

## Physics Opportunities with SN neutrinos

*Thursday 17 March 2016 09:45 (20 minutes)*

The detection of neutrinos from the next galactic supernova (SN) represents the next frontier of low-energy neutrino astronomy.

I will present the physical potential of a future supernova neutrino observation to probe the SN explosion mechanism and the fundamental neutrino properties.

In particular, I will discuss the surprising collective behavior of SN neutrino flavor conversions, associated with neutrino-neutrino interactions in the deepest SN regions, and their impact on the neutrino burst.

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