Talk at Splinter Meeting

Splinter F

The formation of carbon-enhanced metal-poor stars via binary interactions

R. J. Stancliffe[1], C. Abate[1], E. Matrozis[1], Z.-W. Liu[1]

[1] *Argelander-Institut für Astronomie, University of Bonn*

Stars may become chemical oddballs either through internal nucleosynthesis, or through being polluted by a companion in a binary system. The latter is particularly common channel for the formation of most of the so-called carbon-enhanced metal-poor stars – low-mass objects that may account for around 20% of all iron-deficient stars. These objects preserve a record of the nucleosynthesis that occurred in some of the earliest asymptotic giant branch stars in the Universe, and hence they give a unique insight into the rise of certain heavy elements. I will discuss some of the problems associated with interpreting this fossil record, in light of what we do and do not know about the physics of binary star systems.