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Non-relativistic Gravity and Supergravity

Wednesday 25 August 2021 17:20 (40 minutes)

In this talk I will show that Newtonian gravity is not the unique non-relativistic gravity theory that can be defined by taking a limit of (matter coupled) general relativity. I will discuss several extensions of Newtonian gravity including non-relativistic gravity theories involving geometries with a higher co-dimensional foliation and with non-zero torsion. Using these extensions, I will show how a non-relativistic limit of 10D supergravity can be defined that can be identified with the effective low-energy approximation of a non-relativistic superstring theory. Using this identification I will discuss several aspects of non-relativistic superstring theory using field theory techniques.

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