

Table 11.3 from (1990AJ01): Energy Levels of  $^{11}\text{B}$

$E_x$	$J^\pi; T$ (MeV $\pm$ keV)	$\tau_m$ (fs) or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
0	$\frac{3}{2}^-; \frac{1}{2}$	stable		1, 2, 6, 7, 9, 13, 14, 15, 16, 17, 19, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64
$2.124693 \pm 0.027$	$\frac{1}{2}^-$	$\tau_m = 5.5 \pm 0.4$	$\gamma$	1, 6, 7, 9, 13, 14, 15, 16, 17, 23, 24, 25, 26, 27, 29, 30, 32, 33, 36, 37, 38, 40, 47, 48, 49, 51, 52, 53, 55, 58, 59, 60, 61, 62, 63, 64
$4.44489 \pm 0.50$	$\frac{5}{2}^-$	$1.18 \pm 0.04$	$\gamma$	1, 2, 6, 7, 9, 13, 14, 15, 19, 23, 24, 25, 26, 27, 29, 30, 32, 33, 36, 37, 38, 40, 47, 49, 51, 53, 59, 60, 61
$5.02031 \pm 0.30$	$\frac{3}{2}^-$	$0.34 \pm 0.01$	$\gamma$	1, 6, 7, 9, 14, 15, 23, 24, 25, 26, 27, 29, 30, 32, 33, 36, 37, 38, 47, 48, 51, 52, 53, 55, 59, 60, 61
$6.7429 \pm 1.8$	$\frac{7}{2}^-$	$22 \pm 5$	$\gamma$	1, 2, 6, 14, 15, 19, 23, 24, 25, 26, 29, 33, 36, 37, 38, 47, 48, 53, 55, 59, 60, 61
$6.79180 \pm 0.30$	$\frac{1}{2}^+$	$1.7 \pm 0.2$	$\gamma$	1, 2, 6, 14, 15, 23, 24, 25, 27, 29, 33, 37, 40, 47, 48, 51, 55, 60
$7.28551 \pm 0.43$	$\frac{5}{2}^+$	$0.57 \pm 0.04$	$\gamma$	1, 2, 6, 13, 14, 15, 23, 24, 25, 27, 29, 33, 38, 48, 53

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$E_x$	$J^\pi; T$ (MeV $\pm$ keV)	$\tau_m$ (fs) or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
$7.97784 \pm 0.42$	$\frac{3}{2}^+$	$0.57 \pm 0.06$	$\gamma$	1, 2, 14, 23, 24, 27, 29, 33, 48, 53
$8.5603 \pm 1.8$	$(\frac{3}{2}^-)$	$0.70 \pm 0.07$	$\gamma$	1, 13, 14, 23, 24, 29, 30, 33, 48, 53, 60, 61
$8.9202 \pm 2.0$	$\frac{5}{2}^-$	$\Gamma = 4.37 \pm 0.02 \text{ eV}$	$\gamma, \alpha$	1, 2, 13, 14, 19, 23, 24, 26, 29, 30, 33, 38, 55, 59, 60, 61
$9.1850 \pm 2.0$	$\frac{7}{2}^+$	$1.9_{-1.1}^{+1.5} \text{ eV}$	$\gamma, \alpha$	1, 2, 14, 23, 24, 26, 33, 62
$9.2744 \pm 2$	$\frac{5}{2}^+$	4	$\gamma, \alpha$	1, 2, 14, 23, 24, 33, 62
$9.82 \pm 25$	$(\frac{1}{2}^+)$			48
$9.876 \pm 8$	$\frac{3}{2}^+$	$110 \pm 15$	$\alpha$	5, 14, 27
$10.26 \pm 15$	$\frac{3}{2}^-$	$150 \pm 25$	$\gamma, \alpha$	2, 5, 14, 61
$10.33 \pm 11$	$\frac{5}{2}^-$	$110 \pm 20$	$\gamma, \alpha$	2, 5, 14, 24, 61
$10.597 \pm 9$	$\frac{7}{2}^+$	$100 \pm 20$	$\gamma, \alpha$	2, 5, 14, 20, 22
$10.96 \pm 50$	$\frac{5}{2}^-$	4500	$\alpha$	5
$11.265 \pm 17$	$\frac{9}{2}^+$	$110 \pm 20$	$\alpha$	5, 14
$11.444 \pm 19$		$103 \pm 20$	$\alpha$	5, 14
$11.600 \pm 30$	$\frac{5}{2}^+$	$170 \pm 30$	$\text{n}, \alpha$	3, 5, 14, 20, 22, 33, 61
$11.886 \pm 17$	$\frac{5}{2}^-$	$200 \pm 20$	$\text{n}, \alpha$	3, 5, 14, 20, 22
$12.0 \pm 200$	$\frac{7}{2}^+$	$\approx 1000$	$\text{n}, \alpha$	5, 20, 22
$12.557 \pm 16$	$\frac{1}{2}^+(\frac{3}{2}^+); \frac{3}{2}$	$210 \pm 20$	$\gamma, \text{p}, \alpha$	5, 14, 17, 18, 36
$12.916 \pm 12$	$\frac{1}{2}^-; \frac{3}{2}$	$200 \pm 25$	$\gamma, \text{p}, \alpha$	5, 14, 17, 18, 33, 59, 61
$13.137 \pm 40$	$\frac{9}{2}^-$	$426 \pm 40$	$\text{n t}, \alpha$	3, 14, 20, 21, 22
13.16	$\frac{5}{2}^+; \frac{7}{2}^+$	430	$\text{n}, \alpha$	20, 22
$14.04 \pm 100$	$\frac{11}{2}^+$	$500 \pm 200$	$\text{n}, \alpha$	3, 20, 22
$14.34 \pm 20$	$\frac{5}{2}^+; \frac{3}{2}$	$254 \pm 18$	$\gamma, \text{p}$	14, 17, 36
$14.565 \pm 15$		$\leq 30$	$\text{n}, \text{t}, \alpha$	3, 14, 20, 21, 22, 36, 61
$15.29 \pm 25$	$(\frac{3}{2}, \frac{5}{2}, \frac{7}{2})^+; (\frac{3}{2})$	$250 \pm 50$	$\gamma, \text{p}, \text{n}, \alpha$	20, 22, 33, 61

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$E_x$	$J^\pi; T$ (MeV $\pm$ keV)	$\tau_m$ (fs) or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
16.437 $\pm$ 20	$T = \frac{3}{2}$	$\leq 30$	p, d, $\alpha$	11, 14, 22, 30, 33, 61
17.33		$\approx 1000$	n, d, t, $\alpha$	11, 21, 22
17.43 $\pm$ 50	$T = \frac{3}{2}$	100 $\pm$ 30	$\gamma$ , n, p, d, $\alpha$	3, 9, 11, 14
18.0	$T = \frac{3}{2}$	870 $\pm$ 100		14
18.37 $\pm$ 50	$(\frac{1}{2}, \frac{3}{2}, \frac{5}{2})^+$	260 $\pm$ 80	$\gamma$ , d	9
19.13 $\pm$ 30	$(\pi = +); \frac{3}{2}$	115 $\pm$ 25		14, 61
19.7	$(\frac{1}{2}^+)$	broad	$\gamma$ , d	9, 28
21.27 $\pm$ 50	$T = \frac{3}{2}$	300 $\pm$ 30		14
23.7	$(\frac{1}{2}, \frac{3}{2}, \frac{5}{2})^+$		$\gamma$ , d	9
26.5		broad	$\gamma$ , n	28