

Traces of the early Universe from metal-poor stars

Camilla Juul Hansen¹

¹*MPIA, Heidelberg*

The elements locked up in old, metal-poor stars carry a wealth of information on the properties of the early Universe and how it evolved. Stellar abundances are fossil records of the physical conditions in the interstellar medium and of the progenitors that created the material the low-mass stars formed from. All heavy elements show a large star-to-star abundance scatter at low metallicities, which typically hides the fact that several processes and formation sites at early times created different amounts of a given element of under different conditions. Using stellar abundances, we can explore the neutron-capture processes and learn about the origin of the heavy elements from a number of formation sites that host these processes. I will discuss two groups of old metal-poor stars in which we have explored the behaviour of a large number of heavy elements, namely the Carbon Enhanced Metal-Poor (CEMP) stars and old halo stars belonging to the Sagittarius stream, in which we have detected thorium. In the latter case we found indications of early massive star enrichment in contrast with previous literature studies.