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Supernova's neutrino detection at the Jiangmen Underground Neutrino Observatory

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The Jiangmen Underground Neutrino Observatory (JUNO) will be the largest ever built liquid scintillator detector for neutrino physics. JUNO is a 20kton liquid scintillator detector, equipped with ~18000 large PMTs and ~26000 small PMTs. It will be sensitive to various neutrino sources and will give a unique contribution to the observation of the all-flavor neutrino flux from a Galactic core collapse supernova (CCSN). JUNO can register with large statistics the next CCSN neutrinos and also pre-supernova (pre-SN) neutrinos through several interactions, among which inverse beta decay, elastic scattering on electron and proton can provide information of energy spectra of all flavors. Furthermore, JUNO will be able to provide an alert during the pre-SN phase.
The physics potentials of the JUNO observatory and its capability to detect Supernova's neutrinos will be discussed in this talk.

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