

${}^{10}\text{B}({}^3\text{He}, {}^6\text{He})$ 1967Mc14

Type	Author	Citation	Literature Cutoff Date
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The authors impinged a 50 MeV ${}^3\text{He}$ beam, from the Berkeley 88-inch cyclotron, on a 93% enriched $280 \mu\text{g}/\text{cm}^2$ ${}^{10}\text{B}$ target and measured the ejected ${}^6\text{He}$ ions produced in the ${}^{10}\text{B}({}^3\text{He}, {}^6\text{He}){}^7\text{B}$ reaction. The products were measured using a pair of $\Delta E_1 - \Delta E_2 - E - E_{\text{veto}}$ Si detector telescopes that were positioned at $\theta_{\text{lab}} = 10^\circ, 14.1^\circ$ and 19.65° .

The ${}^6\text{He}$ energy spectra indicated ${}^{11}\text{B}({}^3\text{He}, {}^6\text{He}){}^8\text{B}$ contamination, hence the corresponding spectra was measured and was subtracted. A peak interpreted as the ${}^7\text{B}$ ground state was observed, superimposed on a $2\text{p}+{}^5\text{Li}$ and $3\text{p}+4\text{He}$ phase-space distribution. The mass excess was found as $\Delta M = 27.94 \text{ MeV}$ *10* with $\Gamma = 1.4 \text{ MeV}$ *2*. A comparison of the $A=7$ $T=3/2$ IMME mass equation parameters was also given.

 ${}^7\text{B}$ Levels

E(level)	$T_{1/2}$	Comments
0	1.4 MeV <i>2</i>	Level observed in background subtracted ${}^6\text{He}$ energy spectrum. The ground state energy corresponds to $\Delta M = 27.94 \text{ MeV}$ <i>10</i> .