

Fall 2018 Colloquium

Department of Physics & Astronomy, TAMU-Commerce

Sep 13, Thursday, 4-5 PM in Science Building 127

(coffee and cookies will be served at 3:50 PM)

Astronomy

Deep Imaging of Two Stellar Overdensities (a non-traditional academic experience)

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Sarah Cantu graduated from Texas A&M University-Commerce in December 2015 with a Bachelor's of Science in Physics and Mathematics. She is a third year Diversity Fellow pursuing her PhD in Astronomy at Texas A&M University-College Station. She studies near-field cosmology with Milky Way satellite observations. A Dallas native, she could live on tacos alone.

Abstract

This talk will be an opportunity to present my own case study on a non-traditional path to graduate school in Physics and Astronomy. As such, I will be outlining both my academic career (which touches a little on my personal life) and presenting any particular problems/coping mechanisms as they pertained to my experiences in academia and the sciences. I will end with my current experiences including culminating research.

In the past decade, the number of low-luminosity Milky Way satellites has exploded. This is due to the advent of numerous large-area, ground-based surveys such as the Dark Energy Survey (DES). I present deep follow-up Magellan/Megacam photometry of two ultra-faint dwarf galaxy candidates discovered in the DES footprint. We use Peter Stetson's DAOPHOT/ALLFRAME package to derive point-spread function photometry and the DES Ultra-faint Galaxy Likelihood (UGaLi) toolkit to derive improved morphological parameters and isochrone fits. One of these galaxies proves to be one of the first false-positives. Our improved structural parameters show the second to be larger than previously thought.