Contribution ID: **83**   Type: **Talk in a parallel session**

Dynamics of scalar fields in the nonlinear σ-models in the Eddington inspired Born-Infeld gravity

Friday, 12 July 2024 17:00 (15 minutes)

In our presentation, we demonstrate the spacetime properties of a monopole within nonlinear σ-models in Eddington inspired Born-Infeld gravity. Specifically, we investigate characteristic circular orbits of test particles and photons, including circular null geodesics, marginally bound orbits, and stable circular orbits, as influenced by spacetime parameters. Additionally, we discuss the dynamics of a massless scalar field, covering quasinormal frequencies in both low and high energy regimes, their time evolutions, and the stability of the configuration against scalar perturbations.

Primary author: KAYUMOV, Bakhodir (School of Humanities and Natural Sciences, New Uzbekistan University)

Co-author: TOSHMATOV, Bobir (New Uzbekistan University)

Presenter: KAYUMOV, Bakhodir (School of Humanities and Natural Sciences, New Uzbekistan University)

Session Classification: Black holes in alternative theories of gravity

Track Classification: Black Holes: Classical and Beyond (BH): Black holes in alternative theories of gravity