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Searching for Tidal Disruption Events with VAST

Thursday 1 June 2023 18:15 (10 minutes)

A Tidal Disruption Event (TDE) occurs when a star gets close enough to a supermassive black hole, such that the tidal forces are able to rip the star apart, causing a multiwavelength transient flare. These events illuminate the complex environments of galactic centers in what may otherwise be quiescent galaxies. TDEs are typically discovered at shorter wavelengths (optical, Xray) but with new systemic surveys using radio telescopes, we now have an unprecedented opportunity to discover TDEs in the radio regime. A population of radio-discovered TDEs provides distinct insights including an independent TDE rate estimate, and new perspectives on their host galaxies. In this talk, I will present our search for TDE-like transients identified with the the recently completed Variables and Slow Transients (VAST) Pilot Survey, a time domain radio survey from the Australian Square Kilometre Array Pathfinder.

Presenter: DYKAAR, Hannah (University of Toronto)

Session Classification: Student talks