



Contribution ID: 353

Type: **Talk in the parallel session**

Emergent magnetic monopoles in degenerate theory

Thursday, 8 July 2021 17:10 (20 minutes)

We show that a magnetic charge in curved spacetime could be an artefact of a vacuum phase with zero metric determinant at a distance. This phase is characterized by a solution of the first order field equations with nontrivial torsion. The monopole charge has a topological origin, given precisely by a lower-dimensional counterpart of the Nieh-Yan invariant in absence of matter. In this geometric realization, the monopole core remains hidden from the observer living in the invertible metric phase, thus precluding its direct detection.

Primary authors: GERA, Suvikranth (IIT KHARAGPUR); SENGUPTA, Sandipan (IIT KHARAGPUR)

Presenter: GERA, Suvikranth (IIT KHARAGPUR)

Session Classification: Black Holes in Alternative Theories of Gravity

Track Classification: Black Holes: Theory and Observations/Experiments: Black Holes in alternative theories of gravity