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Simulation Studies on Supernova Neutrino Detections in JUNO

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Supernova(SN) 1987A was the first detected neutrino burst in neutrino experiment. The Jiangmen Underground Neutrino Observatory(JUNO) is an upcoming large liquid scintillator detector experiment with an expected 3% energy resolution at 1 MeV and abundant light yield. These properties make JUNO a powerful SN neutrino detector. In this poster, we present our simulation studies on SN neutrino event selection efficiencies and purities for different detection channels involving different flavours of SN neutrinos. We demonstrate that pulse shape discrimination (PSD) technique is effective in JUNO detector for separating different SN neutrino detection channels.

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