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Recent experiments related to explosive nuclear burning¹

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Explosive stellar environments such as novae, supernovae, and x- ray bursts are currently among the most exciting topics in nuclear astrophysics. Reactions on unstable nuclei play a crucial role in the energy generation and nucleosynthesis due to the high temperatures and short reaction time scales in these events, but substantial uncertainties often exist in nuclear reaction rates on unstable nuclei resulting from limited experimental data. In recent years some remarkable developments in radioactive ion beam production and experimental techniques have allowed many key reaction rates to be experimentally determined with reasonable accuracy for the first time. Experimental methods, results, and some remaining challenges will be outlined in this presentation.

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