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Morphological Classification of Veiled CEMP Stars

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We present a novel approach for categorical analysis of strongly carbon-enhanced metal-poor (CEMP) stars using medium-resolution (R~1,800) spectra. Analysis of cool (Teff ~ 4000 K) CEMP stars is largely inhibited by a strong depression of the underlying continuum (veiling) by extreme molecular bands, making normalization and fitting of metallic features such as Ca II H&K lines difficult.

Consequently, few metal-poor dwarf carbon stars are known, with which we can constrain the low-mass tail of the Pop II IMF. We present a new technique for spectral normalization of these stars, and explore a technique for assigning CEMP morphological types based on characteristic abundances seen in Group I, II, and III CEMP stars, using the Yoon-Beers diagram introduced in Yoon et al. (2016).

Affiliation

Department of Physics, University of Notre Dame, Notre Dame, IN. 46556, USA
JINA Center for the Evolution of the Elements (JINA-CEE), USA

Talk/Poster

Poster

Primary authors: WHITTEN, Devin D. (University of Notre Dame); YOON, Jinmi (University of Notre Dame); BEERS, Timothy (University of Notre Dame)

Presenter: WHITTEN, Devin D. (University of Notre Dame)

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