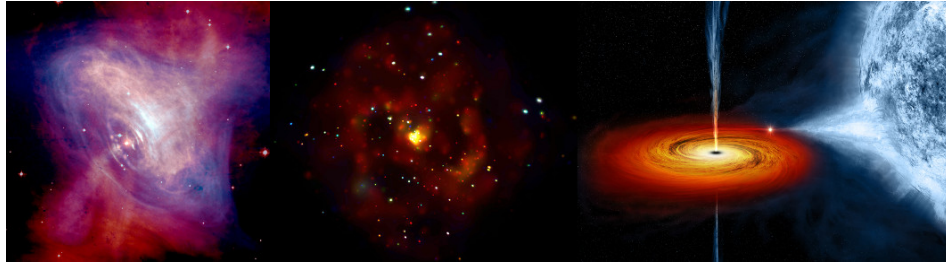


National conference on REcent Trends in the study of Compact Objects
(RETCO-V): Theory and Observation



Contribution ID: 132

Type: **not specified**

Spin evolution of millisecond pulsars

Tuesday, April 4, 2023 2:00 PM (30 minutes)

An understanding of spin frequency evolution of neutron stars in the low-mass X-ray binary (LMXB) phase is essential to explain the observed spin distribution of millisecond pulsars (MSPs), and to probe the stellar and binary physics, including the possibility of continuous gravitational wave emission. I will discuss the crucial effects of transient accretion on the spin evolution of neutron stars. Then, using numerical computations I will conclude that spin frequency can evolve in two distinctly different modes in a way which is counter-intuitive. This implies that the traditional way of spin evolution computation is inadequate in most cases.

Presentation Type

Oral

Primary author: BHATTACHARYYA, Sudip (Tata Institute of Fundamental Research)

Presenter: BHATTACHARYYA, Sudip (Tata Institute of Fundamental Research)

Session Classification: Neutron Stars

Track Classification: Neutron Stars