

Table 12.21 from (2017KE05): Anomalies and maxima in  $^{11}\text{B}(p, n)^{11}\text{C}$  and  $^{11}\text{B}(p, p)^{11}\text{B}$  yields <sup>a</sup>

A			B			$J^\pi$	$E_x^{-1}$ (MeV)
$E_p$ (MeV)	$\Gamma_{\text{lab}}^b$ (keV)	Res. in <sup>b</sup>	$E_p$ (MeV)	$\Gamma_{\text{lab}}$ (keV)	Res. in		
			0.67 <sup>k</sup>	330	p <sub>0</sub>	2 <sup>-</sup>	16.57
			1.4 <sup>k</sup>	1270	p <sub>0</sub>	1 <sup>-</sup>	17.24
			2.08 ± 0.02	86 ± 20	p <sub>0</sub>	0 <sup>+</sup>	17.87
			2.62 ± 0.01 <sup>n</sup>	290 ± 20	p <sub>0</sub>	3 <sup>-</sup> ; (1)	18.36
2.664	48 <sup>h</sup>		2.66 ± 0.01 <sup>n</sup>	46	p <sub>0</sub> , p <sub>1</sub>	0 <sup>-</sup>	18.40
3.16 <sup>c</sup>	100 <sup>h</sup>		3.15	110 ± 10	p <sub>0</sub> , p <sub>1</sub>		18.85
3.5	500 <sup>h</sup>		3.4	broad	p <sub>1</sub>	2 <sup>-</sup>	19.1
3.78 <sup>c</sup>	50 <sup>h</sup>		3.85	400 ± 55	p <sub>0</sub> , p <sub>1</sub>	2 <sup>-</sup>	19.42
4.08 <sup>c</sup>	200 <sup>h</sup>	n <sub>0</sub>	4.10	250 ± 35	p <sub>0</sub>	1 <sup>+</sup>	19.70
4.28	100 <sup>h</sup>		4.35	400	p <sub>1</sub>		19.88
4.68 <sup>c</sup>	170 <sup>h,i</sup>	n <sub>0</sub>	4.68 <sup>f</sup>	330 ± 40	p <sub>0</sub> , p <sub>1</sub>	(1 <sup>+</sup> ; 1)	20.25
5.065 <sup>c</sup>	190 <sup>h,i,j</sup>	n <sub>0</sub>	5.10 <sup>f,g</sup>	350 ± 15	p <sub>0</sub> , p <sub>1</sub>	3 <sup>-</sup> ; 1	20.60
5.49 <sup>c</sup>	400 <sup>d</sup>	n <sub>0</sub>					20.99
6.02	560 <sup>i,j</sup>	n <sub>0</sub> , n <sub>1</sub>	6.08 <sup>f</sup>	290 ± 25	p <sub>0</sub> , p <sub>1</sub> , p <sub>2</sub>	3 <sup>-</sup>	21.50
6.4 <sup>b</sup>	wide	n <sub>0</sub>	6.58 <sup>f</sup>	7800 ± 1100	p <sub>0</sub> , p <sub>2</sub> , p <sub>3</sub>	1 <sup>-</sup> ; 1	21.98
≈ 7.0 <sup>d</sup>	340	n <sub>0</sub>	7.11 <sup>f</sup>	720 ± 90	p <sub>0</sub> , p <sub>2</sub> , p <sub>3</sub>	3 <sup>-</sup>	22.47
7.29	360 <sup>j</sup>	n <sub>0</sub> , n <sub>1</sub>					22.64
7.74	65 <sup>i,j</sup>	n <sub>0</sub> , n <sub>1</sub>				(2 <sup>-</sup> ; 1) <sup>m</sup>	23.05
8.25	380 <sup>i,j</sup>	n <sub>0</sub> , n <sub>1</sub>					23.52
8.65	180 <sup>i,j</sup>	n <sub>0</sub> , n <sub>2</sub>					23.89
9.0 <sup>e</sup>							24.2

Table 12.21 from (2017KE05): Anomalies and maxima in yields of  $^{11}\text{B}(p, n)^{11}\text{C}$  and  $^{11}\text{B}(p, p)^{11}\text{B}$  <sup>a</sup> (continued)

A			B			$J^\pi$	$E_x^{-1}$ (MeV)
$E_p$ (MeV)	$\Gamma_{\text{lab}}^b$ (keV)	Res. in <sup>b</sup>	$E_p$ (MeV)	$\Gamma_{\text{lab}}$ (keV)	Res. in		
9.25	110 <sup>i,j</sup>	$n_0, n_2$					24.44
9.79	1000 <sup>j</sup>	$n_0, n_1$					24.93
10.14	180 <sup>i,j</sup>	$n_0, n_2$					25.25
10.91	440 <sup>i,j</sup>	$n_0$					25.96
11.88	300 <sup>i</sup>						26.85

A: From the (p, n) reaction. B: From the (p, p) reaction.

<sup>a</sup> See also [Tables 12.11 in \(1968AJ02\)](#), [12.13 in \(1980AJ01\)](#) and [12.12 in \(1985AJ01\)](#) for additional work. The earlier references are listed there. Note: in [\(1985AJ01\)](#) the (p, n) work of [\(1955BA22\)](#) was wrongly distributed into columns A and B.

<sup>b</sup> See also [\(1965OV01\)](#) and see [\(1965SE06\)](#) for  $\gamma$ , n, p and  $\alpha$  particle widths.

<sup>c</sup> See also [\(1980RA16\)](#).

<sup>d</sup> [\(1981HO13\)](#); see also for possible additional structures. See  $\Gamma_{\text{lab}} = 300$  keV in [\(1961LE11\)](#).

<sup>e</sup> Also resonance in  $K_y^y(0^\circ)$ .

<sup>f</sup> [\(1983BO19\)](#). From  $R$ -matrix analysis;  $\Gamma_{\text{FWHM}} = 350, 320, 310, 710$  and  $330$  keV are observed for  $E_p = 4.68, 5.10, 6.08, 6.58$  and  $7.11$  MeV, respectively.

<sup>g</sup> See also  $\alpha$ -decay in [Tables 12.19 and 12.20](#).

<sup>h</sup> From [\(1955BA22\)](#).

<sup>i</sup> From [\(1964BA16\)](#).

<sup>j</sup> From [\(1961LE11\)](#).

<sup>k</sup> From [\(1957DE11\)](#)  $\Gamma_p/\Gamma = 0.5$  and  $0.05$  for  $E_p = 0.67, 1.27$  MeV, respectively. See [\(1953BE61\)](#) for different  $\Gamma_p/\Gamma$  values.

<sup>l</sup> See also [\(1977RI01\)](#) and [\(1988ABZW\)](#).

<sup>m</sup> From  $(\bar{p}, p)$  and  $(\bar{p}, p')$ :  $J^\pi = 2^-$ ;  $T = 1$  is consistent with the data, see [\(1975AJ02\)](#).

<sup>n</sup> [\(1977MA37\)](#) suggest two resonances at  $E_p = 2.620$  and  $2.660$  MeV ( $\pm 10$  keV) [ $J^\pi = 3^-$  ( $T = 1$ ) and  $0^-$ ],  $\Gamma = 290 \pm 20$  and  $30 \pm 5$  keV, respectively. In addition, a resonance at  $E_p = 2.80 \pm 0.01$  MeV [ $J^\pi = 3^+$ ],  $\Gamma = 300 \pm 50$  keV, is also reported.