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Core-collapse supernovae and nucleosynthesis[1]

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Core-collapse supernovae are the violent deaths of massive stars. These explosions are responsible for enriching the early galaxy with heavy elements. One of the most important open questions in this context is to understand the conditions in the ejecta and the neutrino-driven winds. In particular, the electron fraction, which is primarily set by neutrino interactions, is crucial in determining the type of nucleosynthesis processes which are possible (r-process, weak r-process, neutrino-p-process, e.g.). In this talk, I will discuss the conditions and the nucleosynthesis in core-collapse supernovae with a focus on the neutrino interactions.

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