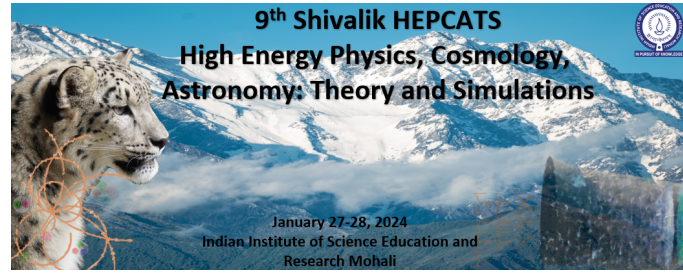


9th Shivalik HEPCATS (High Energy Physics, Cosmology, Astronomy: Theory and Simulations)



Contribution ID: 17

Type: **not specified**

Marginally trapped surfaces in pure gauss bonnet gravity

Saturday 27 January 2024 15:10 (20 minutes)

The higher order theories like Lovelock's and Gauss-Bonnet theories(GB) are unique as they required no extra field beyond GR and holds the property of field equation for order not greater than second order. The GB theory arise when order is 2 in Lovelock's action. We studied the formation and evolution of the marginally trapped surfaces and collapsing shell for n -dimension space time during the gravitational collapse of spherical symmetric dust and viscous fluid matter. We took different density profiles as a initial data to examine the effect of higher dimension on the formation of marginally trapped surfaces and collapsing shell in Pure GB gravity.

Author: KUMAR, Akshay (CENTRAL UNIVERSITY OF HIMACHAL PRADESH)

Co-authors: Dr CHATTERJEE, Ayan (CENTRAL UNIVERSITY OF HIMACHAL PRADESH); Dr JARYAL, Suresh C (CENTRAL UNIVERSITY OF JAMMU)

Presenter: KUMAR, Akshay (CENTRAL UNIVERSITY OF HIMACHAL PRADESH)