

Spring 2019 Colloquium

Department of Physics & Astronomy, TAMU-Commerce

Jan 24, Thursday, 4-5 PM in Science Building 127

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

Astronomy

Structural Parameters of Stellar Clusters in the M33 Galaxy

Mr. Patrick Ross

Planetarium at Texas A&M University-Commerce



Mr. Ross earned his Bachelors of Science in Physics (2015) from the University of Michigan - Flint and Masters of Science in Physics (2018) from the University of Toledo where he completed his research project on the structure of stellar clusters in the M33 galaxy. While pursuing his degrees, he worked at both the Sloan*Longway Planetarium (2015-2016) in Flint, Michigan and the Ritter Planetarium (2016-2018) in Toledo, Ohio. Mr. Ross has begun the position of Planetarium Manager and Instructor at Texas A&M University-Commerce.

Abstract

Star clusters provide a testing ground for a multitude of astrophysical theories. Our theories of gravitational dynamics can be studied through the kinematics of star clusters. As a whole, star clusters are used to trace out the structure of their host galaxies. This work measures the structural parameters of clusters in the Triangulum Galaxy (M33) to determine if clusters underfill, fill, or overfill their Roche lobes and fit astrophysical models to calculate the cluster's tidal radii.