

From Telescopes to Dark Matter & Black Holes

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ABSTRACT

In this talk, I will summarize astrophysical observations that can constrain the fundamental physics of dark matter in the era of modern cosmic surveys. I will highlight the progress that has been made so far with past and ongoing astronomical observations with modern surveys, and discuss how the next-generation cosmic survey programs will complement other experiments to strengthen our understanding of the fundamental characteristics of dark matter. I will finish my talk with a program that I am leading: the Southern Stellar Stream Spectroscopic Survey, or S5, and discuss how we study dark matter and black holes together with this program.