



The Characterization of the Galactic Stellar Halo as Seen by SDSS

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During the last decades, the detection of spatial, chemical and kinematical inhomogeneities in the Galactic halo favors a formation scenario in line with the current Lambda-Cold Dark Matter cosmological model. However, the formation processes are still far from being well described. I will talk about the analysis of chemical abundance trends in halo stars from low- and high-resolution stellar spectra from the Sloan Digital Sky Survey. In particular, I will describe the analyses performed over two halo stellar sub-populations detected in APOGEE data (an SDSS sub-program), previously revealed in the work of Nissen & Schuster (2010), and following papers, from which we infer characteristics of the initial mass function (IMF) and star formation history (SFH) from simple chemical evolution models for each of these two sub-populations. From this study we obtain an earlier, more intense, and longer SFH, and a top-heavier IMF for the sub-population with higher alpha-to-iron ratios.