

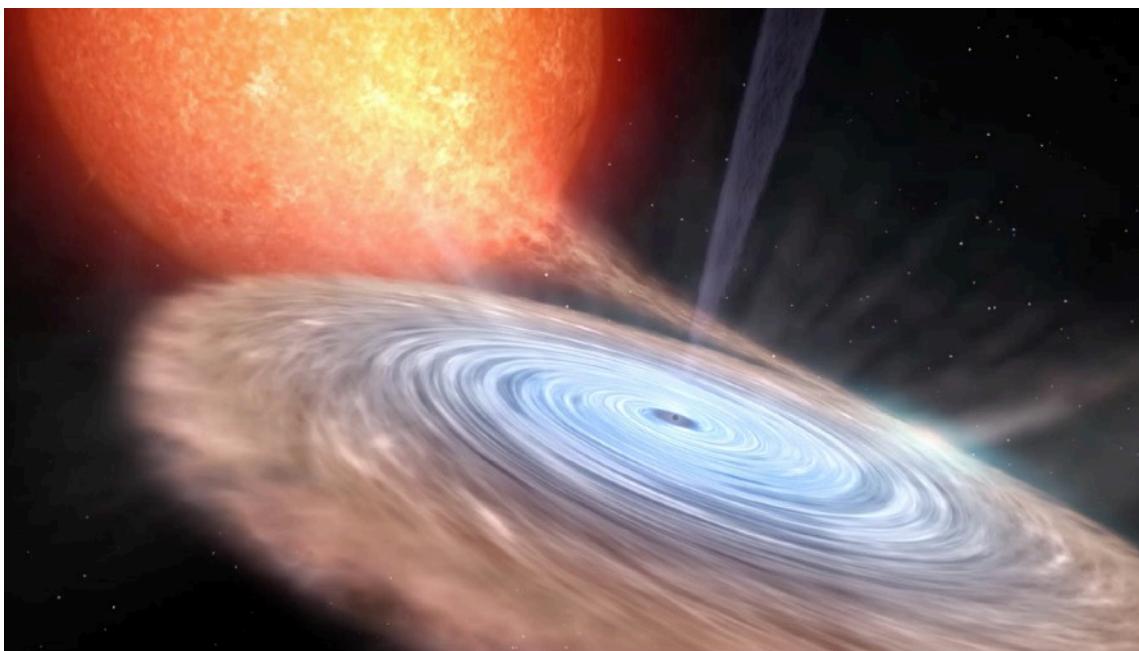


The systematic search for gravitational wave sources and supernova Ia progenitors.

Tuesday, 21 November, 2023
Auditorium & Webcast 16:00 h

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The accelerated expansion of the universe was one of the most striking discoveries in the 20th century and was only possible by using type Ia supernovae (SNe Ia). Only the thermonuclear explosion of a white dwarf (WD) following the interaction in a binary system can explain the observed features. Several different binary scenarios are discussed including the merger and subsequent explosion of an ultracompact double white dwarf (double degenerate) or an explosion triggered by helium accretion from a helium star donor (double detonation). The Laser Interferometer Space Antenna (LISA) is a space-based gravitational wave detector, which is currently being built by ESA. LISA will be sensitive to measure GWs directly of thousands of Galactic binaries, allowing for multi-messenger studies. In this talk I will present an overview of our ongoing efforts to identify a statistical sample of SN Ia progenitors and LISA gravitational wave sources using ongoing and upcoming sky surveys.



This is a HYBRID colloquium
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