Table 14.13 from (1981AJ01): Resonances in $^{10}$B + $\alpha$\textsuperscript{a}

<table>
<thead>
<tr>
<th>$E_\alpha$ (MeV ± keV)</th>
<th>$\Gamma_{\text{c.m.}}$ (keV)</th>
<th>Outgoing particle \textsuperscript{b} (x)</th>
<th>$\Gamma_x$ (keV)</th>
<th>$^{14}\text{N}^*$ (keV)</th>
<th>$J^\pi$</th>
<th>Refs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.95</td>
<td></td>
<td>$p_0$</td>
<td>12.29</td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>1.13 ± 5</td>
<td>30 ± 5</td>
<td>$p_0 \rightarrow p_3, d$</td>
<td>12.42</td>
<td>4$^-$</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>1.20 ± 5</td>
<td>≈ 20</td>
<td>$p_0, (p_2), p_3$</td>
<td>12.47</td>
<td></td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>1.23 ± 5</td>
<td>35 ± 5</td>
<td>$p_0, p_3$</td>
<td>12.49</td>
<td></td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>1.40 ± 5</td>
<td>46 ± 4</td>
<td>$p_1, p_2, (p_3)$</td>
<td>12.61</td>
<td>3$^+$</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>1.507 ± 5</td>
<td>18 ± 5</td>
<td>$n_0$</td>
<td>4.3</td>
<td>12.690</td>
<td>3$^-$</td>
<td>A</td>
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<tr>
<td></td>
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<td>$p_0$</td>
<td>0.62</td>
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<td></td>
<td></td>
<td>$p_1$</td>
<td>0.17</td>
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<tr>
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<td>$p_2$</td>
<td>0.70</td>
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<tr>
<td></td>
<td></td>
<td>$p_3$</td>
<td>5.6</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>$d$</td>
<td>0.93</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>$\alpha$</td>
<td>1.7</td>
<td></td>
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</tr>
<tr>
<td>1.645 ± 5</td>
<td>16 ± 3</td>
<td>$n_0 \leq 0.6$</td>
<td>12.789</td>
<td>4$^+$</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$p_0$</td>
<td>0.18</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>$p_1$</td>
<td>0.085</td>
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<td>$p_2$</td>
<td>0.44</td>
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<tr>
<td></td>
<td></td>
<td>$p_3$</td>
<td>9.6</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>$d$</td>
<td>2.0</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$\alpha$</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.68 ± 5</td>
<td>5 ± 2</td>
<td>$p_1, p_2, p_3, d$</td>
<td>12.814</td>
<td>4$^-$</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>1.83 ± 5</td>
<td>22 ± 4</td>
<td>$p_0 \rightarrow p_3, d$</td>
<td>12.921</td>
<td>4$^+$</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>2.174 ± 5</td>
<td>15 ± 5</td>
<td>$n_0, p_0 \rightarrow p_3, d, \alpha_1$</td>
<td>13.166</td>
<td>1$^+$</td>
<td>A,</td>
<td>(1975WI04)</td>
</tr>
<tr>
<td>2.21 ± 10</td>
<td>65 ± 10</td>
<td>$\alpha_0$</td>
<td>13.192</td>
<td>3$^+$</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>2.281 ± 10</td>
<td>92 ± 5</td>
<td>$n_0, p_0 \rightarrow p_3$</td>
<td>13.243</td>
<td>2$^-$</td>
<td>A,</td>
<td>(1975WI04)</td>
</tr>
<tr>
<td>2.86 ± 5</td>
<td>≈ 90</td>
<td>$n_0, p_1, p_2, \alpha_1$</td>
<td>13.656</td>
<td></td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>2.94 ± 5</td>
<td>105 ± 25</td>
<td>$n_0, p_0 \rightarrow p_3, d$</td>
<td>13.714</td>
<td>2, 3$^+$</td>
<td>A,</td>
<td>(1975WI04)</td>
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<tr>
<td>2.95 ± 50</td>
<td>180 ± 20</td>
<td>$n_0, p_0, (p_2), \alpha_0$</td>
<td>13.72</td>
<td>1$^{(+)}$</td>
<td>A,</td>
<td>(1975WI04)</td>
</tr>
</tbody>
</table>

\textsuperscript{a} See (1981AJ01) for details.

\textsuperscript{b} Identifies the outgoing particle(s) in the resonant process.

\textsuperscript{c} Decay width of the resonance.

\textsuperscript{d} References for additional information.
Table 14.13 from (1981AJ01): Resonances in $^{10}\text{B} + \alpha$\(^a\) (continued)

<table>
<thead>
<tr>
<th>$E_\alpha$ (MeV ± keV)</th>
<th>$\Gamma_{\text{c.m.}}$ (keV)</th>
<th>Outgoing particle (^b) (x)</th>
<th>$\Gamma_x$ (^c) (keV)</th>
<th>$^{14}\text{N}^*$(MeV)</th>
<th>$J^\pi$</th>
<th>Refs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.95 ± 20</td>
<td>110</td>
<td>$p_1, p_3$</td>
<td>13.72</td>
<td></td>
<td></td>
<td>A, (1975WI04) (^d)</td>
</tr>
<tr>
<td>3.40 ± 30</td>
<td>100</td>
<td>$n_0, p_1$</td>
<td>14.04</td>
<td></td>
<td></td>
<td>A, (1975WI04)</td>
</tr>
<tr>
<td>3.56 ± 30</td>
<td>230</td>
<td>$n_0, (p_0), p_3$</td>
<td>14.16</td>
<td></td>
<td></td>
<td>A, (1975WI04)</td>
</tr>
<tr>
<td>3.69 ± 50</td>
<td>420 ± 100</td>
<td>$p, \alpha_0$</td>
<td>14.25</td>
<td>3(^+)</td>
<td></td>
<td>A</td>
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<tr>
<td>3.76 ± 20</td>
<td>150</td>
<td>$p_1$</td>
<td>14.30</td>
<td></td>
<td></td>
<td>(1975WI04)</td>
</tr>
<tr>
<td>3.98 ± 20</td>
<td>100</td>
<td>$n_0, p_0, p_2$</td>
<td>14.56</td>
<td></td>
<td></td>
<td>A, (1975WI04)</td>
</tr>
<tr>
<td>4.16 ± 30</td>
<td>50</td>
<td>$n_0, p_0, p_3$</td>
<td>14.59</td>
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<td>A, (1975WI04)</td>
</tr>
<tr>
<td>4.26 ± 10</td>
<td>100 ± 20</td>
<td>$\alpha_0$</td>
<td>14.66</td>
<td>2(^-)</td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>4.36 ± 30</td>
<td>125</td>
<td>$n_0, p_0, p_1, (p_2)$</td>
<td>14.73</td>
<td></td>
<td></td>
<td>A, (1975WI04)</td>
</tr>
<tr>
<td>4.54 ± 30</td>
<td>140</td>
<td>$n_0, p_2, p_3$</td>
<td>14.86</td>
<td></td>
<td></td>
<td>A, (1975WI04)</td>
</tr>
<tr>
<td>4.633 ± 30</td>
<td>43 ± 8</td>
<td>$n_0, n_{2+3}, p_0$</td>
<td>14.923</td>
<td></td>
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<td>A, (1975WI04)</td>
</tr>
<tr>
<td>4.77 ± 20 (^e)</td>
<td>≈ 60</td>
<td>$n_0, n_1$</td>
<td>15.02</td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>5.08 ± 20</td>
<td>100</td>
<td>$p_3$</td>
<td>15.24</td>
<td></td>
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<td>(1975WI04)</td>
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<tr>
<td>5.35 ± 20</td>
<td>100</td>
<td>$n_1, p_2, p_3$</td>
<td>15.43</td>
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<td>A, (1975WI04)</td>
</tr>
<tr>
<td>6.44 ± 20</td>
<td>125</td>
<td>$n_0, p_0, p_2$</td>
<td>16.21</td>
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<td>(1975WI04)</td>
</tr>
<tr>
<td>6.70 ± 20</td>
<td>150</td>
<td>$p_2$</td>
<td>16.40</td>
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<td>(1975WI04)</td>
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<tr>
<td>7.42 ± 20</td>
<td>150</td>
<td>$p_0$</td>
<td>16.91</td>
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<td>(1975WI04)</td>
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<tr>
<td>7.78 ± 20</td>
<td>50</td>
<td>$p_3$</td>
<td>17.17</td>
<td></td>
<td></td>
<td>(1975WI04)</td>
</tr>
</tbody>
</table>

\(^a\) Refs. to N. R. Adams, et al. (1975WI04).
\(^b\) $x = p, n, \alpha, \beta$.
\(^c\) $\Gamma_x = \Gamma_\alpha + \Gamma_c$.
\(^d\) $E_\alpha$ for $^{10}\text{B} + \alpha$.
\(^e\) $E_\alpha$ for $^{10}\text{B} + ^6\text{Li}$.

a See Table 1 in (1975WI04) for a display of the resonance data obtained both in $^{12}\text{C} + \text{d}$, $^{13}\text{C} + \text{p}$ and $^{10}\text{B} + \alpha$.

b $n_0, n_1, n_{2+3}$ correspond to the g.s. and $^{13}\text{N}*(2.37, 3.51 + 3.55)$; $p_0, p_1, p_2, p_3$ correspond to the g.s. and $^{13}\text{C}*(3.09, 3.68, 3.85)$ and the corresponding $\gamma$-rays; $\alpha_1$ corresponds to the transition to $^{10}\text{B}*(0.7)$.

c For $\theta^2_2$ see Table 14.8 in (1970AJ04).

d See reference (f) to Table 1 of (1975WI04).

e See text of reaction 6.