TeV Particle Astrophysics 2017 (TeVPA 2017)



Contribution ID: 236 Type: Oral

Observing supernova neutrinos to late times

Monday 7 August 2017 14:00 (15 minutes)

The next Galactic supernova (SN) will probably occur while current or next generation neutrino experiments are online. It is crucial to have correct understanding of the basic characteristics of the expected neutrino signals. The nominal expectation of the duration of the neutrino signal is ~10 s; this expectation guided both theoretical and experimental effort. We simulate SN neutrino emission at late times and predict the detected neutrino signals in large neutrino experiments. We find that neutrino signals from a SN should be detected out to ~1 min. We will discuss how this will change future theoretical and experimental effort in SN studies.

Authors: LI, Shirley (The Ohio State University); BEACOM, John (Ohio State University); ROBERTS, Luke

(Michigan State University)

Presenter: LI, Shirley (The Ohio State University)

Session Classification: Neutrinos

Track Classification: Neutrinos (astrophysical, atmospheric)