Explosive Nucleosynthesis in Core-Collapse Supernovae Revisited

Fang Peng[1], Evan O'Connor[1], Christian Ott[1]
[1]*California Institute of Technology*
1200 E California Blvd, 350-17
Pasadena, CA 91125
fpeng@caltech.edu, evanoc@tapir.caltech.edu, cott@tapir.caltech.edu

Core-collapse supernovae play an important role in polluting the universe with heavy elements. Yield predictions from nucleosynthesis calculations are crucial inputs for cosmological simulations of galaxy evolution. We outline an approach for more reliable yield predictions based on full general-relativistic core-collapse simulations with approximate neutrino transport and rotation in spherical symmetry. The nucleosynthesis calculations are performed on-line with an extensive, yet efficient nuclear reaction network. We present preliminary results for a 20-solar-mass progenitor and compare to previous results.

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