



# Halo-Bar Coupling: How Dark Matter Defines Galaxies

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The coupling of a host dark matter halo to a stellar bar forms dark matter substructure near the galactic center which has implications on dark matter annihilation/decay signal strength and morphology expectations. Additionally, these bar-driven dark matter substructures have wide-ranging effects on galaxy dynamics and evolution. In this talk, I will review halo-bar coupling and demonstrate the extensive effects on galaxy morphology such as stellar bar destruction, formation of bar-driven dark matter substructure, and leading spiral arms. I will also present preliminary work showing signal expectations associated with the Milky Way bar-driven dark matter substructure.

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Virtual Seminar