

Abstract Submitted
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Ages, Metallicities, and $[\alpha/\text{Fe}]$ of Virgo Cluster GCs and dE Nuclei from Coadded Keck/DEIMOS Spectra ARNAV KRISHNAMOORTHY, James C Enochs High School, MANIK TANEJA, Monte Vista High School, GIOVANNI GOLLOTTI, Los Gatos High School, KADRI BIN MOHAMAD NIZAM, ELISA TOLOBA, University of the Pacific, STSCI TEAM, NASA TEAM, LAURA FERRARESE COLLABORATION, PATRICK CT COLLABORATION, PURAGRA GUHATHAKURTA COLLABORATION — Our team attempted to learn about the origin of the nuclei observed in dwarf elliptical galaxies (dEs) and the relation, if any, between the globular clusters (GC; small groups of stars) found orbiting these dEs, orbiting ultra diffuse galaxies (UDGs), free floating in the Virgo cluster of galaxies (large collection of galaxies gravitationally bound to M87, a very massive elliptical galaxy sitting at the cluster center), and orbiting the M87 galaxy. The comparison between the different groups of GCs will tell us whether UDGs can be considered extended dEs, and will provide some information about the cannibalism history of M87 and the Virgo cluster itself. This project will also shed some light into the idea that the dE nuclei might be GCs that migrated to the center of the dwarf galaxy. To distinguish between this scenario for the formation of nuclei and other possibilities that describe nuclei as events of strong star formation in the center of the cluster, and to learn about the properties of dEs, UDGs, M87, and the Virgo cluster, the mentor and SIP interns will analyze the stellar content (ages and chemical composition) of these nuclei and GCs.

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