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ABSTRACT ONLY - ORAL

CN AND CH BAND STRENGTHS IN SMC INTERMEDIATE AGE STAR CLUSTERS

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One of the main unsolved problems in the stellar population field is the origin of the observed abundance anomalies in globular cluster stars. An important contribution to its solution is to know if the anomalies are restricted solely to massive star clusters formed at earliest epochs or if they can occur in younger massive star clusters. We have investigated the anti-correlation and distribution of CH and CN band strengths through the measurement of CH(λ 4300) and CN (λ 3880, λ 4215) for four massive star clusters of Small Magellanic Cloud from FORS2 observations. They have metalliticies and luminosities comparable to Galactic globular clusters (GGCs) but show differences in age. The investigated clusters are NGC 121, which is $\sim$ 2.5 Gyr younger than GGCs, and Lindsay 1, Kron 3 and NGC 339, which have ages between 7.5 and 6 Gyr. Our results about the presence or absence of abundance variations will provide an accurate context for studying the problem of origin of anomalies constraining the age dependence of them in the unexplored 6-11 Gyr age range.

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