SEMPARIS – Séminaires en région parisienne

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Particle Physics at LPTHE

Mardi 5 Juillet 2022, 14:00

LPTHE, Library 4th floor and online (link in comments) (https://cnrs.zoom.us/j/98061606464?pw

Domaines: astro-ph—hep-ph—hep-th

Titre: Macroscopic Dark Matter from a dark confining phase transition

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Résumé: First order phase transitions can leave relic pockets of false vacua and their particles, that manifest as macroscopic Dark Matter. I present one predictive model: a gauge theory with a dark quark relic heavier than the confinement scale. During the first order phase transition to confinement, dark quarks remain in the false vacuum and get compressed, forming Fermi balls that can undergo gravitational collapse to stable dark dwarfs (gravitational bound states analogous to white dwarfs) near the Chandrasekhar limit, or primordial black holes. Dark Matter manifests as a macroscopic object made of dark particles.