BOSTON Boston University College of Arts & Sciences Institute for Astrophysical Research

2021-2022 ASTROPHYSICS SEMINAR SERIES

Stellar Interactions & Transients

Stars are the fundamental building blocks of galaxies and stellar clusters. They are often part of small stellar systems, such as binaries and triples in which the stars can interact with each other. These interactions give rise to some of the most energetic events in the universe, e.g. supernovae Type Ia explosions and gravitational wave sources.

The advent and development of large-scale time domain surveys are revealing the existence of a large and diverse zoo of transients, but their origin or progenitor evolution is often unknown. In this talk I will show novel channels to induce stellar interactions and subsequent

transients - in electromagnetic radiation as well as gravitational waves. Amongst others I will discuss how triple stars can evolve differently from binary stars, and show their potential as transient progenitors. While triple star systems are common, our understanding of their evolution has lagged behind compared to single and binary stars.



Monday, January 31st

12:30 - 1:30 p.m. See website for Zoom details Silvia Toonen University of Amsterdam