

# Gordon Research Seminar in Particle Physics: Pushing the Frontiers of Particle Physics During the LHC Run II Era

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## Intermediate Mass Black Holes with Mirror Matter

*Sunday, 25 June 2017 11:45 (5 minutes)*

Mirror dark matter can potentially solve outstanding problems in structure formation, concerning the formation of small-scale structure on dwarf galaxy scales. We show that via its impact on residual ionization when early structure formation occurs, fragmentation into stars is naturally suppressed. The resulting formation of intermediate mass black holes in the mirror sector provides a new form of feedback for the observed dwarf galaxies that provides new insights into the paucity, the too-big- to-fail problem, the core/cusp issue and the baryon fraction of dwarf galaxies, as well as the seeding of supermassive black holes at high redshift.

**Presenter:** D'AMICO, Guido

**Session Classification:** Short oral presentations