

Table 8.11 from (2004TI06): Some  $^8\text{Be}$  states with  $3.0 < E_x < 23.0$  MeV <sup>a</sup>

$E_x$ (MeV $\pm$ keV)	$\Gamma_{\text{cm}}$ (keV)	Reaction
3.18 $\pm$ 50		$^4\text{He}(\alpha, \gamma)$
2.83 $\pm$ 200	1750 $\pm$ 300	$^6\text{Li}(^3\text{He}, \text{p}), ^{10}\text{B}(\text{d}, \alpha)$
	1200 $\pm$ 300	$^6\text{Li}(\alpha, \text{d})$
3.1 $\pm$ 100	1750 $\pm$ 100	$^7\text{Li}(\text{d}, \text{n})$
3.10 $\pm$ 90	1740 $\pm$ 80	$^7\text{Li}(\text{d}, \text{n})$
2.90 $\pm$ 60	1530 $\pm$ 40	$^7\text{Be}(\text{d}, \text{p})$
	1500 $\pm$ 100	$^9\text{Be}(\text{p}, \text{d})$
3.038 $\pm$ 25	1500 $\pm$ 20	$^9\text{Be}(\text{p}, \text{d})$
3.03 $\pm$ 10	1430 $\pm$ 60	$^9\text{Be}(\text{d}, \text{t})$
2.90 $\pm$ 40	1350 $\pm$ 150	$^9\text{Be}(^3\text{He}, \alpha)$
	1480 $\pm$ 70	$^{11}\text{B}(\text{p}, \alpha)$
<b>3.03 <math>\pm</math> 0.01</b>	<b>1513 <math>\pm</math> 15</b>	<b>“mean” value <sup>d</sup></b>
11.5 $\pm$ 300	4000 $\pm$ 400	$^4\text{He}(\alpha, \alpha)$
11.3 $\pm$ 400		$^6\text{Li}(\alpha, \text{d})$
11.3 $\pm$ 200	2800 $\pm$ 300	$^7\text{Li}(\text{d}, \text{n})$
	5200 $\pm$ 100	$^9\text{Be}(\text{p}, \text{d})$
<b>11.35 <math>\pm</math> 150</b>	<b><math>\approx</math> 3500 keV</b>	<b>“mean” value</b>
16.627 $\pm$ 5	113 $\pm$ 3	$^7\text{Li}(^3\text{He}, \text{d})$
	90 $\pm$ 5	$^{10}\text{B}(\text{d}, \alpha)$
16.623 $\pm$ 3	107.7 $\pm$ 0.5	$^4\text{He}(\alpha, \alpha)$ <sup>b</sup>
16.630 $\pm$ 3	108.5 $\pm$ 0.5	$^4\text{He}(\alpha, \alpha)$ <sup>c</sup>
<b>16.626 <math>\pm</math> 3</b>	<b>108.1 <math>\pm</math> 0.5</b>	<b>“mean” value</b>
16.901 $\pm$ 5	77 $\pm$ 3	$^7\text{Li}(^3\text{He}, \text{d})$
	70 $\pm$ 5	$^{10}\text{B}(\text{d}, \alpha)$
16.925 $\pm$ 3	74.4 $\pm$ 0.4	$^4\text{He}(\alpha, \alpha)$ <sup>b</sup>
16.918 $\pm$ 3	73.6 $\pm$ 0.4	$^4\text{He}(\alpha, \alpha)$ <sup>c</sup>
<b>16.922 <math>\pm</math> 3</b>	<b>74.0 <math>\pm</math> 0.4</b>	<b>“mean” value</b>
<b>17.640 <math>\pm</math> 1.0</b>	<b>10.7 <math>\pm</math> 0.5</b>	<b><math>^7\text{Li}(\text{p}, \gamma)</math></b>
18.155 $\pm$ 5	147	$^7\text{Li}(\text{p}, \text{p}'\gamma)$
18.150 $\pm$ 5	138 $\pm$ 6	$^{10}\text{B}(\text{d}, \alpha)$
18.144 $\pm$ 5		$^9\text{Be}(\text{d}, \text{t})$
<b>18.150 <math>\pm</math> 4</b>	<b>138 <math>\pm</math> 6</b>	<b>“mean” value</b>

Table 8.11 from (2004TI06): Some  ${}^8\text{Be}$  states with  $3.0 < E_x < 23.0$  MeV <sup>a</sup>  
(continued)

$E_x$ (MeV $\pm$ keV)	$\Gamma_{\text{cm}}$ (keV)	Reaction
19.06 $\pm$ 20	270 $\pm$ 20	${}^7\text{Li}(p, \gamma)$
19.071 $\pm$ 10	270 $\pm$ 30	${}^9\text{Be}(d, t)$
<b>19.07 <math>\pm</math> 30</b>	<b>270 <math>\pm</math> 20</b>	<b>“mean” value</b>
19.21	208 $\pm$ 30	${}^9\text{Be}(p, d)$
19.22 $\pm$ 30	265 $\pm$ 30	${}^9\text{Be}({}^3\text{He}, \alpha)$
19.234 $\pm$ 12	210 $\pm$ 35	${}^{\text{nat}}\text{Ag}({}^{14}\text{N}, {}^8\text{Be})$
19.26 $\pm$ 30	220 $\pm$ 30	${}^9\text{Be}(d, t)$
<b>19.235 <math>\pm</math> 10</b>	<b>227 <math>\pm</math> 10</b>	<b>“mean” value</b>
<b>19.86 <math>\pm</math> 50</b>	<b>700 <math>\pm</math> 100</b>	${}^9\text{Be}(d, t)$
<b>22.05 <math>\pm</math> 100</b>	<b>270 <math>\pm</math> 70</b>	${}^9\text{Be}({}^3\text{He}, \alpha)$
<b>22.63 <math>\pm</math> 100</b>	<b>100 <math>\pm</math> 50</b>	${}^9\text{Be}({}^3\text{He}, \alpha)$
<b>22.98 <math>\pm</math> 100</b>	<b>230 <math>\pm</math> 50</b>	${}^9\text{Be}({}^3\text{He}, \alpha)$

<sup>a</sup> See Table 8.5 in (1979AJ01) for references. See also Tables 8.11 and 8.12 here.

<sup>b</sup> From  $R$ -matrix analysis.

<sup>c</sup> Complex eigenvalue theory.

<sup>d</sup> These parameters represent the weighted average of values given in Table 8.4 of (1974AJ01): the value  $E_x = 3.18 \pm 0.05$  MeV from  ${}^4\text{He}(\alpha, \gamma)$ , the values  $E_x = 3.038 \pm 0.025$  MeV,  $\Gamma = 1500 \pm 20$  keV from  ${}^9\text{Be}(p, d)$  that were adopted in (1984AJ01); and  $E_x = 3.03 \pm 0.01$  MeV,  $\Gamma = 1430 \pm 60$  keV from  ${}^9\text{Be}(d, t)$ . The average of the most recent values from  ${}^9\text{Be}(p, d)$  and  ${}^9\text{Be}(d, t)$  yields  $E_x = 3.03 \pm 0.01$  MeV and  $\Gamma = 1490 \pm 20$  keV. See also (2002BH03).