

CEMP Stars as Probes of First-Star Nucleosynthesis, the IMF, and Galactic Assembly



Contribution ID: 59

Type: **Oral contribution**

Observations of very iron-poor stars

Monday 9 September 2019 09:40 (30 minutes)

At the time of writing there are fourteen stars known to have an iron content below 3.16×10^{-5} that of the Sun. Twelve out of fourteen of these stars are extremely enhanced in carbon, so that their total metal content Z is larger than 10^{-3} that of the Sun, although their iron content may be lower than 1.0×10^{-7} that of the Sun. I will summarize extant observations of these very iron poor stars. New radial velocity measurements, implying binarity in one of these stars, have revived the theoretical view that this extreme carbon enhancement is the result of mass transfer from a former AGB companion, in contrast with the more popular view, that it reflects the chemical composition of the gas cloud out of which the star was formed. I will also provide an outlook on how current and future surveys may provide us larger samples of these extremely rare objects.

Author: Dr BONIFACIO, Piercarlo (GEPI, Observatoire de Paris, Université PSL, CNRS)

Presenter: Dr BONIFACIO, Piercarlo (GEPI, Observatoire de Paris, Université PSL, CNRS)

Session Classification: OBSERVATIONAL APPROACH: CEMP STARS, FIRST STARS, FIRST GALAXIES