

Abstract

Building Petascale Multiphysics Supernova Simulations from Scalable Parts

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A brief overview of the software roadmap for the PRISM (Petascale Research in Integrated Supernova Modeling) collaboration will be presented. Supernova simulations require a panoply of physics modules, linear and non-linear solvers, and software infrastructure components. For each of these components, scalable implementations must be developed and the final integration must preserve much of this scalability. Scalability studies for several of our standard 'ingredients' and an outline of our strategy for integration will be given.