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Exotic Compact Objects: The Dark White Dwarf¹ MICHAEL RYAN, DAVID RADICE, SARAH SHANDERA, Pennsylvania State University — Dissipative dark matter models provide a solution to the dark matter problem while opening up the possibility for exotic compact object formation. These objects, ranging from dark black holes down to dark white dwarfs, have the potential for unique characteristics that set them apart from their baryonic counterparts. Furthermore, gravitational wave observations of their mergers may provide the only direct window on a potentially entirely hidden sector. We present here an introduction to dark white dwarfs, with a focus on how dark microphysics drive macroscopic characteristics distinct from astrophysical compact objects. We also discuss some implications for gravitational wave observations, further highlighting the need for third generation detectors.

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