Nucleosynthesis of Mo in neutrino-driven winds

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Neutrino-driven winds that follow core-collapse supernovae are an exciting astrophysical site for the production of heavy elements. For a long time it has been thought that the neutrino-driven winds could be the host for the r-process, but recent hydrodynamical simulations show that the conditions are not sufficient neutron rich. Nonetheless, lighter heavy elements between Sr and Ag can be produced in neutrino-driven winds. Among these elements, Mo has raised attention since various astrophysical scenarios failed to reproduce the solar abundance ratio of $Y(^{92}\mathrm{Mo})/Y(^{92}\mathrm{Mo})$. Moreover, available data of SiC X-grains present different isotopic ratios than in the solar system.
We have done a systematic nucleosynthesis study to identify the necessary conditions to reproduce the observed Mo isotopic ratios based on neutrino-driven winds.