

Theoretical Physics Seminar

Thursday, October 24, 2019 / Pupin Hall Theory Center, 8th Floor / 2:10 PM

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"Searching for light particles in strong gravity environments"



With no discovery of WIMPs to date, attention is turning towards lighter mass (sub eV) candidates for dark matter such as the axion. I will describe work to look for signatures from such light particles in strong gravity environments. In particular, I will explore the idea that they may clump to form relativistic “stars” which can collide with other astrophysical objects such as black holes and neutron stars. I will also discuss the distinctive density patterns that can form by their accretion onto black holes, and how their presence as an additional cooling channel may leave an imprint on neutron star mergers.