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Detecting dark matter with asteroids, planetary rings, and craters

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Macroscopic, composite, and ultraheavy dark matter remains one of the most intriguing dark matter candidates. Along with primordial black holes, this includes quark nuggets, Fermi balls, Q-balls, and more. I will motivate these candidates and discuss their formation mechanisms, before discussing here my recent work which places constraints on a wide and previously unconstrained area of the macroscopic dark matter parameter space by considering the interaction of these massive objects within our Solar System. Macroscopic dark matter could destroy asteroids, planetary rings, and lead to excessive cratering on the Earth or other rocky bodies.

Mini Symposia (Invited Talks Only)

Plenary (Invited talks only)

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