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Active-Sterile Neutrino Transformation: Consequences for Supernova Nucleosynthesis JOSHUA BEUN, North Carolina State University, REBECCA SURMAN, Union College, GAIL MCLAUGHLIN, North Carolina State University, WILLIAM HIX, Oak Ridge National Laboratory — We consider a fourth, sterile neutrino and study the implications for core collapse supernovae. In particular we consider the effect of such an additional neutrino on the nucleosynthesis which occurs in the neutrino driven wind. We present calculations of neutrino flavor transformation coupled to a nuclear reaction network. We comment on the prospects for obtaining the r-process elements in this scenario.

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