Contribution ID: **137** Type: **Talk**

The importance of dynamics in the cataclysmic variables in globular clusters

Thursday, 22 August 2024 14:15 (20 minutes)

For decades, it has been believed that globular clusters (GCs) are efficient environments for producing cataclysmic variables (CVs) due to the significant number of stellar interactions among their members. However, models in the last years have cast doubt on the validity of this scenario. In this study, I present the results of the first analysis of detectable CVs in core-collapsed and non-core-collapsed Galactic GCs to evaluate the influence of dynamics on their formation and evolution. I will also discuss how our findings compare to existing models. Our results, which combine information of systems observed in different wavelengths, challenge the relations between the number of detectable CVs and different cluster parameters reported in prior studies using only X-ray data. I will further explore the impact of observational biases on the current paradigm and discuss the implications of our findings for understanding the role of dynamics in the population of detectable CVs and other compact binaries within GCs.

Affliation

UTRGV

Current Position

Senior Scientist or Faculty

Primary author: RIVERA SANDOVAL, Liliana (University of Texas Rio Grande Valley (UTRGV))

Presenter: RIVERA SANDOVAL, Liliana (University of Texas Rio Grande Valley (UTRGV))

Session Classification: Stellar multiplicity, exotica, and transients in star clusters

Track Classification: Stellar multiplicity, exotica, and transients in star clusters