On the chemical enrichment of dwarf spheroidal galaxies

Moritz Reichert[*],[1] Camilla J. Hansen,[2] Martin Obergaulinger,[1,3] and Almudena Arcones[1,4]

[1]*Institut für Kernphysik,TU-Darmstadt*

[2]*Max-Plank Institute for Astrophysics, Heidelberg*

[3]*Departament d'Astonomia i Astrofísca, Universitat de València*

[4]*GSI Helmholtzzentrum, Darmstadt*

Dwarf galaxies can provide unique hints to understand the origin of r-process elements. Even if neutron star merger (NSM) have been confirmed as an r-process site, magneto-rotational-driven supernovae (MR SN) could also contribute to the production of heavy elements. Moreover, they could help explaining several observations that are difficult to reconcile with NSM alone. Our aim is to distinguish peculiar abundance trends that serve as a fingerprints of early r-process nucleosynthesis in NSM or possibly MR SN. Observational data from different studies could hide a possible trend within the elements due to different techniques when deriving stellar parameters. Therefore, we consistently determine the stellar parameters and abundances of Mg, Sc, Cr, Ni, Sr, Y, Ba and Eu of ~ 400 stars contained in 12 different dwarf galaxies. Since these elements form within different production sites, we can reveal commonalities and unique chemical enrichments across different dwarf galaxies.