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## Supernova neutrino signal using SNOwGLoBES

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Supernova neutrinos are weakly interacting particles which are produced when a massive star collapses to form a compact object losing 99% of the gravitational binding energy of the remnant in the form of neutrinos with energies a few tens of MeV in a few tens of seconds. They were observed for 1987A core-collapse supernova (SN1987A) in the Large Magellanic Cloud (LMC), 50 kpc away from Earth. The detection capabilities have increased by orders of magnitude since 1987 and the next observation of core-collapse will provide a great deal of information for both physics and astrophysics. SNOwGLoBES (SuperNova Observatories with GLoBES), is a software whose goal is to record much more events than before to analyze the supernova neutrinos and to study the neutrino oscillations in more depth, for computing interaction rates and distributions of observed quantities for supernova burst neutrinos in common detector materials. A study is carried out to determine flux parameters by parameter fit algorithm, using different cross-section models, more accurately in SNOwGLoBES.

### Session

Neutrino Physics

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