A de	
1473.69 20	1+ [@]	A e G	
1477.8 4	(1 ⁻ ,2 ⁻)	A De	E(level),J ^π : L(d,p)=0+2 from 3/2 ⁻ for a 1478 10 group suggests 1 ⁻ ,2 ⁻ for 1474 or 1478 level. Since 1474 level is proposed as 1 ⁺ from (³ He,t), evaluators assign L(d,p)=0+2 for 1478 level.
1494.41 10	(≤3) [‡]	A e	
1499.0 11	(≤3) [‡]	A	
1512.23 7	(≤3) [‡]	A d	
1520.30 30	(≤3) [‡]	A d	
1524.90 30	(≤3) [‡]	A d	
1541.81 4	(≤3) [‡]	A d G	
1550.50 5	(≤3) [‡]	A dE	J ^π : L(d,p)=0+2 from 3/2 ⁻ for a 1553 10 group suggests 1 ⁻ ,2 ⁻ for 1542 or 1571 level.
1571.41 4	(2 ⁻)	A D G	XREF: G(1573). J ^π : from σ(θ) in (³ He,t).
1584.10 30	(≤3) [‡]	A	
1597.7 6	(≤3) [‡]	A de	
1605.24 10	(≤3) [‡]	A de	
1630.58 5	1 ⁺	A de J	J ^π : σ(θ) shape in (d, ² He) for a 1630 group.
1638.09 5	(≤3) [‡]	A de G	
1644.43 6	(≤3) [‡]	A e	
1652.75 4	(≤3) [‡]	A de	J ^π : L(d,p)=0+2 from 3/2 ⁻ for a 1657 10 group suggests 1 ⁻ ,2 ⁻ for 1653 or 1665 level.
1664.83 4	(≤3) [‡]	A de	
1673.42 9	(≤3) [‡]	A	
1682.89 12	(≤3) [‡]	A	
1694.7 5	1+ [@]	A de G	
1699.10 11	(≤3) [‡]	A de	
1704.38 19	(≤3) [‡]	A de	
1713.65 20	(1 ⁻ ,2 ⁻)	A D	XREF: D(1717). J ^π : L(d,p)=0 from 3/2 ⁻ for a 1717 10 group suggests 1 ⁻ ,2 ⁻ for 1714, or 1716 level. Since 1716 is assigned 1 ⁺ from (³ He,t), L(d,p) is associated with 1714 level.
1715.7 7	1+ [@]	A G	XREF: G(1718).
1727.27 10	(≤3) [‡]	A D	XREF: D(1733).
1748.43 5	(≤3) [‡]	A DE	
1759.66 7	(≤3) [‡]	A D	XREF: D(1766).
1782.60 13	(≤3) [‡]	A de	
1788.09 23	(≤3) [‡]	A de	
1794.71 4	1+ [@]	A e G	
1801.63 18	(≤3) [‡]	A	
1821 10		DE	

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Adopted Levels, Gammas (continued) ^{76}As Levels (continued)

E(level) [†]	J ^π	XREF	Comments
1830? <i>IO</i>		D	
1852 <i>I</i>	1 ⁺ @	D G J	XREF: D(?)J(1860).
1872 <i>IO</i>	(1 ⁻ ,2 ⁻)	DE	J ^π : L(d,p)=0 from 3/2 ⁻ .
1885 <i>IO</i>	(1 ⁻ ,2 ⁻)	D	J ^π : L(d,p)=0 from 3/2 ⁻ .
1902 <i>I</i>	1 ⁺ @	G	
1929& <i>I</i>	(2 ⁻)&	DE G	XREF: E(1914). J ^π : from $\sigma(\theta)$ in (^3He ,t).
1960 <i>IO</i>		DE	
1987 <i>I</i>	1 ⁺ @	DE G	XREF: D(?).
2004 <i>IO</i>		D	
2032 <i>IO</i>		DE	
2041 <i>I</i>	1 ⁺ @	G	
2067 <i>IO</i>		DE	
2114 <i>IO</i>		DE	
2136 <i>IO</i>		DE	XREF: E(2144).
2154 <i>I</i>	1 ⁺ @	DE G	XREF: D(2147)E(2166).
2206 <i>IO</i>		DE	
2220	1 ⁺	J	J ^π : $\sigma(\theta)$ shape in (d, ^2He).
2239 <i>IO</i>		DE	
2272 <i>IO</i>		D	
2306 <i>IO</i>		D	
2338 <i>I</i>	1 ⁺ @	D G	
2366 <i>IO</i>		D	
2392 <i>IO</i>		D	
2400	(2 ⁺)	J	J ^π : $\sigma(\theta)$ shape in (d, ^2He).
2419 <i>IO</i>		D	
2449 <i>I</i>	1 ⁺ @	D G	
2485? <i>IO</i>		D	
2505 <i>IO</i>		D	
2537 <i>I</i>	1 ⁺ @	G	
2604 <i>I</i>	1 ⁺ @	G	
2657 <i>I</i>	1 ⁺ @	G	
2688 <i>I</i>	1 ⁺ @	G	
2716 <i>I</i>	1 ⁺ @	G	
2763 <i>I</i>	1 ⁺ @	G	
2791 <i>I</i>	1 ⁺ @	G	
2819 <i>I</i>	1 ⁺ @	G	
2882 <i>I</i>	1 ⁺ @	G	
2918 <i>I</i>	1 ⁺ @	G	
2940 <i>I</i>	1 ⁺ @	G	
3024 <i>I</i>	1 ⁺ @	G	
3134& <i>I</i>	(2 ⁻)&	G	J ^π : from $\sigma(\theta)$ in (^3He ,t).
3190& <i>I</i>	(2 ⁻)&	G	J ^π : from $\sigma(\theta)$ in (^3He ,t).
3257 <i>I</i>	1 ⁺ @	G	
3364& <i>I</i>	[1 ⁺ ,2 ⁻]&	G	
3426 <i>I</i>	2 ⁻ @	G	
3482 <i>I</i>	1 ⁺ @	G	
3504 <i>I</i>	1 ⁺ @	G	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{76}As Levels (continued)

E(level) [†]	J ^π	XREF	Comments
3540 <i>I</i>	1+ @	G	
3589 <i>I</i>	1+ @	G	
3634 <i>I</i>	1+ @	G	
3695 <i>I</i>	1+ @	G	
3798 <i>I</i>	1+ @	G	
3848 <i>I</i>	1+ @	G	
3932 <i>I</i>	1+ @	G	
4034 <i>I</i>	1+ @	G	
4071 <i>I</i>	1+ @	G	
4109 <i>I</i>	1+ @	G	
4179 <i>I</i>	1+ @	G	
4218 <i>I</i>	1+ @	G	
4268 <i>I</i>	1+ @	G	
4306 <i>I</i>	1+ @	G	
4466 <i>I</i>	1+ @	G	
4499 <i>I</i>	1+ @	G	
4536 <i>I</i>	1+ @	G	
4668 <i>I</i>	1+ @	G	
4699 <i>I</i>	1+ @	G	
4738 <i>I</i>	1+ @	G	
4801 <i>I</i>	1+ @	G	
4841 <i>I</i>	1+ @	G	
4941 <i>I</i>	1+ @	G	
4978 <i>I</i>	1+ @	G	
(7328.836 7)	1 ⁻ , 2 ⁻	A	J ^π : s-wave capture in ^{75}As (g.s. J ^π =3/2 ⁻). E(level): S(n)=7328.50 7 (2021Wa16).
(7329.708 3I)	(1,2,3 ⁺)	B	E(level): S(n)+2 keV neutron resonances, S(n)=7328.50 7 (2021Wa16). J ^π : s- or p-wave capture in 3/2 ⁻ g.s. of ^{75}As ; γ to 2 ⁻ .
(7351.23 5)	(1,2,3 ⁺)	B	E(level): S(n)+24 keV neutron resonances, S(n)=7328.50 7 (2021Wa16). J ^π : s- or p-wave capture in 3/2 ⁻ g.s. of ^{75}As ; γ to 2 ⁻ .

[†] For levels populated in γ-ray studies, E(level) values are from a least-squares fit to E_γ data.

[‡] Primary γ from 1⁻, 2⁻ capture state in (n,γ), E=thermal.

From comparison of experimental reduced γ-ray intensities in (n,γ), E=2,24 keV with calculated values.

@ From σ(θ) data in (^3He ,t).

& The spin assignments in square brackets indicate the presence of two closely spaced and unresolved states of different spins.

Adopted Levels, Gammas (continued) $\gamma(^{76}\text{As})$

Additional information 2.

$E_i(\text{level})$	J_i^π	E_γ @	I_γ @	E_f	J_f^π	Mult. &	δ &	$\alpha^\dagger$	Comments
44.4254	(1) ⁺	44.425 1	100	0.0	2 ⁻	(E1)		0.821 11	B(E1)(W.u.)=1.284×10 ⁻⁶ 42 $\alpha(K)=0.729$ 10; $\alpha(L)=0.0788$ 11; $\alpha(M)=0.01182$ 17 $\alpha(N)=0.000844$ 12
86.7876	1 ⁺	86.788 1	100	0.0	2 ⁻	(E1+M2)	0.090 17	0.125 5	$\alpha(K)=0.111$ 4; $\alpha(L)=0.0120$ 6; $\alpha(M)=0.00181$ 9 $\alpha(N)=0.000133$ 7
120.2582	1 ⁺	75.836 2	2.2 3	44.4254	(1) ⁺	M1+E2	0.28 6	0.34 6	$\alpha(K)=0.30$ 5; $\alpha(L)=0.038$ 8; $\alpha(M)=0.0057$ 12 $\alpha(N)=0.00040$ 8
		120.258 1	100 7	0.0	2 ⁻	E1		0.0426 6	$\alpha(K)=0.0380$ 5; $\alpha(L)=0.00396$ 6; $\alpha(M)=0.000600$ 8 $\alpha(N)=4.46\times 10^{-5}$ 6 $\delta(M2/E1)<0.08$.
122.2481	(1) ⁻	122.247 1	100	0.0	2 ⁻	M1+E2	0.15 3	0.0593 31	$\alpha(K)=0.0526$ 27; $\alpha(L)=0.00580$ 35; $\alpha(M)=0.00088$ 5 $\alpha(N)=6.6\times 10^{-5}$ 4 δ : other: 0.33 6 from (p,n γ).
165.0488	(3) ⁻	165.047 1	100	0.0	2 ⁻	M1(+E2)	<0.15	0.0247 11	$\alpha(K)=0.0220$ 10; $\alpha(L)=0.00236$ 12; $\alpha(M)=0.000360$ 18 $\alpha(N)=2.72\times 10^{-5}$ 13 δ : other: <0.3 from (p,n γ).
203.5422	(0,1) ⁺	83.280 3	7.1 5	120.2582	1 ⁺	[M1]		0.1486 21	$\alpha(K)=0.1319$ 18; $\alpha(L)=0.01437$ 20; $\alpha(M)=0.002196$ 31 $\alpha(N)=0.0001653$ 23
		116.755 1	100 6	86.7876	1 ⁺	M1+E2 ^a	0.22 ^a 6	0.077 10	$\alpha(K)=0.068$ 9; $\alpha(L)=0.0077$ 12; $\alpha(M)=0.00117$ 17 $\alpha(N)=8.6\times 10^{-5}$ 12 δ : <0.15 from (n, γ), E=thermal; $\delta=0$ if $J^\pi(203 \text{ level})=0^+$.
		159.116 8	4.4 5	44.4254	(1) ⁺	[M1]		0.0260 4	$\alpha(K)=0.02313$ 32; $\alpha(L)=0.002475$ 35; $\alpha(M)=0.000378$ 5 $\alpha(N)=2.86\times 10^{-5}$ 4
211.1467	(4) ⁻	46.098 1	100 5	165.0488	(3) ⁻	(M1+E2)	0.065 25	0.84 5	$\alpha(K)=0.74$ 4; $\alpha(L)=0.087$ 9; $\alpha(M)=0.0132$ 13 $\alpha(N)=0.00097$ 8 Mult.: D+Q from ce data with $\delta(E2/M1)=0.065$ 25, $\delta(M2/E1)=0.095$ 10. From adopted level parities, $\Delta\pi=\text{no}$.
		211.146 2	35 1	0.0	2 ⁻	E2 ^a		0.0489 7	$\alpha(K)=0.0432$ 6; $\alpha(L)=0.00491$ 7; $\alpha(M)=0.000745$ 10 $\alpha(N)=5.39\times 10^{-5}$ 8 $\delta(E2/M1)>1.3$ from ce data in (p,n γ). The ce data in (n, γ), E=thermal give E2 or M2.
264.8069	1 ⁺	144.549 1	100 7	120.2582	1 ⁺	M1+E2	0.25 6	0.043 5	$\alpha(K)=0.038$ 4; $\alpha(L)=0.0042$ 5; $\alpha(M)=0.00065$ 8 $\alpha(N)=4.8\times 10^{-5}$ 5
		178.018 2	69 3	86.7876	1 ⁺	M1(+E2)	<0.25	0.0215 21	$\alpha(K)=0.0191$ 19; $\alpha(L)=0.00207$ 22; $\alpha(M)=0.000315$ 34 $\alpha(N)=2.37\times 10^{-5}$ 24
		220.380 1	38 1	44.4254	(1) ⁺	(M1) ^a		0.01125 16	$\alpha(K)=0.01001$ 14; $\alpha(L)=0.001062$ 15; $\alpha(M)=0.0001620$ 23 $\alpha(N)=1.230\times 10^{-5}$ 17

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{As})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ @	I_γ @	E_f	J_f^π	Mult. &	δ &	$\alpha^\dagger$	Comments
280.3026	(1,2) ⁺	235.877 1	100	44.4254	(1) ⁺	M1+E2	0.77 14	0.0181 21	$\alpha(\text{K})=0.0160$ 18; $\alpha(\text{L})=0.00177$ 21; $\alpha(\text{M})=0.000269$ 32 $\alpha(\text{N})=1.98 \times 10^{-5}$ 23 δ : other: <0.35 from (p,n γ). $\alpha(\text{K})=0.217$ 17; $\alpha(\text{L})=0.0255$ 26; $\alpha(\text{M})=0.0039$ 4 $\alpha(\text{N})=0.000281$ 25
286.0186	(3,4) ⁻	74.873 1	100	211.1467	(4) ⁻	M1+E2	0.15 3	0.246 20	$\alpha(\text{K})=0.217$ 17; $\alpha(\text{L})=0.0255$ 26; $\alpha(\text{M})=0.0039$ 4 $\alpha(\text{N})=0.000281$ 25
292.5586	(2,3,4) ⁻	81.411 2 127.513 6	8.1 8 100 10	211.1467 (4) ⁻ 165.0488 (3) ⁻		M1+E2	0.17 5	0.054 5	$\alpha(\text{K})=0.048$ 4; $\alpha(\text{L})=0.0053$ 5; $\alpha(\text{M})=0.00081$ 8 $\alpha(\text{N})=6.0 \times 10^{-5}$ 6 δ : 0.11 5 for M2/E1, 0 for E2/M1.
300.4607	(2,3 ⁺)	135.411 1 256.036 3	100 5 23.5 3	165.0488 (3) ⁻ 44.4254 (1) ⁺		D		0.035 5	
308.3202	(2) ⁺	300.461 1 143.267 4 186.072 3 188.062 1	30.5 16 2.6 3 11.0 6 44.5 9	0.0 2 ⁻ 165.0488 (3) ⁻ 122.2481 (1) ⁻ 120.2582 1 ⁺		M1(+E2)	<0.35	0.0200 32	$\alpha(\text{K})=0.0178$ 28; $\alpha(\text{L})=0.00193$ 33; $\alpha(\text{M})=0.00029$ 5 $\alpha(\text{N})=2.20 \times 10^{-5}$ 35
		221.532 1	32.4 6	86.7876 1 ⁺		(M1) ^a		0.01110 16	$\alpha(\text{K})=0.00988$ 14; $\alpha(\text{L})=0.001047$ 15; $\alpha(\text{M})=0.0001599$ 22 $\alpha(\text{N})=1.213 \times 10^{-5}$ 17
		263.894 1	100 1	44.4254 (1) ⁺		(M1)		0.00716 10	$\alpha(\text{K})=0.00638$ 9; $\alpha(\text{L})=0.000673$ 9; $\alpha(\text{M})=0.0001027$ 14 $\alpha(\text{N})=7.80 \times 10^{-6}$ 11 Mult.: dipole from ce data in (p,n γ). From adopted level parities, $\Delta\pi=\text{no}$.
328.4790	(3,4) ⁻	308.327 4 117.332 1	9.0 6 100	0.0 2 ⁻ 211.1467 (4) ⁻		M1(+E2)	<0.15	0.062 4	$\alpha(\text{K})=0.055$ 4; $\alpha(\text{L})=0.0061$ 5; $\alpha(\text{M})=0.00093$ 7 $\alpha(\text{N})=6.9 \times 10^{-5}$ 5
352.3625	(3) ⁻	141.216 7	100 14	211.1467 (4) ⁻		M1+E2	0.25 7	0.046 6	$\alpha(\text{K})=0.041$ 5; $\alpha(\text{L})=0.0046$ 7; $\alpha(\text{M})=0.00069$ 10 $\alpha(\text{N})=5.1 \times 10^{-5}$ 7
		187.312 3	33 1	165.0488 (3) ⁻		(M1) ^a		0.01703 24	$\alpha(\text{K})=0.01515$ 21; $\alpha(\text{L})=0.001614$ 23; $\alpha(\text{M})=0.0002464$ 34 $\alpha(\text{N})=1.867 \times 10^{-5}$ 26
		352.367 4	96 14	0.0 2 ⁻		M1 ^a		0.00354 5	$\alpha(\text{K})=0.00315$ 4; $\alpha(\text{L})=0.000330$ 5; $\alpha(\text{M})=5.04 \times 10^{-5}$ 7 $\alpha(\text{N})=3.84 \times 10^{-6}$ 5
363.9067	(2 ⁻)	198.855 2 241.657 1 277.117 4 319.485 7 363.911 2	84 1 42 2 12 1 11 1 100 7	165.0488 (3) ⁻ 122.2481 (1) ⁻ 86.7876 1 ⁺ 44.4254 (1) ⁺ 0.0 2 ⁻		(M1) ^a		0.00327 5	$\alpha(\text{K})=0.00292$ 4; $\alpha(\text{L})=0.000306$ 4; $\alpha(\text{M})=4.66 \times 10^{-5}$ 7 $\alpha(\text{N})=3.55 \times 10^{-6}$ 5
366.2297	(2 ⁻ to 5 ⁻)	80.214 3 155.082 1	14 1 100 9	286.0186 (3,4) ⁻ 211.1467 (4) ⁻					

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{As})$ (continued)									
$E_i(\text{level})$	J_i^π	$E_\gamma^@$	$I_\gamma^@$	E_f	J_f^π	Mult. $\&$	$\delta\&$	$\alpha^\dagger$	Comments
366.2297 377.3847	(2 ⁻ to 5 ⁻) (2) ⁻	201.187 4 91.367 1	29 1 100	165.0488 286.0186	(3) ⁻ (3,4) ⁻	M1+E2	0.16 6	0.140 21	$\alpha(\text{K})=0.123$ 18; $\alpha(\text{L})=0.0141$ 26; $\alpha(\text{M})=0.0022$ 4 $\alpha(\text{N})=0.000158$ 25
401.8332	(1,2) ⁺	137.012 6 281.575 1	30 2 100 4	264.8069 120.2582	1 ⁺ 1 ⁺	(M1)		0.00610 9	$\alpha(\text{K})=0.00543$ 8; $\alpha(\text{L})=0.000572$ 8; $\alpha(\text{M})=8.74\times 10^{-5}$ 12 $\alpha(\text{N})=6.64\times 10^{-6}$ 9 Mult.: dipole from ce data in (p,n γ) with $\delta(\text{E2/M1})=0$, $\delta(\text{M2/E1})<0.3$. From adopted level parities, $\Delta\pi=\text{no}$.
		315.041 5 357.401 4	11.2 6 77 5	86.7876 44.4254	1 ⁺ (1) ⁺	M1+E2 ^a	0.7 ^a 3	0.0048 8	$\alpha(\text{K})=0.0043$ 7; $\alpha(\text{L})=0.00045$ 8; $\alpha(\text{M})=6.9\times 10^{-5}$ 12 $\alpha(\text{N})=5.2\times 10^{-6}$ 9
436.8037	(1,2,3) ⁻	136.343 1 271.754 4 436.803 8	100 9 40 3 28 4	300.4607 165.0488 0.0	(2,3 ⁺) (3) ⁻ 2 ⁻				
447.1712	(1,2) ⁺	166.862 6 326.906 7 360.383 2 402.746 3	9.3 9 30 3 51 5 100 7	280.3026 120.2582 86.7876 44.4254	(1,2) ⁺ 1 ⁺ 1 ⁺ (1) ⁺	M1(+E2) ^a	<0.5 ^a	0.00282 25	$\alpha(\text{K})=0.00252$ 23; $\alpha(\text{L})=0.000264$ 25; $\alpha(\text{M})=4.0\times 10^{-5}$ 4 $\alpha(\text{N})=3.06\times 10^{-6}$ 28
457.3505	(2 ⁻ , 3 ⁺)	156.891 3 246.203 2 457.29 3	67 8 100 2 35 2	300.4607 211.1467 0.0	(2,3 ⁺) (4) ⁻ 2 ⁻				
471.0018	(2) ⁻	162.684 2 170.544 12 178.442 4 190.721 14 259.849 15 426.580 4 471.000 1	14.5 15 2.5 3 4.4 3 2.0 5 3.5 5 48 3 100 2	308.3202 300.4607 292.5586 280.3026 211.1467 44.4254 0.0	(2) ⁺ (2,3 ⁺) (2,3,4) ⁻ (1,2) ⁺ (4) ⁻ (1) ⁺ 2 ⁻	(M1) ^a	^a	1.79 $\times 10^{-3}$ 3	$\alpha(\text{K})=0.001593$ 22; $\alpha(\text{L})=0.0001659$ 23; $\alpha(\text{M})=2.530\times 10^{-5}$ 35 $\alpha(\text{N})=1.930\times 10^{-6}$ 27 $\delta(\text{E2/M1})<0.9$.
479.2969	(2,3,4) ⁻	101.916 2 178.829 7 186.732 4 193.270 5	16 2 80 4 49 2 53 2	377.3847 300.4607 292.5586 286.0186	(2) ⁻ (2,3 ⁺) (2,3,4) ⁻ (3,4) ⁻				

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{As})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ @	I_γ @	E_f	J_f^π	Mult. &	δ &	$\alpha^\dagger$	Comments
479.2969	(2,3,4) ⁻	268.162 7 314.240 5	31 2 100 8	211.1467 (4) ⁻ 165.0488 (3) ⁻					
499.5812	(1 ⁺ ,2 ⁺)	135.9 ^f 6	56 35	363.9067 (2) ⁻					γ reported in (p,n γ) only. It is considered doubtful since this intensity should have been detected in (n, γ).
		191.267 11 234.768 4 296.039 4 379.322 5	14 2 39 4 57 2 100 7	308.3202 (2) ⁺ 264.8069 1 ⁺ 203.5422 (0,1) ⁺ 120.2582 1 ⁺		(M1) ^a		0.00297 4	$\alpha(\text{K})=0.00264$ 4; $\alpha(\text{L})=0.000277$ 4; $\alpha(\text{M})=4.22\times 10^{-5}$ 6 $\alpha(\text{N})=3.21\times 10^{-6}$ 5
505.2058	(2,3) ⁺	412.795 3 499.0 ^{bf} 6 152.844 4 204.747 16 340.156 2	55 6 17 7 41 3 12 1 100 10	86.7876 1 ⁺ 0.0 2 ⁻ 352.3625 (3) ⁻ 300.4607 (2,3) ⁺ 165.0488 (3) ⁻		E1 ^a		2.09 $\times 10^{-3}$ 3	$\alpha(\text{K})=0.001862$ 26; $\alpha(\text{L})=0.0001925$ 27; $\alpha(\text{M})=2.93\times 10^{-5}$ 4 $\alpha(\text{N})=2.216\times 10^{-6}$ 31
508.6891	(2,3,4) ⁻	418.418 14 460.777 17 131.304 5 142.458 3 180.206 4	19 1 37 3 5 1 24 2 31 1	86.7876 1 ⁺ 44.4254 (1) ⁺ 377.3847 (2) ⁻ 366.2297 (2 ⁻ to 5 ⁻) 328.4790 (3,4) ⁻		E2(+M1)	>1.2	0.074 14	$\alpha(\text{K})=0.065$ 12; $\alpha(\text{L})=0.0075$ 15; $\alpha(\text{M})=0.00114$ 22 $\alpha(\text{N})=8.2\times 10^{-5}$ 16
517.5798	(1 ⁺ ,2 ⁺)	222.674 14 297.542 1 237.281 3 395.328 19 430.802 5 473.152 1	7 1 100 3 7.1 3 3.4 3 6.8 11 100 4	286.0186 (3,4) ⁻ 211.1467 (4) ⁻ 280.3026 (1,2) ⁺ 122.2481 (1) ⁻ 86.7876 1 ⁺ 44.4254 (1) ⁺		(M1) ^a		1.77 $\times 10^{-3}$ 3	$\alpha(\text{K})=0.001576$ 22; $\alpha(\text{L})=0.0001641$ 23; $\alpha(\text{M})=2.503\times 10^{-5}$ 35 $\alpha(\text{N})=1.909\times 10^{-6}$ 27
519.6090	(1 ⁻ ,2,3 ⁺)	191.130 7 239.309 4 354.558 4 399.347 2 432.839 12	14 1 24 1 32 3 100 10 24 3	328.4790 (3,4) ⁻ 280.3026 (1,2) ⁺ 165.0488 (3) ⁻ 120.2582 1 ⁺ 86.7876 1 ⁺					
544.0244	(2) ⁻	180.104 5 191.664 5	46 1 17 3	363.9067 (2) ⁻ 352.3625 (3) ⁻		M1(+E2) ^a	<0.8 ^a	0.027 10	$\alpha(\text{K})=0.023$ 9; $\alpha(\text{L})=0.0026$ 11;

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{As})$ (continued)									
$E_i(\text{level})$	J_i^π	$E_\gamma^@$	$I_\gamma^@$	E_f	J_f^π	Mult.&	$\delta^&$	$\alpha^\dagger$	Comments
544.0244	(2) ⁻	243.566 8 378.975 4	15 1 100 8	300.4607 165.0488	(2,3) ⁺ (3) ⁻	(M1) ^a		0.00297 4	$\alpha(\text{M})=4.0\times 10^{-4}$ 16 $\alpha(\text{N})=2.9\times 10^{-5}$ 12 $\alpha(\text{K})=0.00265$ 4; $\alpha(\text{L})=0.000277$ 4; $\alpha(\text{M})=4.23\times 10^{-5}$ 6 $\alpha(\text{N})=3.22\times 10^{-6}$ 5
550.4363	(1 ⁻ ,2 ⁻)	544.041 17 264.420 6 270.128 4 428.195 5	22 3 53 8 60 3 75 5	0.0 2 ⁻ 286.0186 (3,4) ⁻ 280.3026 (1,2) ⁺ 122.2481 (1) ⁻		(M1) ^a		2.23×10 ⁻³ 3	$\alpha(\text{K})=0.001987$ 28; $\alpha(\text{L})=0.0002074$ 29; $\alpha(\text{M})=3.16\times 10^{-5}$ 4 $\alpha(\text{N})=2.411\times 10^{-6}$ 34
554.39	(1,2,3) ⁺	463.647 4 153.2 ^d 3	100 5 <111	86.7876 1 ⁺ 401.8332 (1,2) ⁺		(M1+E2) ^a	^a	0.09 7	$\alpha(\text{K})=0.08$ 6; $\alpha(\text{L})=0.010$ 7; $\alpha(\text{M})=0.0015$ 11 $\alpha(\text{N})=1.1\times 10^{-4}$ 7 $\delta(\text{E2/M1})=0.45$ 8 for a possible doublet.
609.9723	(3 ⁺)	245.7 3 554.1 3 301.636 6 565.552 4 609.959 23	54 7 100 9 17 2 100 6 19 4	308.3202 (2) ⁺ 0.0 2 ⁻ 308.3202 (2) ⁺ 44.4254 (1) ⁺ 0.0 2 ⁻					
628.7467	(1 ⁺ ,2 ⁺)	157.745 1	100 8	471.0018 (2) ⁻		D		0.03	From ce data in (n, γ), E=thermal, $\delta(\text{M2/E1})=0.18$ 6, $\delta(\text{E2/M1})<0.1$. From ce data in (p, γ), $\delta(\text{E2/M1})=0.29$ 6 for 157.4 γ .
637.2506	(1 ⁺ ,2 ⁺)	506.493 11 628.66 5 200.449 6 517.025 18 550.459 3	7.7 17 8.4 7 16 4 9 2 100 7	122.2481 (1) ⁻ 0.0 2 ⁻ 436.8037 (1,2,3) ⁻ 120.2582 1 ⁺ 86.7876 1 ⁺		(M1+E2)	1.0 +13-6	0.00158 24	$\alpha(\text{K})=0.00140$ 21; $\alpha(\text{L})=0.000148$ 23; $\alpha(\text{M})=2.25\times 10^{-5}$ 35 $\alpha(\text{N})=1.70\times 10^{-6}$ 26 Mult., δ : from ce data in (p, γ) for a 550.1 γ .
640.123	(1 ⁻ ,2 ⁻)	203.334 20 517.869 12 640.11 3	10 2 100 12 58 12	436.8037 (1,2,3) ⁻ 122.2481 (1) ⁻ 0.0 2 ⁻					
669.1158	(1 ⁺ ,2 ⁺)	118.680 3 125.094 ^e 8 669.062 22	52 3 <14 ^e 100 15	550.4363 (1 ⁻ ,2 ⁻) 544.0244 (2) ⁻ 0.0 2 ⁻					
681.0	(≤ 4)	681.0 ^b 7	100	0.0 2 ⁻					

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{As})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ @	I_γ @	E_f	J_f^π	Mult. &	δ &	α †	Comments
686.1296	(1 ⁻ to 4)	142.102 3	83 4	544.0244	(2) ⁻				
		393.581 6	100 12	292.5586	(2,3,4) ⁻				
		521.090 24	63 8	165.0488	(3) ⁻				
703.250	(1 ⁻ , 2 ⁻ , 3 ⁺)	159.226 6	100 13	544.0244	(2) ⁻				
		198.046 8	67 7	505.2058	(2,3) ⁺				
		339.332 13	87 20	363.9067	(2) ⁻				
		374.778 21	73 20	328.4790	(3,4) ⁻				
734.3916	(1,2) ⁻	225.702 1	100 3	508.6891	(2,3,4) ⁻	M1+E2	0.8 2	0.0214 35	$\alpha(\text{K})=0.0190$ 31; $\alpha(\text{L})=0.0021$ 4; $\alpha(\text{M})=0.00032$ 5 $\alpha(\text{N})=2.3 \times 10^{-5}$ 4
741.465	(≤3)	263.400 13	12.7 13	471.0018	(2) ⁻				
		262.178 10	100 8	479.2969	(2,3,4) ⁻				
		294.265 21	50 8	447.1712	(1,2) ⁺				
		461.13 3	75 4	280.3026	(1,2) ⁺				
742.7	(0 ⁻ to 3)	225.1 ^b		517.5798	(1 ⁺ , 2 ⁺)				
744.947	(1 ⁺ , 2 ⁺)	742.7 ^b		0.0	2 ⁻				
		343.105 6	30 2	401.8332	(1,2) ⁺				
		480.125 9	54 3	264.8069	1 ⁺				
751.8	(0 ⁻ , 1, 2)	624.697 6	100 6	120.2582	1 ⁺				
		629.8 8	79	122.2481	(1) ⁻				
		665.5 7	100	86.7876	1 ⁺				
		706.9 7	31	44.4254	(1) ⁺				
		751.4 7	62	0.0	2 ⁻				
756.5762	(0 ⁺ , 3 ⁺)	238.996 1	100 45	517.5798	(1 ⁺ , 2 ⁺)				
		354.78 4	13 4	401.8332	(1,2) ⁺				
774.411	(3) ⁺	466.072 19	37 5	308.3202	(2) ⁺				
		494.106 7	58 5	280.3026	(1,2) ⁺				
		687.67 3	100 32	86.7876	1 ⁺				
785.835	(≤3 ⁺)	384.001 5	64 6	401.8332	(1,2) ⁺				
		582.299 12	100 3	203.5422	(0,1) ⁺				
		785.0 ^b 7		0.0	2 ⁻				
793.5718	(1,2,3) ⁺	273.952 5	24 2	519.6090	(1 ⁻ , 2,3) ⁺				
		322.573 3	38 12	471.0018	(2) ⁻				
		706.90 6	100 16	86.7876	1 ⁺				
802.454	(1 ⁻ , 2 ⁻ , 3 ⁺)	297.248 10	100 42	505.2058	(2,3) ⁺				
		438.57 4	54 4	363.9067	(2) ⁻				
863.31	1 ⁺	774.9 ^f 6	100	86.7876	1 ⁺				
893.814	(1 ⁻ , 2 ⁻ , 3 ⁺)	394.236 11	70 10	499.5812	(1 ⁺ , 2 ⁺)				
		529.905 11	100 15	363.9067	(2) ⁻				
		585.43 4	100 15	308.3202	(2) ⁺				
909.176	(1,2) ⁺	600.83 3	49 14	308.3202	(2) ⁺				

Adopted Levels, Gammas (continued) $\gamma(^{76}\text{As})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ @	I_γ @	E_f	J_f^π
909.176	(1,2) ⁺	644.43 3	100 19	264.8069	1 ⁺
		822.35 7	160 80	86.7876	1 ⁺
924.760	($\leq 3^-$)	453.755 9	36 4	471.0018	(2) ⁻
		477.577 25	47 5	447.1712	(1,2) ⁺
		880.38 3	100 31	44.4254	(1) ⁺
935.385	1 ⁺	306.645 9	37 2	628.7467	(1 ⁺ ,2 ⁺)
		731.81 3	54 11	203.5422	(0,1) ⁺
		848.577 22	100 18	86.7876	1 ⁺
		935.7 ^b		0.0	2 ⁻
939.752	(1,2,3)	194.790 11	12 5	744.947	(1 ⁺ ,2 ⁺)
		311.005 5	100 6	628.7467	(1 ⁺ ,2 ⁺)
		440.19 6	45 3	499.5812	(1 ⁺ ,2 ⁺)
		468.775 15	55 3	471.0018	(2) ⁻
958.397	(≤ 3)	224.003 4	100 3	734.3916	(1,2) ⁻
		329.653 8	57 7	628.7467	(1 ⁺ ,2 ⁺)
		479.095 15	93 13	479.2969	(2,3,4) ⁻
		487.396 12	83 13	471.0018	(2) ⁻
970.98	(≤ 3)	971.7 6	100	0.0	2 ⁻
985.542	(1,2,3) ⁺	467.963 12	47 2	517.5798	(1 ⁺ ,2 ⁺)
		941.21 6	100 9	44.4254	(1) ⁺
1013.8	($\leq 3^+$)	927.0 6	100	86.7876	1 ⁺
1027.8	(1 ⁺ ,2 ⁺)	861.2 ^f 6	100	165.0488	(3) ⁻
1034.269	1 ⁺	125.094 ^e 8	<20 ^e	909.176	(1,2) ⁺
		554.968 14	51 5	479.2969	(2,3,4) ⁻
		632.45 3	100 17	401.8332	(1,2) ⁺
		725.935 23	80 17	308.3202	(2) ⁺
		989.2 6	54	44.4254	(1) ⁺
1064.494	1 ⁺	307.98 4	20 2	756.5762	(0 ⁺ ,3 ⁺)
		330.100 7	80 10	734.3916	(1,2) ⁻
		607.06 8	40 8	457.3505	(2 ⁻ ,3 ⁺)
		687.13 6	64 32	377.3847	(2) ⁻
		942.27 9	100 3	122.2481	(1) ⁻
(7328.836)	1 ⁻ ,2 ⁻	5526.99 18	1.99 9	1801.63	(≤ 3)
		5533.91 4	26.8 3	1794.71	1 ⁺
		5540.53 23	2.33 11	1788.09	(≤ 3)
		5546.02 13	3.22 13	1782.60	(≤ 3)
		5568.96 7	6.29 13	1759.66	(≤ 3)
		5580.19 5	12.03 13	1748.43	(≤ 3)
		5601.34 10	2.46 9	1727.27	(≤ 3)
		5612.9 7	1.9 4	1715.7	1 ⁺
		5614.96 20	2.6 4	1713.65	(1 ⁻ ,2 ⁻)

Adopted Levels, Gammas (continued) $\gamma(^{76}\text{As})$ (continued)

<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_γ @</u>	<u>I_γ @</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult. &</u>
(7328.836)	$1^-, 2^-$	5624.23 19	1.25 9	1704.38	(≤ 3)	
		5629.51 11	3.22 13	1699.10	(≤ 3)	
		5633.9 5	0.96 11	1694.7	1^+	
		5645.72 12	2.12 9	1682.89	(≤ 3)	
		5655.19 9	3.06 9	1673.42	(≤ 3)	
		5663.78 4	12.41 13	1664.83	(≤ 3)	
		5675.86 4	18.81 18	1652.75	(≤ 3)	
		5684.18 6	7.36 7	1644.43	(≤ 3)	
		5690.52 5	11.81 13	1638.09	(≤ 3)	
		5698.03 5	8.52 9	1630.58	1^+	
		5723.36 10	2.84 9	1605.24	(≤ 3)	
		5730.9 6	0.43 7	1597.7	(≤ 3)	
		5744.5 3	0.76 7	1584.10	(≤ 3)	
		5757.19 4	10.34 11	1571.41	(2^-)	
		5778.10 5	8.57 9	1550.50	(≤ 3)	
		5786.79 4	12.21 13	1541.81	(≤ 3)	
		5803.7 3	1.56 11	1524.90	(≤ 3)	
		5808.3 3	1.34 13	1520.30	(≤ 3)	
		5816.37 7	4.39 5	1512.23	(≤ 3)	
		5829.6 11	0.34 11	1499.0	(≤ 3)	
		5834.19 10	3.73 11	1494.41	(≤ 3)	
		5850.8 4	1.68 25	1477.8	($1^-, 2^-$)	
		5854.90 20	3.91 20	1473.69	1^+	
		5869.64 9	13.4 4	1458.95	(≤ 3)	
		5877.66 9	4.90 11	1450.93	(≤ 3)	
		5884.71 5	8.95 9	1443.88	(≤ 3)	
		5906.24 13	2.28 9	1422.35	(≤ 3)	
		5924.5 3	1.34 9	1404.09	(≤ 3)	
		5931.21 14	2.53 11	1397.38	(≤ 3)	
		5942.96 14	2.12 9	1385.63	(≤ 3)	
		5959.2 4	0.54 7	1369.4	(≤ 3)	
		5970.12 7	3.74 7	1358.46	(≤ 3)	
		5976.18 8	3.54 7	1352.40	1^+	
		5986.65 4	7.27 7	1341.93	(≤ 3)	
		6006.34 7	5.28 11	1322.24	(≤ 3)	
		6013.99 12	3.98 13	1314.59	(≤ 3)	
		6019.17 17	2.86 11	1309.41	(≤ 3)	
		6027.52 3	15.21 16	1301.059	(≤ 3)	
		6059.48 3	18.03 18	1269.096	($\leq 3^-$)	(E1)
		6068.45 23	1.56 9	1260.13	(≤ 3)	
		6083.85 19	1.54 7	1244.72	(≤ 3)	
		6126.58 20	1.48 9	1201.99	(≤ 3)	
		6142.79 4	9.11 9	1185.78	(≤ 3)	

Adopted Levels, Gammas (continued)

<u>$\gamma(^{76}\text{As})$ (continued)</u>						
$E_i(\text{level})$	J_i^π	$E_\gamma^@$	$I_\gamma^@$	E_f	J_f^π	Mult. & Comments
(7328.836)	$1^-, 2^-$	6171.99 14	1.86 7	1156.58	1^+	(E1)
		6180.15 6	4.68 9	1148.42	(≤ 3)	
		6203.57 6	8.05 9	1124.99	(≤ 3)	
		6223.06 4	8.61 9	1105.50	(≤ 3)	
		6231.25 5	7.34 7	1097.31	1^+	
		6238.6 5	0.56 7	1090.0	(≤ 3)	
		6266.38# 15	1.75 9	1064.494	1^+	E_γ : very poor fit and omitted in the fitting; level-energy difference=6264.065. E_γ : fitted value deviates by 2.32 keV.
		6294.88# 2	36.8 4	1034.269	1^+	(E1) E_γ : very poor fit and omitted in the fitting; level-energy difference=6294.287. E_γ : fitted value deviates by 0.54 keV.
		6305.37 4	15.03 14	1023.17	($1^+, 2^+$)	
		6343.37‡ 5	7.07 7	985.542	(1,2,3) ⁺	E_γ : uncertainty multiplied by a factor of 3 in the fitting; level-energy difference=6343.009. E_γ : fitted value deviates by 0.36 keV.
		6357.58 8	3.64 7	970.98	(≤ 3)	
		6364.4 3	1.05 9	964.15	(≤ 3)	
		6370.04 7	4.86 9	958.397	(≤ 3)	
		6380.65 24	1.01 9	947.90	(≤ 3)	
		6388.96 9	5.84 18	939.752	(1,2,3)	
		6393.37‡ 4	15.44 16	935.385	1^+	E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6393.162. E_γ : fitted value deviates by 0.20 keV.
		6403.80 3	14.34 14	924.760	($\leq 3^-$)	(E1)
		6419.41 4	12.48 13	909.176	(1,2) ⁺	
		6433.9 11	0.42 20	893.814	($1^-, 2^-, 3^+$)	(E1)
		6465.13 13	6.31 25	863.31	1^+	
		6526.21 10	2.19 7	802.454	($1^-, 2^-, 3^+$)	
		6535.03 5	5.62 5	793.5718	(1,2,3) ⁺	
		6542.76 4	7.25 7	785.835	($\leq 3^+$)	
		6554.09 21	0.98 7	774.411	(3) ⁺	
		6572.6 4	0.67 7	756.5762	(0 ⁺ , 3 ⁺)	
		6584.23‡ 13	8.3 4	744.947	($1^+, 2^+$)	(E1) E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6583.582. E_γ : fitted value deviates by 0.63 keV.
		6588.12‡ 13	8.0 4	741.465	(≤ 3)	E_γ : uncertainty multiplied by a factor of 3 in the fitting; level-energy difference=6587.064. E_γ : fitted value deviates by 0.97 keV.
		6600.73 5	6.62 7	727.80	(≤ 3)	
		6612.7 9	0.43 9	716.08	(1,2,3) ⁺	
		6620.61 8	5.41 11	707.92	(≤ 3)	

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{As})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ @	I_γ @	E_f	J_f^π	Mult. &	Comments
(7328.836)	1 ⁻ , 2 ⁻	6640.9 [‡] 3	0.89 7	686.1296	(1 ⁻ to 4)		E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6642.394. E_γ : fitted value deviates by 1.50 keV.
		6659.45 7	4.03 7	669.1158	(1 ⁺ , 2 ⁺)		
		6690.83 [‡] 8	4.38 9	637.2506	(1 ⁺ , 2 ⁺)		E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6691.269. E_γ : fitted value deviates by 0.47 keV.
		6699.48 17	1.94 7	628.7467	(1 ⁺ , 2 ⁺)		
		6719.72 [‡] 17	1.79 7	609.9723	(3 ⁺)		E_γ : uncertainty multiplied by a factor of 3 in the fitting; level-energy difference=6718.544. E_γ : fitted value deviates by 1.15 keV.
		6728.31 25	1.50 7	600.21	(≤ 3)		
		6777.91 13	2.55 11	550.4363	(1 ⁻ , 2 ⁻)		
		6784.42 6	6.35 13	544.0244	(2 ⁻)		
		6810.55 [#] 1	100.0 11	517.5798	(1 ⁺ , 2 ⁺)	(E1)	E_γ : very poor fit and omitted in the fitting; level-energy difference=6810.928. E_γ : fitted value deviates by 0.42 keV.
		6822.13 [‡] 17	2.37 9	505.2058	(2, 3) ⁺		E_γ : uncertainty multiplied by a factor of 3 in the fitting; level-energy difference=6823.301. E_γ : fitted value deviates by 1.21 keV.
		6828.67 13	2.86 9	499.5812	(1 ⁺ , 2 ⁺)		
		6857.62 14	2.98 13	471.0018	(2 ⁻)		
		6881.38 9	2.88 9	447.1712	(1, 2) ⁺		
		6892.8 5	0.43 7	436.8037	(1, 2, 3) ⁻		
		6926.64 2	33.1 4	401.8332	(1, 2) ⁺	(E1)	
		6952 ^f 3	0.9	377.3847	(2 ⁻)		I_γ : from $I_\gamma(\text{per } 100 \text{ neutrons})=0.04$ (1968Jo11).
		6965.35 [‡] 20	0.85 9	363.9067	(2 ⁻)		E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6964.586. E_γ : fitted value deviates by 0.72 keV.
		6976.16 4	8.50 9	352.3625	(3 ⁻)		
		6999.8 6	0.40 7	328.4790	(3, 4) ⁻		
		7020.15 1	67.5 7	308.3202	(2) ⁺	(E1)	
		7028.19 [‡] 4	9.49 9	300.4607	(2, 3) ⁺		E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=7028.026.
		7048 ^f 3	1.8	280.3026	(1, 2) ⁺		I_γ : from $I_\gamma(\text{per } 100 \text{ neutrons})=0.08$ (1968Jo11).
		7063.67 2	26.2 4	264.8069	1 ⁺	(E1)	
		7129 ^f 3	0.67	203.5422	(0, 1) ⁺		I_γ : from $I_\gamma(\text{per } 100 \text{ neutrons})=0.03$ (1968Jo11).
		7163.49 8	3.22 7	165.0488	(3) ⁻		
		7207.56 [‡] 11	2.26 7	120.2582	1 ⁺		E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=7208.210. E_γ : fitted value deviates by 0.73 keV.

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{As})$ (continued)						
$E_i(\text{level})$	J_i^π	E_γ @	I_γ @	E_f	J_f^π	Mult. & Comments
(7328.836)	$1^-, 2^-$	7241.60 3	11.10 11	86.7876	1^+	(E1) E_γ : fitted value deviates by 0.15 keV.
		7284.10 2	18.08 18	44.4254	$(1)^+$	(E1)
		7328.6 3	0.76 7	0.0	2^-	
(7329.708)	$(1,2,3^+)$	6266.1 $^{\pm}$ 2	29.8 12	1064.494	1^+	E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6264.937.
		6296.2 4	23.5 23	1034.269	1^+	
		6301.3 8	17.4 22	1027.8	$(1^+, 2^+)$	
		6307.8 $^{\pm}$ 2	63.0 19	1023.17	$(1^+, 2^+)$	E_γ : uncertainty multiplied by a factor of 3 in the fitting; level-energy difference=6306.25.
		6344.1 1	43.0 17	985.542	$(1,2,3)^+$	
		6390.2 5	34 ^C 4	939.752	$(1,2,3)$	
		6407.1 $^{\pm}$ 6	7.6 16	924.760	$(\leq 3^-)$	E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6404.659.
		6420.2 3	16.2 13	909.176	$(1,2)^+$	
		6433.5 9	7.4 19	893.814	$(1^-, 2^-, 3^+)$	
		6466.3 9	100.0 ^C 20	863.31	1^+	
		6527.5 5	7.3 9	802.454	$(1^-, 2^-, 3^+)$	
		6535.8 2	32.3 11	793.5718	$(1,2,3)^+$	
		6543.7 1	37.2 ^C 15	785.835	$(\leq 3^+)$	
		6555.0 2	17.6 12	774.411	$(3)^+$	
		6573.3 3	13.4 11	756.5762	$(0^+, 3^+)$	
		6584.5 3	30.6 25	744.947	$(1^+, 2^+)$	
		6588.9 9	6.9 23	741.465	(≤ 3)	
		6613.2 4	6.8 8	716.08	$(1,2,3)^+$	
		6626.7 4	6.9 5	703.250	$(1^-, 2^-, 3^+)$	
		6642.1 $^{\pm}$ 2	16.2 9	686.1296	$(1^- \text{ to } 4)$	E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6643.267.
		6660.3 2	18.6 9	669.1158	$(1^+, 2^+)$	
		6691.9 1	52.5 ^C 16	637.2506	$(1^+, 2^+)$	
		6700.6 2	26.5 13	628.7467	$(1^+, 2^+)$	
		6719.2 4	9.7 10	609.9723	(3^+)	
		6779.0 4	8.1 8	550.4363	$(1^-, 2^-)$	
		6785.3 4	9.2 9	544.0244	$(2)^-$	
		6811.0 [#] 1	43.9 13	517.5798	$(1^+, 2^+)$	E_γ : very poor fit and omitted in the fitting; level-energy difference=6811.801.
		6824.0 5	12.4 15	505.2058	$(2,3)^+$	
		6829.5 3	25.0 16	499.5812	$(1^+, 2^+)$	
		6858.0 2	26.1 ^C 10	471.0018	$(2)^-$	
		6873.1 6	5.4 8	457.3505	$(2^-, 3^+)$	
		6882.0 2	22.3 11	447.1712	$(1,2)^+$	
		6892.8 7	3.8 8	436.8037	$(1,2,3)^-$	

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{As})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ @	I_γ @	E_f	J_f^π	Comments
(7329.708)	(1,2,3 ⁺)	6927.4 1	33.3 10	401.8332	(1,2) ⁺	
		6965.7 3	8.1 6	363.9067	(2 ⁻)	
		6977.1 2	10.3 5	352.3625	(3) ⁻	
		7002.6 9	2.0 5	328.4790	(3,4) ⁻	
		7021.1 2	23.2 9	308.3202	(2) ⁺	
		7029.1 3	10.2 9	300.4607	(2,3 ⁺)	
		7048.9 1	34.3 10	280.3026	(1,2) ⁺	
		7064.4 2	24.1 9	264.8069	1 ⁺	
		7119.2 7	2.8 4	211.1467	(4) ⁻	
		7126.1 4	5.4 5	203.5422	(0,1) ⁺	
		7164.3 3	7.4 6	165.0488	(3) ⁻	
		7208.1 ‡ 2	31.2 12	120.2582	1 ⁺	E_γ : uncertainty multiplied by a factor of 3 in the fitting; level-energy difference=7207.093.
		7242.5 1	51.2 10	86.7876	1 ⁺	
		7285.2 2	23.1 12	44.4254	(1) ⁺	
		7329.2 2	8.6 4	0.0	2 ⁻	
(7351.23)	(1,2,3 ⁺)	6287.5 ‡ 3	75 5	1064.494	1 ⁺	E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6286.46.
		6318.9 ‡ 4	93 8	1034.269	1 ⁺	E_γ : uncertainty multiplied by a factor of 3 in the fitting; level-energy difference=6316.68.
		6321.9 6	60 8	1027.8	(1 ⁺ ,2 ⁺)	
		6329.9 ‡ 4	79 8	1023.17	(1 ⁺ ,2 ⁺)	E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6327.77.
		6367.0 7	28 6	985.542	(1,2,3) ⁺	
		6412.4 5	45 6	939.752	(1,2,3)	
		6441.5 2	68 5	909.176	(1,2) ⁺	
		6456.3 4	39 4	893.814	(1 ⁻ ,2 ⁻ ,3 ⁺)	
		6490.3 ‡ 7	48 11	863.31	1 ⁺	E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6487.63.
		6548.5 4	41 4	802.454	(1 ⁻ ,2 ⁻ ,3 ⁺)	
		6557.2 4	38 4	793.5718	(1,2,3) ⁺	
		6565.3 6	24 4	785.835	($\leq$ 3 ⁺)	
		6575.8 5	25 4	774.411	(3) ⁺	
		6594.6 5	27 4	756.5762	(0 ⁺ ,3 ⁺)	
		6606.7 3	68 5	744.947	(1 ⁺ ,2 ⁺)	
		6635.1 8	12 3	716.08	(1,2,3) ⁺	
		6646.8 ‡ 3	34 3	703.250	(1 ⁻ ,2 ⁻ ,3 ⁺)	E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6647.67.
		6664.0 6	19 3	686.1296	(1 ⁻ to 4)	
		6681.6 2	100 4	669.1158	(1 ⁺ ,2 ⁺)	
		6715.9 ‡ 7	56 8	637.2506	(1 ⁺ ,2 ⁺)	E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6713.66.
		6722.8 3	80 6	628.7467	(1 ⁺ ,2 ⁺)	
		6741.6 6	20 4	609.9723	(3 ⁺)	
		6800.4 4	35 4	550.4363	(1 ⁻ ,2 ⁻)	
		6806.8 4	36 4	544.0244	(2) ⁻	
		6833.4 2	93 5	517.5798	(1 ⁺ ,2 ⁺)	

Adopted Levels, Gammas (continued)

$\gamma(^{76}\text{As})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^a	I_γ^a	E_f	J_f^π	Comments
(7351.23)	(1,2,3 ⁺)	6845.2 4	51 4	505.2058	(2,3) ⁺	
		6851.0 4	46 4	499.5812	(1 ⁺ ,2 ⁺)	
		6880.0 4	28 3	471.0018	(2) ⁻	
		6894.4 [‡] 3	42 3	457.3505	(2 ⁻ ,3 ⁺)	E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6893.54.
		6904.1 2	69 3	447.1712	(1,2) ⁺	
		6914.4 3	28 3	436.8037	(1,2,3) ⁻	
		6948.7 3	44 4	401.8332	(1,2) ⁺	
		6988.7 [‡] 5	37 6	363.9067	(2) ⁻	E_γ : uncertainty multiplied by a factor of 2 in the fitting; level-energy difference=6986.98.
		6998.4 4	23 2	352.3625	(3) ⁻	
		7021.8 [‡] 1	8 3	328.4790	(3,4) ⁻	E_γ : uncertainty multiplied by a factor of 3 in the fitting; level-energy difference=7022.40.
		7042.9 3	51 4	308.3202	(2) ⁺	
		7050.8 4	33 3	300.4607	(2,3 ⁺)	
		7069.8 4	28 3	280.3026	(1,2) ⁺	
		7086.2 2	52 3	264.8069	1 ⁺	
		7140.4 5	19 3	211.1467	(4) ⁻	
		7147.6 3	36 3	203.5422	(0,1) ⁺	
		7185.7 2	38 2	165.0488	(3) ⁻	
		7229.8 [‡] 2	79 4	120.2582	1 ⁺	E_γ : uncertainty multiplied by a factor of 3 in the fitting; level-energy difference=7228.61.
		7263.7 2	47 3	86.7876	1 ⁺	
		7306.3 3	45 3	44.4254	(1) ⁺	
		7350.4 2	44 3	0.0	2 ⁻	

[†] Additional information 3.

[‡] Poor fit; uncertainty multiplied by a factor in the fitting.

Very Poor fit and omitted in the fitting.

@ From (n, γ),E=thermal, unless otherwise noted.

& From ce in (n, γ),E=thermal, unless otherwise stated. For primary transitions, the assignments are from: $I_\gamma(\text{thermal})/I_\gamma(\text{epithermal})$ and $I_\gamma(\text{epithermal})/E\gamma^3$ (1969Gr09).

^a From ce data in (p,n γ).

^b γ from (p,n γ) only.

^c Line partly obscured by an impurity.

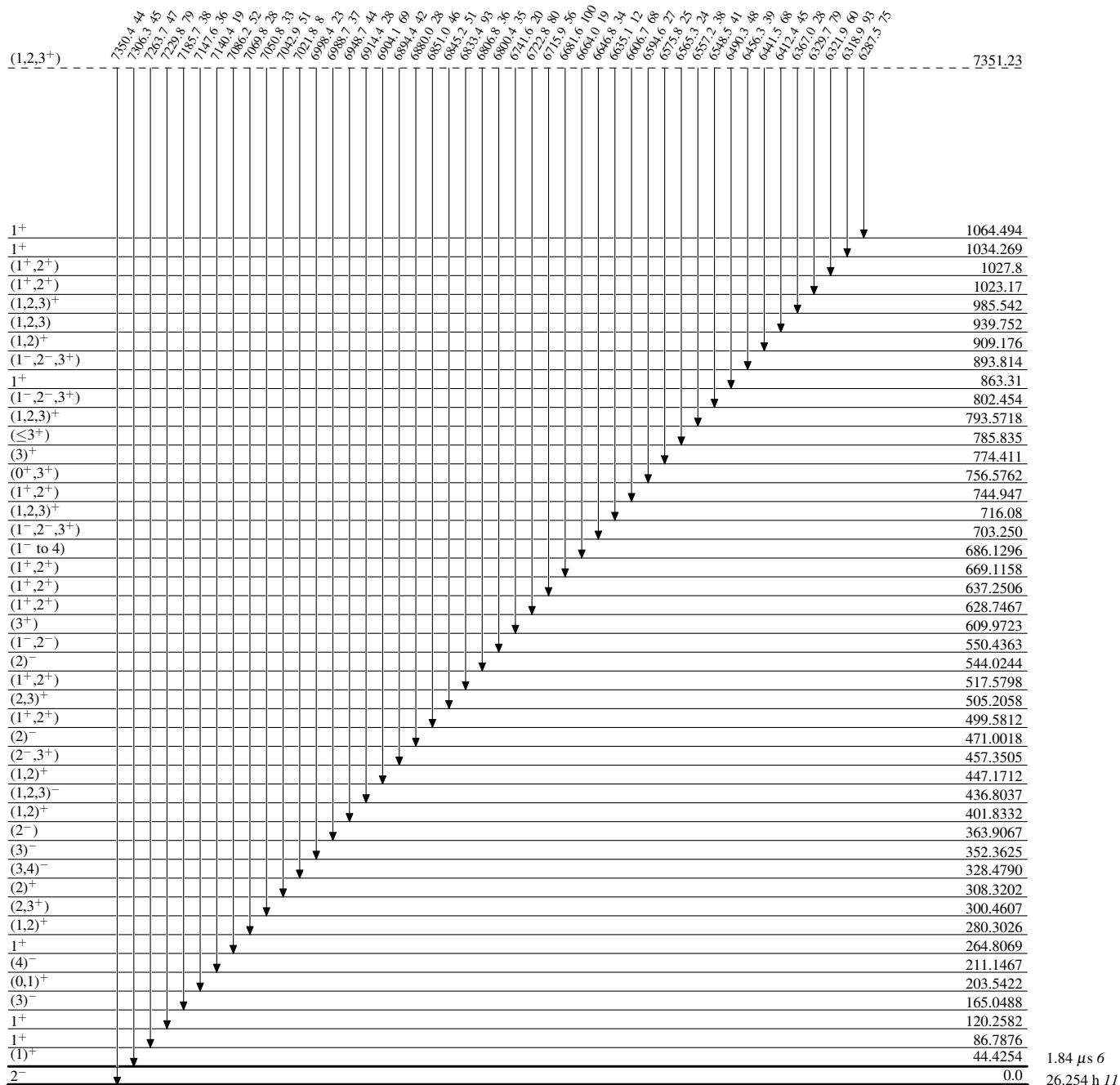
^d Multiply placed.

^e Multiply placed with undivided intensity.

^f Placement of transition in the level scheme is uncertain.

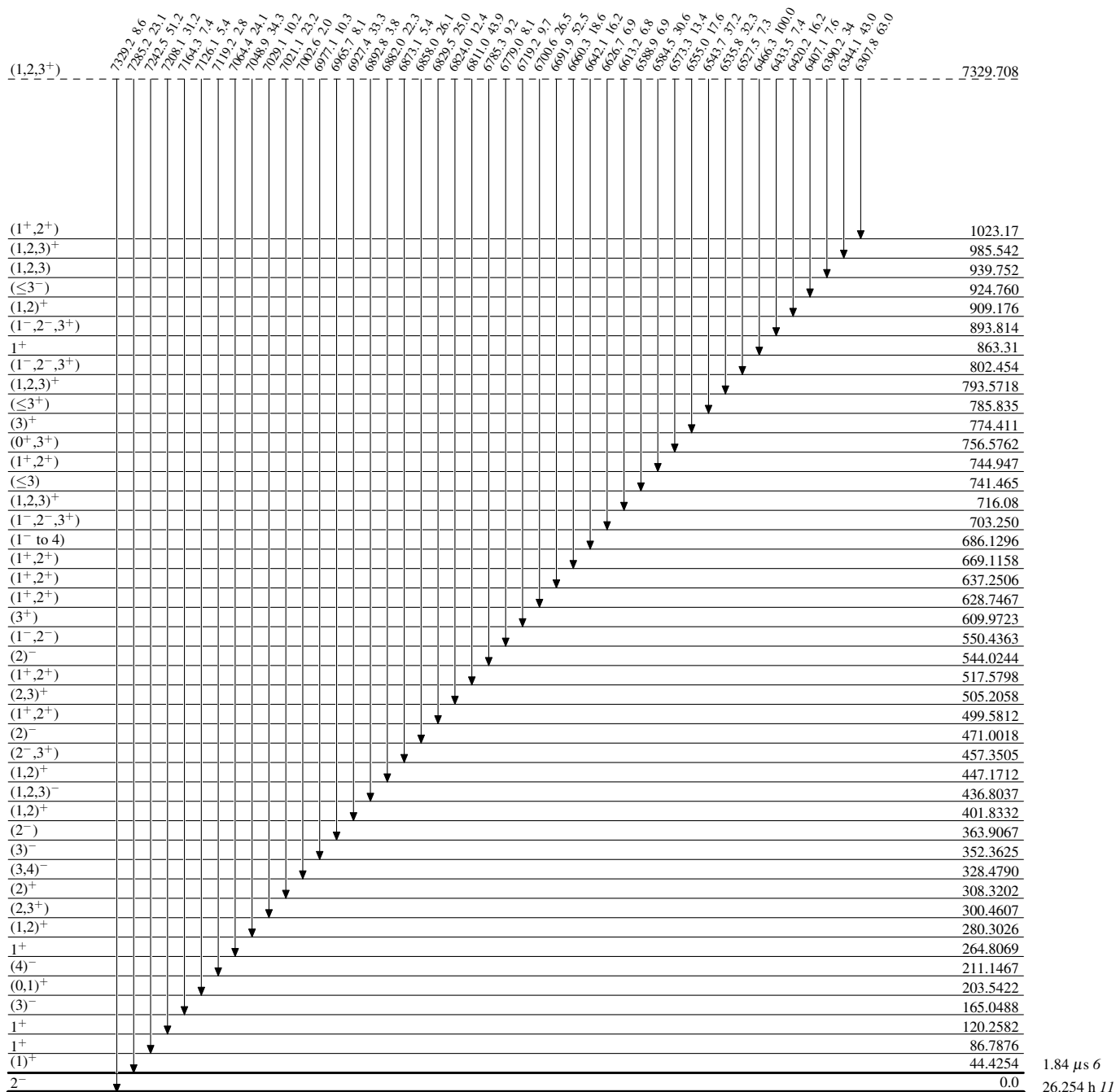
Adopted Levels, Gammas**Level Scheme**

Intensities: Relative photon branching from each level



Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level

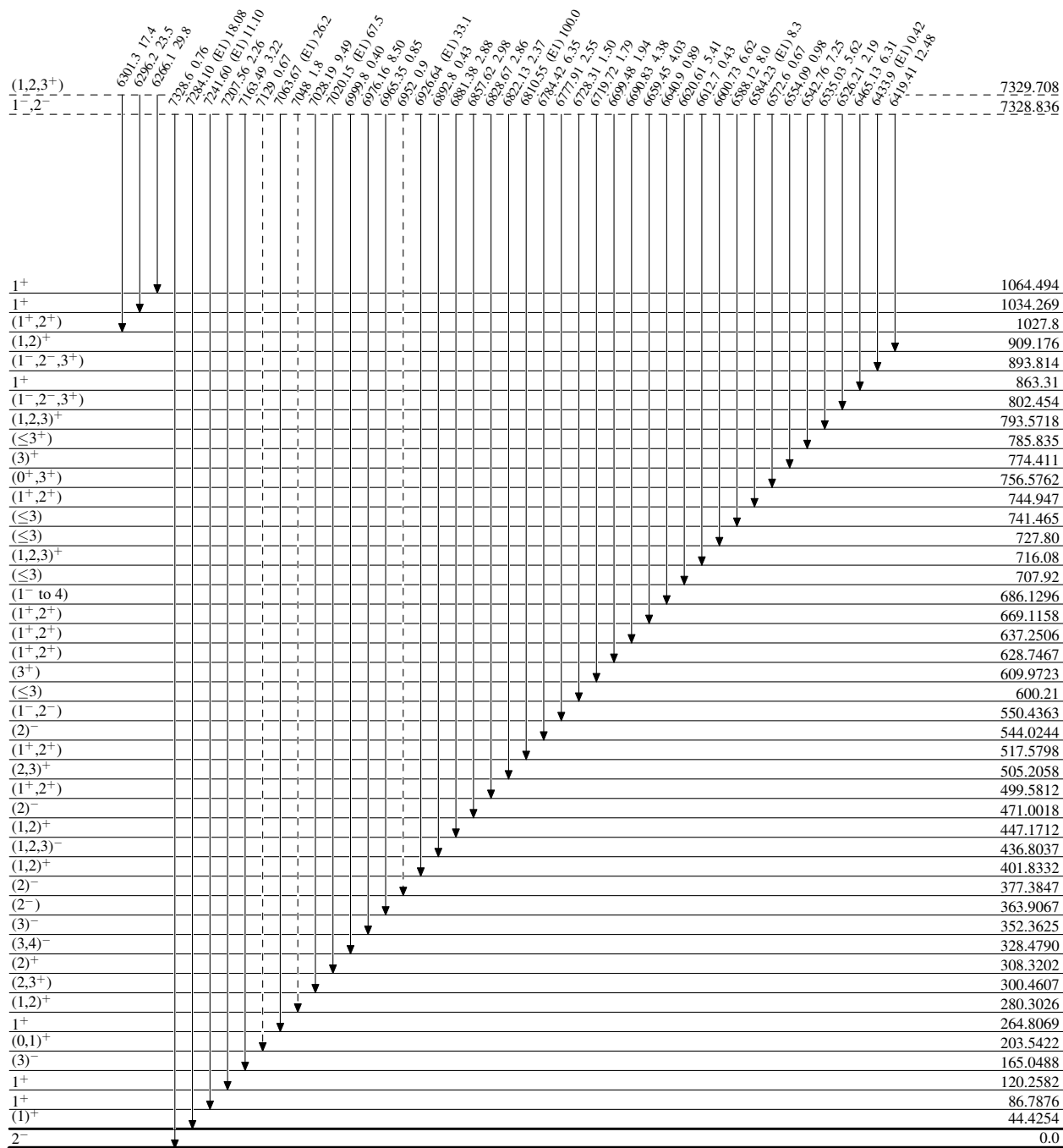


Adopted Levels, Gammas

Legend

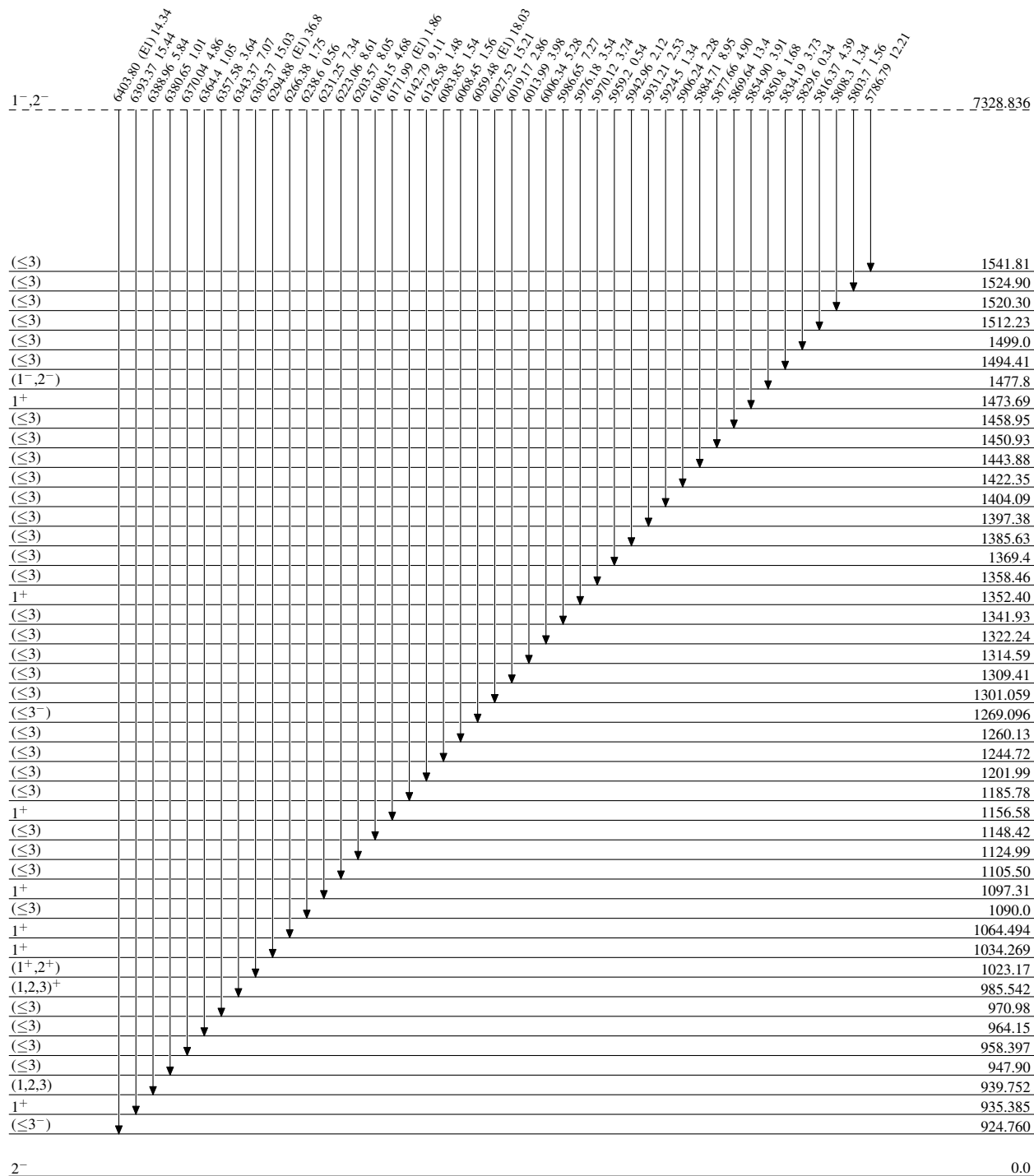
Level Scheme (continued)

Intensities: Relative photon branching from each level

-----► γ Decay (Uncertain)1.84 μs 6
26.254 h 11

Adopted Levels, GammasLevel Scheme (continued)

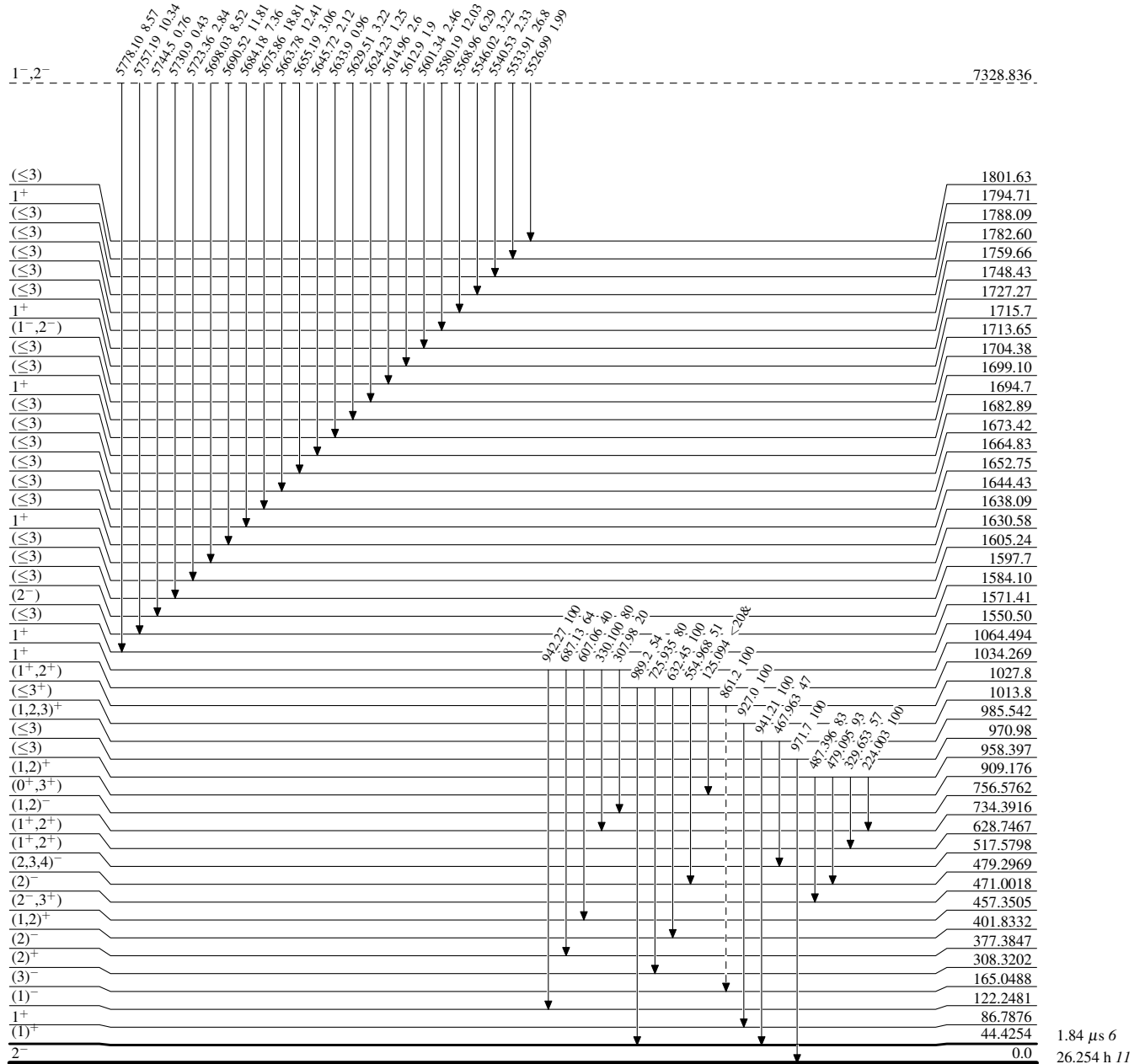
Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Legend

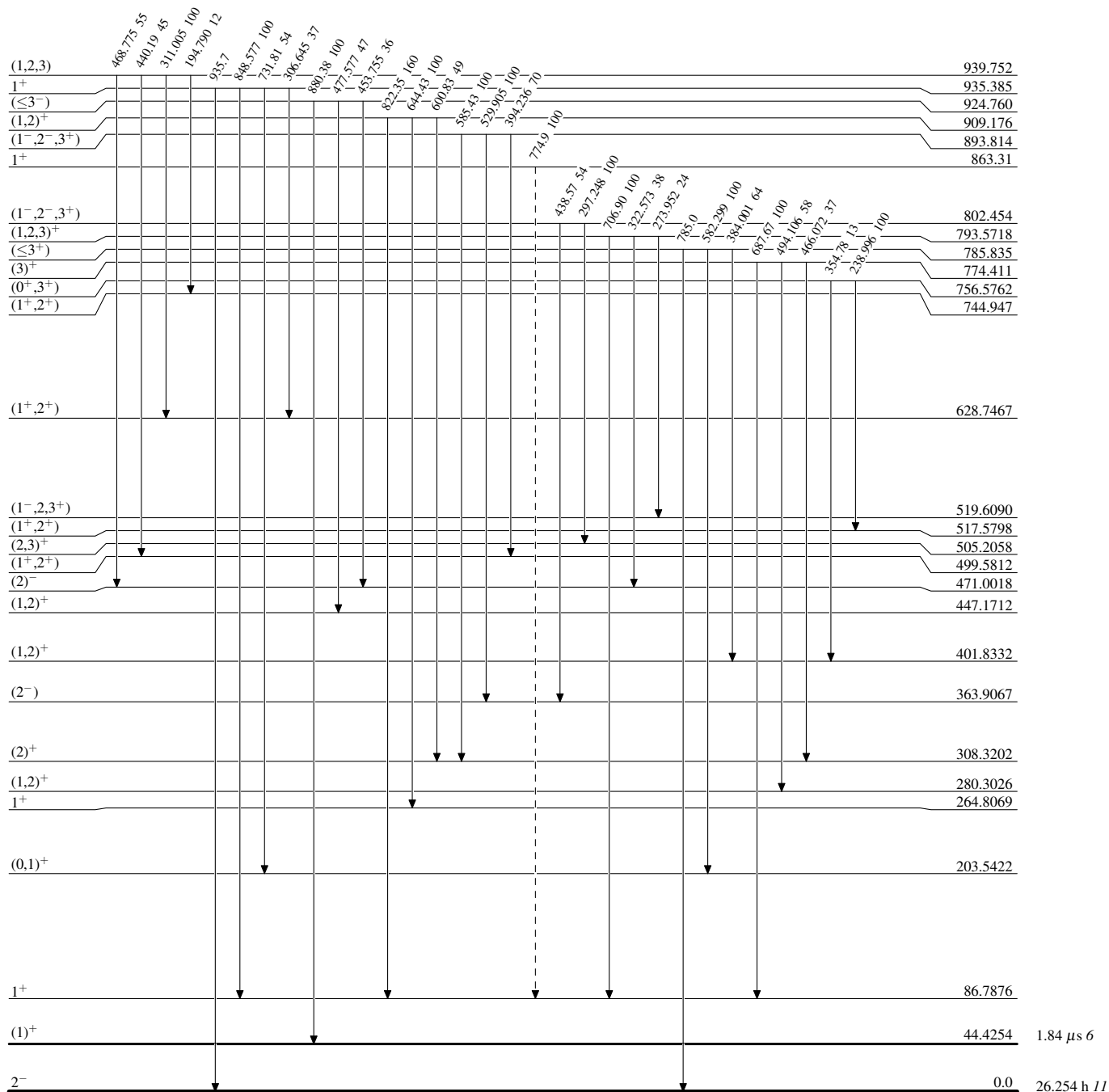
Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given-----► γ Decay (Uncertain)

Adopted Levels, Gammas**Level Scheme (continued)**

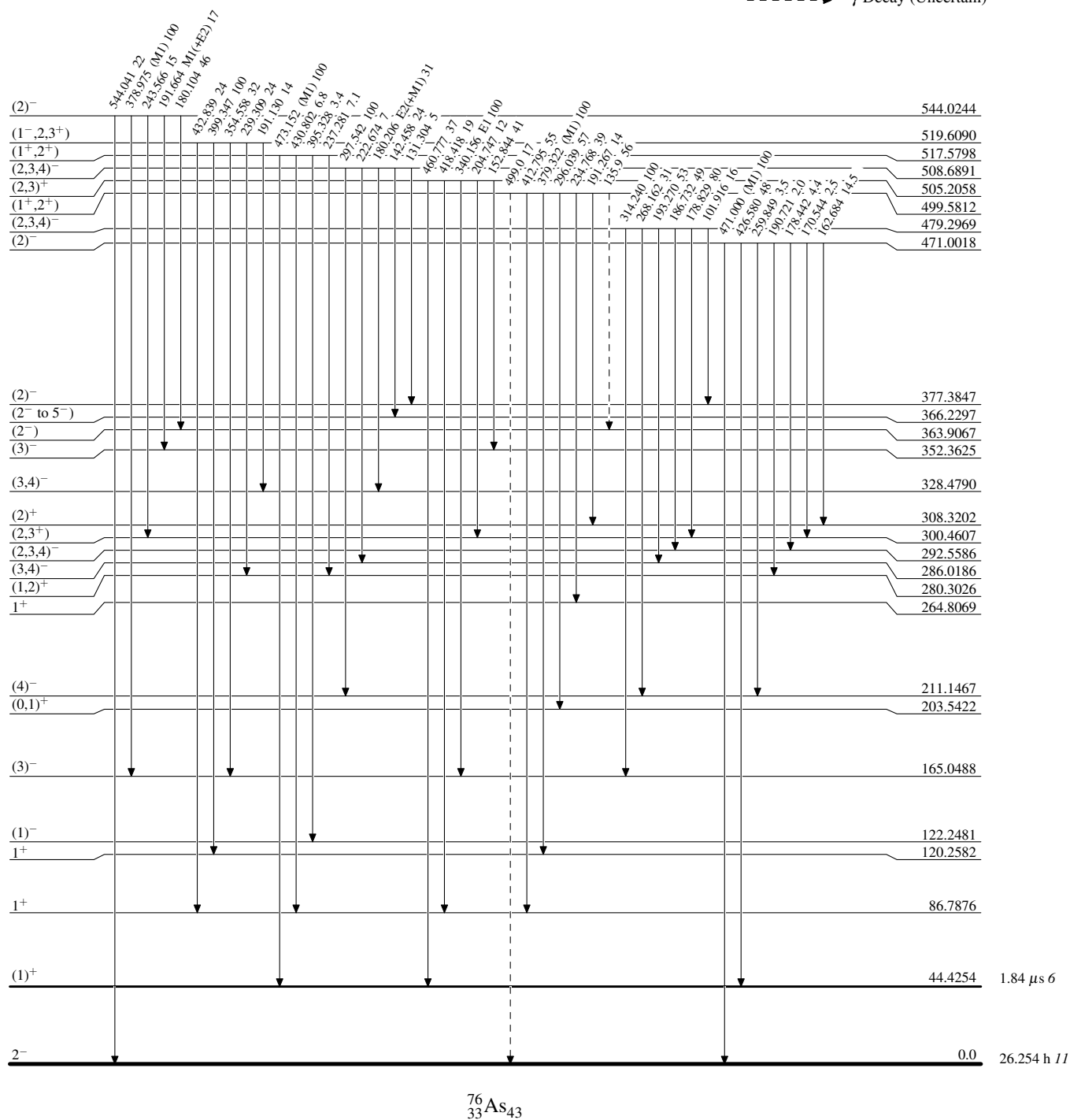
Legend

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

-----► γ Decay (Uncertain)

Adopted Levels, Gammas

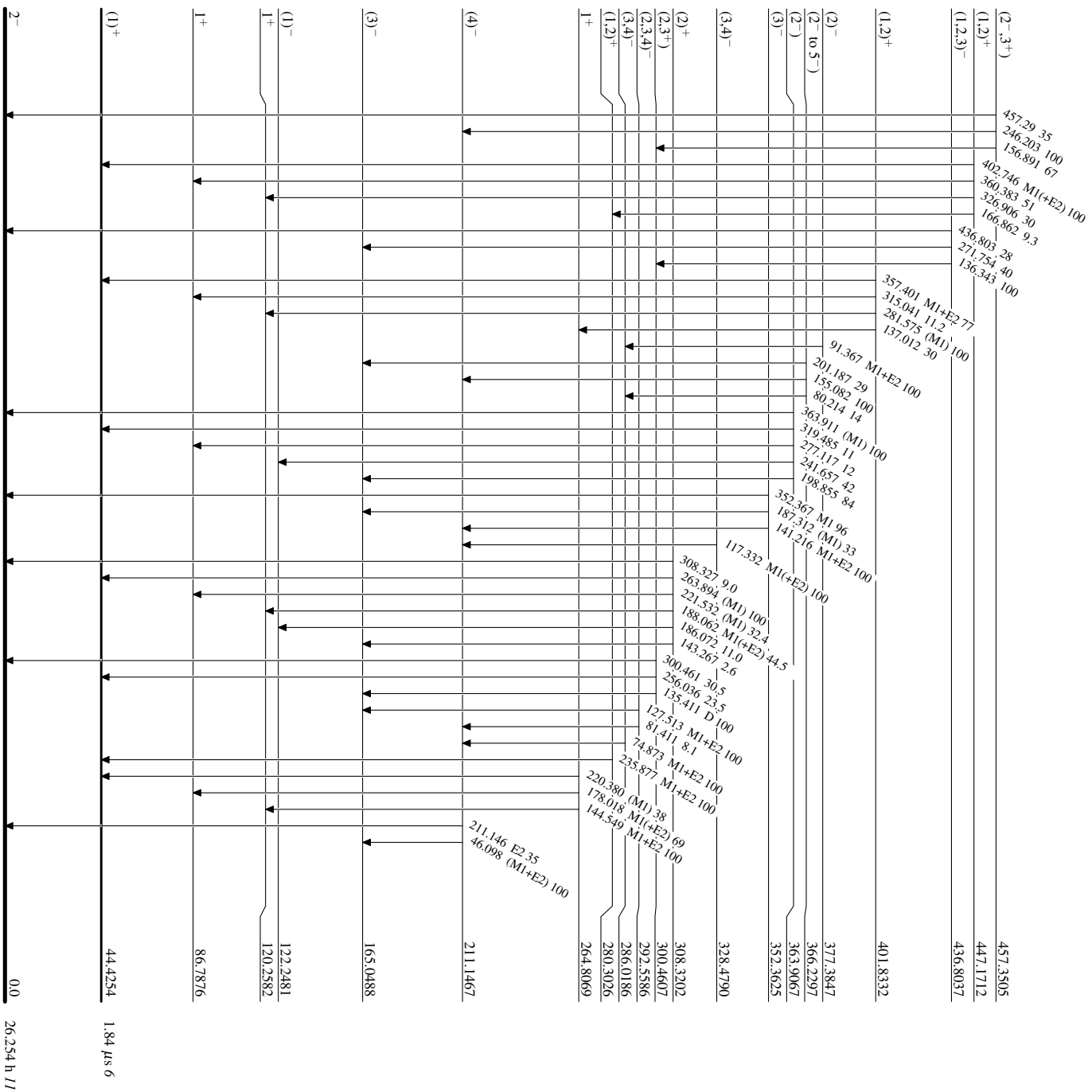
Legend

Level Scheme (continued)Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given-----► γ Decay (Uncertain)

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

