



Contribution ID: 134

Type: **Talk**

Decoding binary evolution: insights from stripped stars

Wednesday, 21 August 2024 11:20 (20 minutes)

Stripped stars, also known as naked helium stars, are the helium cores of stars that have lost their hydrogen-rich outer layer. The recent discoveries of stripped stars have provided valuable insights into massive star evolution, as well as the evolution of stellar binaries. In my talk, I will present results from the rapid stellar evolution code METISSE, used within the binary population synthesis code COSMIC. Specifically, I will discuss the impact of uncertainties in modelling stripped stars on the complex dynamics of mass transfer and the outcomes of common envelope evolution. I will compare the relative importance of these uncertainties with those of the hydrogen-rich massive stars in determining the population properties of binaries. This knowledge is crucial for the realistic modelling of diverse stellar systems such as star clusters, and can help us uncover the secrets of electromagnetic and gravitational-wave transients.

Affiliation

University of North Carolina at Chapel Hill

Current Position

Postdoc

Primary author: AGRAWAL, Poojan (University of North Carolina at Chapel Hill)

Presenter: AGRAWAL, Poojan (University of North Carolina at Chapel Hill)

Session Classification: Numerical approaches to modelling stellar systems and their constituents

Track Classification: Numerical approaches to modelling stellar systems and their constituents