

# Impact of Extreme Horizontal Branch(EHB) stars on the integrated colors of simple stellar populations

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Recent studies show that the extreme horizontal branch stars observed in the color magnitude diagrams of globular clusters can be explained by helium enhanced populations. To investigate the effect of extreme horizontal branch stars on the integrated colors, we assumed enhanced helium abundance as an origin of extreme horizontal branch stars and measured the integrated color variation in the GALEX far-UV/near-UV passbands, the Johnson  $V,I$  bands and the Sloan  $g_{475}, z_{850}$  bands. Our models show that integrated colors of globular clusters become bluer when they contain extreme horizontal branch stars. This result implies that enhanced helium abundance can be a key to explain the unusual integrated colors of globular clusters.