Abstract for an Invited Paper for the HAW09 Meeting of The American Physical Society

The r-Process in Supernovae and Galactic Chemical Evolution

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I will discuss the recent progress of r-process issues relevant to the neutrino-driven outflows of core-collapse supernovae. Main topics include 1) r-process in neutrino winds, which is based on the semi-analytic wind solutions with taking the effect of termination shock into account, 2) nucleosynthesis in electron-capture supernovae (or AGB supernovae, ONeMg supernovae), which is based on a recent collaborative work with the Munich hydro group, and 3) Galactic chemical evolution of r-process elements, which is based on the evolution model of the Galactic halo with the spectroscopic data of metal-poor stars collected at the SUBARU telescope.