Contribution ID: **10** Type: **Talk**

Networks of Axion Strings - Scaling

Friday 14 March 2025 12:00 (20 minutes)

In the post-inflationary scenario, if PQ symmetry breaking occurs, a network of global cosmic strings are expected to form. At the time of the QCD phase transition, the previously scaling network of such defects will collapse by forming domain walls attached to strings. Given that all of the energy density of the string network is left behind into axion waves, in order to improve current estimates of axion dark matter density, estimates of the scaling density of axion strings are required. In this talk, I will review recent work on the dynamics of axion strings which uses extreme scale computing resources for simulating 16384ˆ3 lattices. I will address and comment on the recent claims of logarithmic violations of scaling

Authors: Dr LOPEZ-EIGUREN, Asier (University of Basque Country); Dr LIZARRAGA, Joanes (University of Basque Country); Prof. URRESTILLA, Jon (University of Basque Country); CORREIA, Jose Ricardo (University of Helsinki); RUMMUKAINEN, Kari; Prof. HINDMARSH, Mark (University of Helsinki, University of Sussex)

Presenter: CORREIA, Jose Ricardo (University of Helsinki)

Session Classification: Contributed talks