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Alpha-induced reactions in stellar burning

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Alpha-induced reactions play an important role in a variety of astrophysical environments. They provide the neutron sources for the main s-process which takes place in highly convective AGB stars and for the weak process during core Helium burning in massive stars. In addition, alpha induced reactions on 15O and 18Ne provide a break-out from the CNO cycle which is important for the dynamics of explosive Hydrogen burning. To illuminate experimental difficulties in determinating reaction rates results of recent and ongoing experiments will be presented and future developments at the Nuclear Structure Laboratory at Notre Dame will be discussed.

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