September 9-13 2019

GENEVA
CEMP

Contribution ID: **45**   Type: **Oral contribution**

CEMP Stars –Past Perspectives and Future Objectives

Monday 9 September 2019 09:10 (30 minutes)

It has been over a quarter century that the class of metal-poor stars known as carbon-enhanced metal-poor (CEMP) stars was first recognized. In that time, astronomers have recognized a number of sub-classes, apparently due to a variety of nucleosynthesis pathways. Most recently, the sub-class formerly referred to as CEMP-r/s has been shown to be due to the so-called intermediate neutron-capture process, one not appearing in the seminal work of B^2FH (1957) and Cameron (1957). After a brief review of our current state of understanding of the CEMP stars, I will comment on objectives for future study that are still required –- including understanding the effects of NLTE/3D corrections to the apparent frequency of CEMP stars as a function of declining metallicity, identification of the likely environments in which various sub-classes of CEMP stars formed, and identification of the progenitors (and binary nature) associated with each sub-class.

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