

Adopted Levels, Gammas 1990Aj01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu		NP A880,88 (2012)	1-Jan-2011

$Q(\beta^-) = -1982.4$ 9; $S(n) = 11454.12$ 16; $S(p) = 11228.6$ 5; $Q(\alpha) = -8664.1$ 5 [2012Wa38](#)

Note: Current evaluation has used the following Q record -1982.4 10 11454.1 6 11228.5 4 -8664.0 4 [2011AuZZ](#).

From mass excess (^{11}B) = 8667.93 keV 42.

 ^{11}B LevelsCross Reference (XREF) Flags

A	^{11}Be β^- decay	V	$^{10}\text{B}(n,n)$ res	AP	$^{12}\text{C}(\gamma,p)$
B	^{11}C β^+ decay	W	$^{10}\text{B}(n,t)$ res	AQ	$^{12}\text{C}(e,e'p)$
C	$^4\text{He}(^7\text{Li},\alpha)$	X	$^{10}\text{B}(n,\alpha)$ res	AR	$^{12}\text{C}(\pi^+,\pi^+p)$
D	$^6\text{Li}(^6\text{Li},p)$	Y	$^{10}\text{B}(p,\pi^+)$	AS	$^{12}\text{C}(n,d)$
E	$^7\text{Li}(\alpha,\gamma)$ res	Z	$^{10}\text{B}(d,p)$	AT	$^{12}\text{C}(p,2p)$
F	$^7\text{Li}(\alpha,n)$	Others:		AU	$^{12}\text{C}(p,\pi^+d)$
G	$^7\text{Li}(\alpha,\alpha)$	AA	$^{10}\text{B}(t,d)$	AV	$^{12}\text{C}(d,^3\text{He})$
H	$^7\text{Li}(^6\text{Li},d\gamma), ^6\text{Li}(^6\text{Li},\gamma p)$	AB	$^{10}\text{B}(^7\text{Li},^6\text{Li})$	AW	$^{12}\text{C}(t,\alpha\gamma)$
I	$^7\text{Li}(^7\text{Li},t)$	AC	$^{10}\text{B}(^9\text{Be},^8\text{Be})$	AX	$^{12}\text{C}(\alpha,^5\text{Li})$
J	$^7\text{Li}(^7\text{Li},\alpha^7\text{Li})$	AD	$^{10}\text{B}(^{13}\text{C},^{12}\text{C})$	AY	$^{12}\text{C}(^6\text{Li},^7\text{Be})$
K	$^7\text{Li}(^9\text{Be},\alpha^7\text{Li})$	AE	$^{11}\text{B}(\gamma,\gamma)$	AZ	$^{12}\text{C}(^{10}\text{Be},\alpha^7\text{Li})$
L	$^9\text{Be}(d,\gamma)$	AF	$^{11}\text{B}(\gamma,n), (\gamma,p), (\gamma,d), (\gamma,t)$	BA	$^{12}\text{C}(^{11}\text{B},^{11}\text{B}), (^{11}\text{B},\alpha^7\text{Li})$
M	$^9\text{Be}(d,p), (d,\alpha), (d,t)$	AG	$^{11}\text{B}(e,e')$	BB	$^{13}\text{C}(p,^3\text{He})$
N	$^9\text{Be}(t,n)$	AH	$^{11}\text{B}(\pi^+,\pi^+)$	BC	$^{13}\text{C}(d,\alpha)$
O	$^9\text{Be}(^3\text{He},p)$	AI	$^{11}\text{B}(n,n'\gamma)$	BD	$^{13}\text{C}(^{11}\text{B},^{11}\text{B}')$
P	$^9\text{Be}(\alpha,d)$	AJ	$^{11}\text{B}(p,p')$	BE	$^{14}\text{C}(p,\alpha)$
Q	$^9\text{Be}(^6\text{Li},\alpha)$	AK	$^{11}\text{B}(d,d')$	BF	$^{14}\text{C}(^{11}\text{B},^{11}\text{B})$
R	$^9\text{Be}(^{11}\text{B},^{11}\text{B}')$	AL	$^{11}\text{B}(^3\text{He},^3\text{He})$	BG	$^{14}\text{N}(n,\alpha)$
S	$^{10}\text{Be}(p,\gamma)$ res	AM	$^{11}\text{B}(\alpha,\alpha')$	BH	$^{15}\text{N}(\alpha,^8\text{Be})$
T	$^{10}\text{Be}(p,n)$	AN	$^{11}\text{B}(^6\text{Li},^6\text{Li}), (^7\text{Li},^7\text{Li})$	BI	$^{16}\text{O}(d,^7\text{Be})$
U	$^{10}\text{B}(n,\gamma)$ E=th	AO	$^{11}\text{B}(^{12}\text{C},^{12}\text{C})$		

E(level)	J^π	$T_{1/2}$	XREF							Comments
0	$3/2^-$	stable	AB	DE	HI	L	NOPQR	U	YZ	XREF: Others: AA, AB, AC, AD, AE, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, BA, BB, BC, BD, BE, BF, BG, BH, BI $T=1/2$; $\mu=+2.6886489$ 10 (1989Ra17); $Q=0.04065$ 26 (1970Ne05)
1214.693 27	$1/2^-$	0.117 eV 4	A	D	HI	L	NOPQR		YZ	XREF: Others: AA, AE, AG, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, BA, BB, BC, BD, BE, BF, BG, BH, BI E(level): from least squares fit to γ -ray energies observed in ^{11}Be β -decay. Γ : From $^{11}\text{B}(\gamma,\gamma')$.
4444.98 7	$5/2^-$	0.55 eV 5	A	DE	HI	L	NOPQR	U	YZ	XREF: Others: AA, AB, AC, AD, AE, AG, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AV, AW, BA, BB, BC, BD, BE, BF, BG, BH, BI E(level): from least squares fit to γ -ray energies observed in $^{10}\text{B}(n,\gamma)$ thermal neutron capture. Γ : From 0.56 keV 2 from $^{11}\text{B}(\gamma,\gamma)$, 0.69 keV 5 from $^{11}\text{B}(e,e')$ and 0.47 keV 3 $^{11}\text{B}(n,n'\gamma)$.
5020.30 30	$3/2^-$	1.97 eV 7	A	D	HI	L	OPQR		YZ	XREF: Others: AA, AB, AE, AG, AI, AJ, AK, AL,

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Adopted Levels, Gammas 1990Aj01 (continued) ^{11}B Levels (continued)

<u>E(level)</u>	<u>J^π</u>	<u>T_{1/2}</u>	<u>XREF</u>							<u>Comments</u>
										AM, AN, AP, AQ, AS, AT, AU, AV, AW, AY, BA, BB, BC, BD, BE, BF, BG, BI E(level): from least squares fit to γ -ray energies observed in ^{11}Be β -decay. Also see 5021.1 keV 6 from $^{11}\text{B}(p,p')$. Γ : From $^{11}\text{B}(\gamma,\gamma')$.
6741.85 8	7/2 ⁻	0.030 eV 7	DE	H	L	OPQR	U	YZ		XREF: Others: AA, AB, AC, AD, AE, AJ, AK, AL, AM, AN, AP, AQ, AW, AY, BB, BC, BD, BE, BF, BH, BI E(level): from least squares fit to γ -ray energies observed in $^{10}\text{B}(n,\gamma)$ thermal neutron capture. Γ : From $^{11}\text{B}(\gamma,\gamma')$.
6791.80 30	1/2 ⁺	0.39 eV 5	A	DE	H	L	OPQR	YZ		XREF: Others: AA, AE, AJ, AL, AM, AO, AP, AQ, AT, AY, BC, BD, BF, BI E(level): from least squares fit to γ -ray energies observed in ^{11}Be β -decay. Γ : From $^{11}\text{B}(\gamma,\gamma')$.
7285.51 43	5/2 ⁺	1.14 eV 8	A	DE	HI		NOPQR	YZ		XREF: Others: AA, AE, AG, AI, AJ, AL, AM, AP, AQ, AV, AW, BD, BF, BI E(level): from least squares fit to γ -ray energies observed in ^{11}Be β -decay. Γ : From $^{11}\text{B}(\gamma,\gamma')$.
7977.84 42	3/2 ⁺	1.15 eV 15	A	DE	H		O QR	YZ		XREF: Others: AE, AG, AI, AJ, AL, AN, AP, AQ, AV, AW, BD, BF E(level): from least squares fit to γ -ray energies observed in ^{11}Be β -decay. Γ : From $^{11}\text{B}(\gamma,\gamma')$.
8560.1 17	(3/2 ⁻)	1.00 eV 9		D	HI		NO QR	YZ		XREF: Others: AE, AG, AI, AJ, AK, AL, AM, AN, AP, AQ, AW, BC, BD, BE, BF E(level): from $E_x=8563$ keV 4 from $^{10}\text{B}(d,p)$ and $E_x=8559.4$ keV 1.9 from $^{11}\text{B}(p,p')$. Γ : From $^{11}\text{B}(\gamma,\gamma')$.
8920.47 11	5/2 ⁻	4.374 eV 23	DE	H		NO Q	U	YZ		XREF: Others: AB, AC, AE, AG, AI, AJ, AK, AL, AN, AW, AY, BB, BC, BE %IT=99.8; % α =0.14 $\Gamma_\gamma=4.368$ eV 21; $\Gamma_\alpha=5.9\times 10^{-3}$ eV 9 E(level): from least squares fit to γ -ray energies observed in $^{10}\text{B}(n,\gamma)$ thermal neutron capture. Γ : From $^7\text{Li}(\alpha,\gamma)$.
9183.5 10	7/2 ⁺	1.8 eV +15-11	DE		J		O Q	YZ		XREF: Others: AB, AC, AF, AJ, AL, BA, BG %IT=9.4; % α =91.6 $\Gamma_\gamma=0.17$ eV +6-3; $\Gamma_\alpha=1.6$ eV +15-11 E(level): from $E_x=9183$ keV 1 from $^7\text{Li}(\alpha,\gamma)$ and $E_x=9185$ keV 2 from $^{11}\text{B}(p,p')$. Γ : From $^7\text{Li}(\alpha,\gamma)$.
9271.7 10	5/2 ⁺	≈4 keV	DE		K		O Q	YZ		XREF: Others: AG, AJ, AL, AZ, BA, BG %IT≈0.03; % α ≈99.97 $\Gamma_\gamma=1.15$ eV 16 E(level): from $E_x=9271$ keV 1 from $^7\text{Li}(\alpha,\gamma)$ and $E_x=9274.4$ keV 2.0 from $^{11}\text{B}(p,p')$. Γ : From $^7\text{Li}(\alpha,\gamma)$.
9820 25	(1/2 ⁺)									XREF: Others: AQ E(level): from $^{12}\text{C}(e,e'p)$.

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Adopted Levels, Gammas 1990Aj01 (continued) ^{11}B Levels (continued)

E(level)	J^π	$T_{1/2}$	XREF						Comments
9873 4	3/2 ⁺	109 keV 14	A	G	O				XREF: Others: AW, BG % α >0 E(level): from $^7\text{Li}(\alpha,\alpha)$ and $^9\text{Be}(\alpha,\text{He},\text{p})$. Γ : From $^7\text{Li}(\alpha,\alpha)$ and $^9\text{Be}(\alpha,\text{He},\text{p})$.
10262 8	3/2 ⁻	163 keV 22	C	E	G	K	O		XREF: Others: AL, AZ, BA, BG %IT \geq 10.5; % α \leq 89.5 $\Gamma_{\gamma 0}$ =17 keV E(level): from $^7\text{Li}(\alpha,\gamma)$, $^7\text{Li}(\alpha,\alpha)$, $^9\text{Be}(\alpha,\text{He},\text{p})$ and $^{12}\text{C}(^{11}\text{B},^{11}\text{B}')$. Γ : From $^7\text{Li}(\alpha,\alpha)$ and $^9\text{Be}(\alpha,\text{He},\text{p})$, also see Γ =337 keV 44 from $^{12}\text{C}(^{11}\text{B},^{11}\text{B}')$. $\Gamma\alpha$: $\Gamma\alpha$ =4 keV (also<9 keV) is reported in $^4\text{He}(\alpha,\text{He},\alpha)$ (2011Ya02), but Γ =163 keV 22= $\Gamma\alpha + \Gamma_\gamma$ since no other decay paths are open.
10330 8	5/2 ⁻	112 keV 10	C	E	G	J	O	Z	XREF: Others: AZ, BE %IT \geq 8.9 $\times 10^{-3}$; % α \approx 100 $\Gamma_{\gamma 0}$ \approx 1 eV E(level): from $^7\text{Li}(\alpha,\gamma)$, $^7\text{Li}(\alpha,\alpha)$, $^9\text{Be}(\alpha,\text{He},\text{p})$ and $^{10}\text{B}(\text{d},\text{p})$. Γ : From $^7\text{Li}(\alpha,\alpha)$, $^9\text{Be}(\alpha,\text{He},\text{p})$, $^{10}\text{B}(\text{d},\text{p})$ and $^{14}\text{C}(\text{p},\alpha)$; the value Γ =54 keV 17 from $^{10}\text{B}(\text{d},\text{p})$ is included though it is rather low. $\Gamma\alpha$: $\Gamma\alpha$ =19 keV 4 is reported in $^4\text{He}(\alpha,\text{He},\alpha)$ (2011Ya02), but Γ =112 keV= $\Gamma\alpha + \Gamma_\gamma$ since no other decay paths are open.
10602 4	7/2 ⁺	91 keV 20	C	E	G	K	O	X	XREF: Others: AG, AL, BA, BG %IT \approx 2 $\times 10^{-4}$; % α \approx 100 $\Gamma_{\gamma 0}$ <0.2 eV E(level): from $^7\text{Li}(\alpha,\alpha)$, $^9\text{Be}(\alpha,\text{He},\text{p})$, $^{12}\text{C}(^{11}\text{B},^{11}\text{B}')$ and $^{14}\text{C}(\text{p},\alpha)$. Γ : From unweighted average of Γ =70 keV 10 from $^7\text{Li}(\alpha,\alpha)$, Γ =122 keV 20 from $^9\text{Be}(\alpha,\text{He},\text{p})$ and Γ =83 keV 22 from $^{12}\text{C}(^{11}\text{B},^{11}\text{B}')$. Also see Γ =186 keV 25 from $^{14}\text{C}(\text{p},\alpha)$. Though it is rather low. $\Gamma\alpha$: $\Gamma\alpha$ =10 keV 3 is reported in $^4\text{He}(\alpha,\text{He},\alpha)$ (2011Ya02), but Γ =91 keV= $\Gamma\alpha + \Gamma_\gamma$ since no other decay paths are open.
10960 50	5/2 ⁻	\approx 4.5 MeV		G					XREF: Others: BG % α >0 E(level): from $^7\text{Li}(\alpha,\alpha)$. Γ : From $^7\text{Li}(\alpha,\alpha)$; the text gives two plausible values, first Table 1 "Anomalies in the scattering" gives the value Γ >0.9 MeV, however Table 2 describes parameters from a seven level fit to the data where Γ \approx 4.5 MeV is given. Also see (2011Ya11) who suggest a J^π =5/2 ⁺ level at 11.06 MeV 4 with $\Gamma\alpha$ =32 keV 20.
11272 14	9/2 ⁺	110 keV 20	C	G	K	O			XREF: Others: AG, AL, BG % α \approx 100; %IT>0 E(level): from $^7\text{Li}(\alpha,\alpha)$ and $^9\text{Be}(\alpha,\text{He},\text{p})$. Γ : From $^9\text{Be}(\alpha,\text{He},\text{p})$.

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Adopted Levels, Gammas 1990Aj01 (continued)

^{11}B Levels (continued)						
E(level)	J^π	$T_{1/2}$	XREF			Comments
11450 17		93 keV 17	G J	O Q		$\Gamma\alpha$: $\Gamma\alpha=35$ keV 4 is reported in $^4\text{He}(^7\text{Li},\alpha)$ (2011Ya02); the resonance is observed in $^7\text{Li}(\alpha,\gamma)$, but not in p- or n-decay channels. $\%n>0$ E(level): from $E_x=11480$ keV 30 from $^7\text{Li}(\alpha,\alpha)$ and $E_x=11437$ keV 20 from $^9\text{Be}(^3\text{He},p)$. Γ : From $\Gamma=70$ keV 30 from $^7\text{Li}(\alpha,\alpha)$ and $\Gamma=103$ keV 20 from $^9\text{Be}(^3\text{He},p)$.
11600 20	5/2 ⁺	180 keV 20	FG	O	X	XREF: Others: AJ, BE $\%n<100$; $\%n<100$ E(level): Γ : from $^7\text{Li}(\alpha,\alpha)$, $^9\text{Be}(^3\text{He},p)$ and $^{14}\text{C}(p,\alpha)$.
11893 13	5/2 ⁻	194 keV 6	FG K	O	X	$\%n<100$; $\%n<100$ E(level): from $^7\text{Li}(\alpha,n)$, $^7\text{Li}(\alpha,\alpha)$ and $^9\text{Be}(^3\text{He},p)$. Γ : From $^7\text{Li}(\alpha,n)$.
12.04×10 ³ 13	7/2 ⁺	≈1 MeV	G		X	$\%n<100$; $\%n<100$ E(level): Γ : from $^7\text{Li}(\alpha,\alpha)$. In (2011Ya02) a state is reported at 11.59 MeV with $J^\pi=(7/2^-)$, $\Gamma\alpha=270$ keV and $\Gamma_n=580$ keV.
12554 13	1/2 ⁺ , (3/2 ⁺)	205 keV 20	G JK	O Q ST		XREF: Others: AF, AL $\%IT\geq 6\times 10^{-3}$; $\%p<100$; $\%n<100$ $T=3/2$ E(level): Γ : from $^7\text{Li}(\alpha,\alpha)$, $^9\text{Be}(^3\text{He},p)$, $^{10}\text{Be}(p,\gamma)$ and $^{11}\text{B}(^3\text{He},^3\text{He})$. Γ_γ : From $\Gamma_{\gamma 0}=10$ eV +7-5 and $\Gamma_{\gamma 1}/\Gamma_{\gamma 0}=0.25$ 8.
12917 11	1/2 ⁻	230 keV 20	G K	O ST		XREF: Others: AJ, BB, BE $\%IT\geq 1.3\times 10^{-2}$; $\%p<100$; $\%n<100$ $T=3/2$ E(level): Γ : from $^9\text{Be}(^3\text{He},p)$, $^{10}\text{Be}(p,\gamma)$, $^{13}\text{C}(p,^3\text{He})$ and $^{14}\text{C}(p,\alpha)$. Γ_γ : From $\Gamma_{\gamma 0}=29$ eV 9 and $\Gamma_{\gamma 1}/\Gamma_{\gamma 0}<0.06$.
13137 40	9/2 ⁻	426 keV 40	C F JK	O	VWX	$\%n<100$; $\%^3\text{H}>0$; $\%n<100$ E(level): Γ : from $^9\text{Be}(^3\text{He},p)$. Also see $^7\text{Li}(\alpha,\alpha)$.
13160	5/2 ⁺ , 7/2 ⁺	363 keV		Q	V X	$\Gamma\alpha$: In (2011Ya02) a state is reported at 13.03 MeV with $\Gamma\alpha=140$ keV +110-80. $\%n=?$; $\%n=?$ E(level): from $^9\text{Be}(^6\text{Li},\alpha)$. Γ : From R-matrix fit in $^{10}\text{B}(n,\alpha)$: $E_x=13.2$ MeV and $\Gamma=363$ keV.
14040 80	11/2 ⁺	0.5 MeV 2	FG K		V X	$\%n=?$; $\%n=?$ E(level): from $^7\text{Li}(\alpha,n)$ and $^7\text{Li}(\alpha,\alpha)$. Γ : From $^7\text{Li}(\alpha,\alpha)$; also see $\Gamma=855$ keV from $^{10}\text{B}(n,\alpha)$.
14340 20	5/2 ⁺	253 keV 19	K	OP S		XREF: Others: AL $\%IT\geq 6.3\times 10^{-3}$; $\%p<100$ $T=3/2$ E(level): from $^9\text{Be}(^6\text{Li},\alpha)$ and $^{11}\text{B}(^3\text{He},^3\text{He}')$. Γ : From $^9\text{Be}(^3\text{He},p)$, $^{10}\text{B}(p,\gamma)$ and

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Adopted Levels, Gammas 1990Aj01 (continued)

<u>^{11}B Levels (continued)</u>							
E(level)	J^π	$T_{1/2}$	XREF				Comments
14563	11	≤ 30 keV	F	J	OP	VW	$^{11}\text{B}(^3\text{He}, ^3\text{He})$. Γ_γ : From $\Gamma_{\gamma 0}=14.5$ and $\Gamma_{\gamma 1}/\Gamma_{\gamma 0}<0.10$. XREF: Others: AL , BE $\%n=?$; $\%{}^3\text{H}=?$; $\%\alpha=?$ E(level): from $^9\text{Be}(^3\text{He}, \text{p})$ and $^{14}\text{C}(\text{p}, \alpha)$. Γ : From $^9\text{Be}(^3\text{He}, \text{p})$ and $^9\text{Be}(\alpha, \text{d})$. XREF: Others: AJ , BE $\%IT=?$; $\%n=?$; $\%p=?$; $\%\alpha=?$ T=3/2 T: tentative.
15290	25 (3/2,5/2,7/2) ⁺	282 keV 15				S V X	E(level): Γ : from $^{14}\text{C}(\text{p}, \alpha)$. Also see $\Gamma=635$ keV 180 from $^{10}\text{B}(\text{p}, \gamma)$. XREF: Others: AJ , BE $\%p=?$; $\%d=?$; $\%\alpha=?$ T=3/2 E(level): from $^9\text{Be}(\text{d}, \text{p})$ and $^9\text{Be}(^3\text{He}, \text{p})$. Γ : From $^9\text{Be}(^3\text{He}, \text{p})$. $\%n=?$; $\%d=?$; $\%{}^3\text{H}=?$; $\%\alpha=?$
16432	10	≤ 30 keV			LM	O	E(level): Γ : from $^9\text{Be}(\text{d}, \text{p})$. $\%IT=?$; $\%n=?$; $\%p=?$; $\%d=?$; $\%\alpha=?$ T=3/2
17310		≈ 1 MeV			M	WX	E(level): Γ : from $^9\text{Be}(\text{d}, \text{p})$. $\%IT=?$; $\%n=?$; $\%p=?$; $\%d=?$; $\%\alpha=?$ T=3/2
17500	30	116 keV 25	F		KLM	O	E(level): from $E_x=17435$ keV 50 from $^9\text{Be}(\text{d}, \gamma)^7\text{Li}$ and $E_x=17520$ keV 30 from $^7\text{Li}(\alpha, \text{n})$. Γ : From $\Gamma=184$ keV 41 from $^9\text{Be}(\text{d}, \gamma)$ and $\Gamma=91$ keV 25 from $^9\text{Be}(^3\text{He}, \text{p})$. T=3/2
18.00×10 ³	10	0.87 MeV 10				O	Decay mode not specified. E(level): Γ : from $^9\text{Be}(^3\text{He}, \text{p})$. $\%IT=?$; $\%d=?$
18370	50 (1/2,3/2,5/2) ⁺	260 keV 80			L		E(level): Γ : $^9\text{Be}(\text{d}, \gamma)$. XREF: Others: BE T=3/2
19125	26 +	115 keV 25				O	E(level): from $^9\text{Be}(^3\text{He}, \text{p})$ and $^{14}\text{C}(\text{p}, \alpha)$. Γ : From $^9\text{Be}(^3\text{He}, \text{p})$; also see $\Gamma=294$ keV 10 from $^{14}\text{C}(\text{p}, \alpha)$. $\%IT=?$; $\%d=?$ Γ : Broad.
19700	(1/2 ⁺)				L	T	E(level): from $^9\text{Be}(\text{d}, \gamma)$. Also see $E_x=19.5$ MeV from $^9\text{Be}(\text{d}, \text{p})$ and $^{10}\text{B}(\text{n}, \alpha)$. T=3/2
21270	50	300 keV 30				O	E(level): Γ : from $^9\text{Be}(^3\text{He}, \text{p})$. $\%IT=?$; $\%d=?$
23700	(1/2,3/2,5/2) ⁺				L		E(level): from $^9\text{Be}(\text{d}, \gamma)$. XREF: Others: AF $\%IT=?$; $\%n=?$
26500							Γ : Broad. E(level): from $^{11}\text{B}(\gamma, \text{n})$.

Adopted Levels, Gammas 1990Aj01 (continued)

$\gamma(^{11}\text{B})$								
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ	E_f	J_f^π	Mult.	δ	Comments
2124.693	1/2 ⁻	2124.473 27	100	0	3/2 ⁻	M1		$\Gamma_\gamma=0.117$ eV 4; B(M1)(W.u.)=0.58 2
4444.98	5/2 ⁻	4444.03 8	100.	0	3/2 ⁻	M1+E2	+0.158 +25-21	$\Gamma_\gamma=0.55$ eV 5; B(M1)(W.u.)=0.29 3; B(E2)(W.u.)=6.1 22
5020.30	3/2 ⁻	2895.30 40	14.4 6	2124.693	1/2 ⁻	M1+E2	+0.19 +10-17	$\Gamma_\gamma=0.28$ eV 2; B(M1)(W.u.)=0.54 3; B(E2)(W.u.)=40 +80-9
		5018.98 40	85.6 6	0	3/2 ⁻	M1+E2	-0.036 13	$\Gamma_\gamma=1.69$ eV 6; B(M1)(W.u.)=0.63 2; B(E2)(W.u.)=0.57 +49-35
6741.85	7/2 ⁻	2296.63 13	30 2	4444.98	5/2 ⁻	M1		$\Gamma_\gamma=9.0\times 10^{-3}$ eV 22; B(M1)(W.u.)=3.5 $\times 10^{-2}$ 8
		6739.53 16	70 2	0	3/2 ⁻	E2		$\Gamma_\gamma=2.1\times 10^{-2}$ eV 5; B(E2)(W.u.)=1.26 30 $\delta(\text{E2/M3})=-0.45$ 18 is reported but this is not reasonable.
6791.80	1/2 ⁺	1771.31 30	4.0 3	5020.30	3/2 ⁻	E1		$\Gamma_\gamma=1.56\times 10^{-2}$ eV 23; B(E1)(W.u.)=8.3 $\times 10^{-3}$ 12
		4665.90 40	28.5 11	2124.693	1/2 ⁻	E1		$\Gamma_\gamma=0.111$ eV 15; B(E1)(W.u.)=3.25 $\times 10^{-3}$ 43
		6789.81 50	67.5 11	0	3/2 ⁻	E1		$\Gamma_\gamma=0.26$ eV 3; B(E1)(W.u.)=2.5 $\times 10^{-3}$ 3
7285.51	5/2 ⁺	2264.9	7.5 10	5020.30	3/2 ⁻	E1+M2	+0.028 +73-75	$\Gamma_\gamma=8.6\times 10^{-2}$ eV 13; B(E1)(W.u.)=2.2 $\times 10^{-2}$ 3; B(M2)(W.u.) ≤ 190
		2840.23	5.5 10	4444.98	5/2 ⁻	E1+M2	-0.08 +16-12	$\Gamma_\gamma=6.3\times 10^{-2}$ eV 12; B(E1)(W.u.)=8.1 $\times 10^{-3}$ 16; B(M2)(W.u.) ≤ 180
		7282.92	87.0 20	0	3/2 ⁻	E1+M2	+0.0001 +22-21	$\Gamma_\gamma=0.99$ eV 7; B(E1)(W.u.)=7.6 $\times 10^{-3}$ 6; B(M2)(W.u.) ≤ 33
7977.84	3/2 ⁺	692.31 10	0.85 4	7285.51	5/2 ⁺	M1		$\Gamma_\gamma=9.8\times 10^{-3}$ eV 14; B(M1)(W.u.)=1.4 2
		5851.47 42	53.2 12	2124.693	1/2 ⁻	E1		$\Gamma_\gamma=0.61$ eV 8; B(E1)(W.u.)=9.1 $\times 10^{-3}$ 12
		7974.73	46.2 11	0	3/2 ⁻	E1		$\Gamma_\gamma=0.53$ eV 7; B(E1)(W.u.)=3.1 $\times 10^{-3}$ 4
8560.1	(3/2 ⁻)	3539.38	9 1	5020.30	3/2 ⁻	M1		$\Gamma_\gamma=9.0\times 10^{-2}$ eV 13; B(M1)(W.u.)=9.7 $\times 10^{-2}$ 14
		4114.6	5 1	4444.98	5/2 ⁻	M1		$\Gamma_\gamma=5.0\times 10^{-2}$ eV 11; B(M1)(W.u.)=3.4 $\times 10^{-2}$ 8
		6433.6	30 2	2124.693	1/2 ⁻	M1		$\Gamma_\gamma=0.30$ eV 3; B(M1)(W.u.)=5.4 $\times 10^{-2}$ 5
		8556.7	56 2	0	3/2 ⁻	M1		$\Gamma_\gamma=0.56$ eV 5; B(M1)(W.u.)=4.3 $\times 10^{-2}$ 4
8920.47	5/2 ⁻	4474.5 3	4.5 5	4444.98	5/2 ⁻	M1+E2	-0.061 +25-22	$\Gamma_\gamma=0.20$ eV 2; B(M1)(W.u.)=0.10 1; B(E2)(W.u.)=0.34 27
		8916.67 16	95 1	0	3/2 ⁻	M1+E2	0.000 14	$\Gamma_\gamma=4.15$ eV 5; B(M1)(W.u.)=0.28 3; B(E2)(W.u.)<0.01
9183.5	7/2 ⁺	2441.8	12.5 11	6741.85	7/2 ⁻	E1		$\Gamma_\gamma=2.1\times 10^{-2}$ eV 8; B(E1)(W.u.)=4.3 $\times 10^{-3}$ 16

Continued on next page (footnotes at end of table)

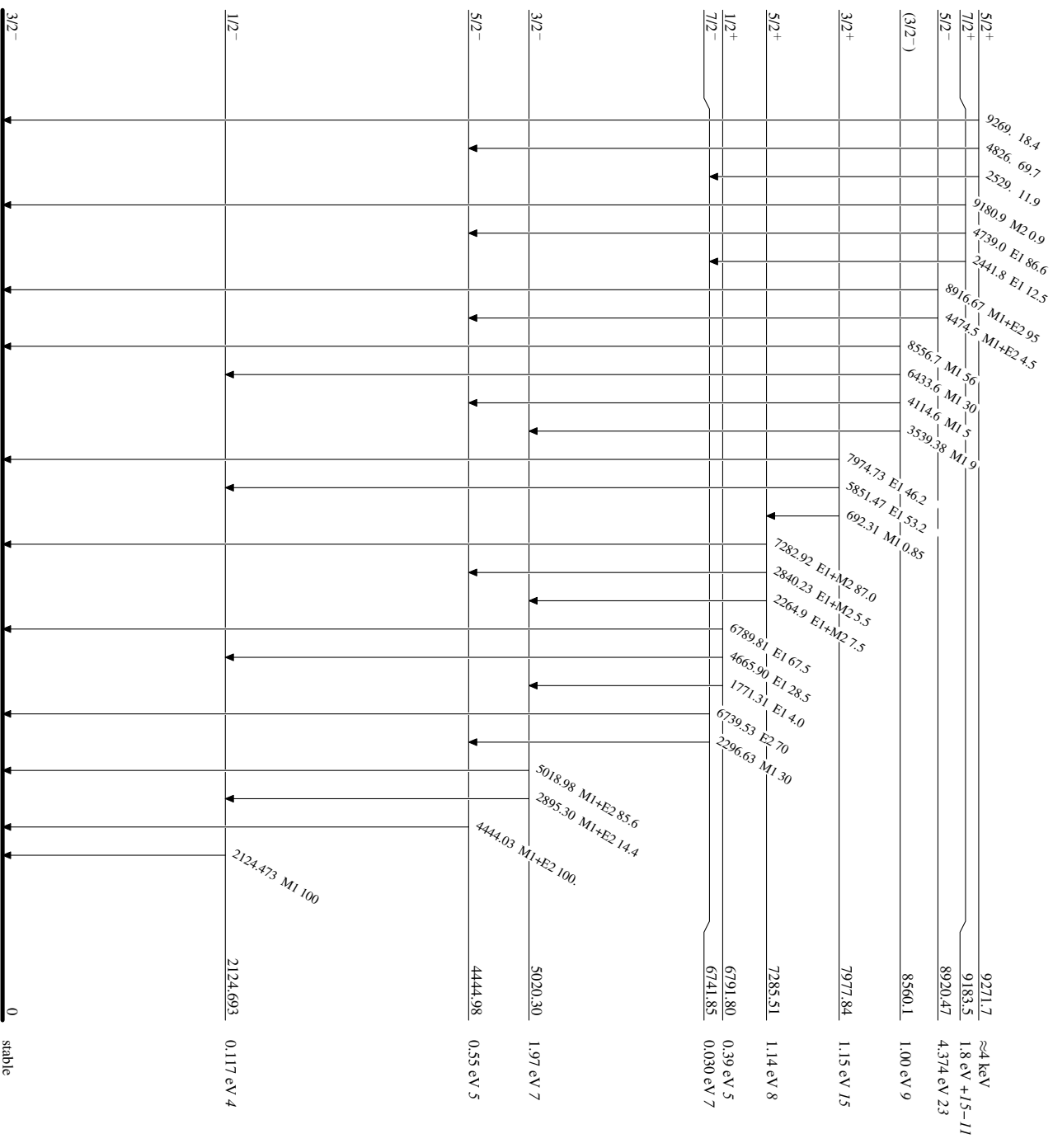
Adopted Levels, Gammas 1990Aj01 (continued) $\gamma(^{11}\text{B})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ	E_f	J_f^π	Mult.	Comments
9183.5	$7/2^+$	4739.0	86.6 23	4444.98	$5/2^-$	E1	$\Gamma_\gamma=0.15$ eV 5; B(E1)(W.u.)= 4.1×10^{-3} 14
		9180.9	0.9 3	0	$3/2^-$	M2	$\Gamma_\gamma=1.5 \times 10^{-3}$ eV 7; B(M2)(W.u.)=0.32 15
9271.7	$5/2^+$	2529.	11.9 6	6741.85	$7/2^-$		
		4826.	69.7 14	4444.98	$5/2^-$		
		9269.	18.4 9	0	$3/2^-$		

† From level energy difference; recoil correction applied except where noted.

Adopted Levels, Gammas 1990Aj01Level Scheme

Intensities: % photon branching from each level

 $^{11}\text{B}_6$