Contributed Talk

Splinter Populations

STELLAR POPULATIONS IN THE BULGE - FROM NO-RESOLUTION TO HIGH-RESOLUTION

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The Galactic bulge is one of the oldest, yet very metal-rich populations in the Milky Way, suggesting that it experienced early, rapid chemical enrichment. With large high-resolution spectroscopic bulge surveys, we are only gradually uncovering metal-poor stars ([Fe/H] < -2 dex) that are predicted in galactic models, according to which the first stars formed in the bulge. The chemical abundances of those candidates vastly overlap with those of halo stars. However, chemically peculiar stars (such as a CEMP-s star and a hitherto inexplicable NEMP star with anomalous abundance patterns) are of particular interest in terms of the nucleosynthetic origin of the elements in the early Galaxy. Further clues to the evolution of the versatile populations in the bulge can be gleaned from photometric surveys. Here, narrow-to-intermediate band Strömgren photometry provides a powerful tool to separate stars by their metallicity, age, and evolutionary status. In the second part of this talk, I will thus introduce our comprehensive HST program to disentangle the agemetallicity relation of the bulge using an unprecedented combination of nine Strömgren and broad-band filters.