

Multi-messenger probes on dark matter surrounding black holes

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The environment around the black hole can provide us with a promising playground to study the dark matter properties because of the large dark matter density from accretion.

I will explore the multi-messenger probes on the dark matter in the vicinity of black holes. More concretely, I will discuss (1) the multi-wavelength signals covering the radio, CMB and gamma rays which can arise from the dark matter annihilation/decay (2) the gravitational wave signals from a black hole binary whose dynamics is affected by the dark matter.

Paper info

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