Measurement of $^{7}\text{Li}(\alpha,\gamma)^{11}\text{B}$ cross section at Notre Dame

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At the end of its life, a massive star collapses into a neutron star leading to a supernovae explosion. The neutrino flux released during the collapse is so significant that the probability of neutrino interacting with nuclei can actually impact the nucleosynthesis. The $\nu$-process has been proposed as a candidate for the production of $^{11}\text{B}$. Neutrino triggered reaction lead to the production of $^{11}\text{B}$ via the reaction $^{7}\text{Li}(\alpha,\gamma)^{11}\text{B}$. Its cross section has been measured in 1967 and we have some evidence of it being a lower limit. $^{7}\text{Li}(\alpha,\gamma)^{11}\text{B}$ was recently studied at Notre Dame in the range of energy relevant to the $\nu$-process and the result of this experiment will be presented.