

Abstract Submitted
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Monte Carlo Methods for Neutrino Transport in Core Collapse Supernovae ERNAZAR ABDIKAMALOV, LSU, ADAM BURROWS, Princeton University, FRANK LOEFFLER, LSU, CHRISTIAN D. OTT, Caltech, E. SCHNETTER, Perimeter Institute, PETER DIENER, LSU — Core-collapse supernovae are among the most powerful events in Nature. Despite decades of effort, the details of the explosion mechanism remain uncertain. Recent studies indicate that the neutrino-driven explosion mechanism is a fundamentally three-dimensional phenomenon, implying that it is necessary to model such an event in three dimensions using large parallel supercomputers. Monte Carlo methods for radiation transport have been known for their simplicity and ease of parallel implementation. In this talk, I will present results of our explorations of Monte Carlo methods for neutrino transport in core-collapse supernovae.

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