

Primordial Black Holes in globular clusters

Wednesday, 23 October 2024 12:00 (30 minutes)

Even if Primordial Black Holes (PBHs) represent only a subdominant component of the dark matter sector, their mere presence can inform us about physical processes that happened at energy scales not reachable by future Particle Physics experiments. Therefore, it is extremely interesting to investigate whether a small fraction of these objects can be detectable by future gravitational wave experiments. In this talk I will discuss the role of PBHs of few to hundreds solar masses in globular cluster. In particular I will show how such dense systems can boost PBH binary formation rate to the point of impacting the gravitational wave background detected by next-generation ground-based interferometers.

Primary author: BELLOMO, Nicola (Istituto Nazionale di Fisica Nucleare)

Presenter: BELLOMO, Nicola (Istituto Nazionale di Fisica Nucleare)

Session Classification: Cosmology