

# Detector Simulation and Reconstruction of Supernova Neutrinos with JUNO

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Since the detection of neutrinos emitted by the supernova SN 1987A, no neutrinos from other supernovae have been observed to date.

The Jiangmen Underground Neutrino Observatory (JUNO) will be capable of measuring the neutrino burst from a galactic supernova explosion. High statistics, a low detection threshold and an excellent energy resolution will strongly constrain the details of the neutrino-driven supernova mechanism.

JUNO will be sensitive to signals from all neutrino flavors via different detection channels.

These are the inverse beta decay, elastic scattering on protons and electrons and various interactions with carbon. The capability of separating these channels is challenging but crucial for flavor dependent analyses of the supernova burst. We present initial results of an event classification that is based on a full detector simulation.

## Secondary track (number)

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**Authors:** STAHL, Achim (Rheinisch Westfaelische Tech. Hoch. (DE)); Mr BÜSKEN, Max (RWTH Aachen University); BIRKENFELD, Thilo (RWTH Aachen University)

**Presenter:** BIRKENFELD, Thilo (RWTH Aachen University)

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