Constantly changing constraints on Primordial Black Hole dark matter

jeudi 5 novembre 2020 14:30 (25 minutes)

Since the first detections of gravitational waves from merging binary black holes, there has been a renewed interest in the possibility that at least some of these black holes could be primordial in origin and that these primordial black holes (PBHs) could make up a substantial fraction of the dark matter (DM). I will briefly summarize the changing landscape of constraints on PBHs as a DM candidate, including bounds from evaporation, lensing, gravitational waves, accretion and dynamical effects. Previously claimed constraints on asteroid-mass PBHs have disappeared in recent years, leaving the range 10^-16 to 10^-11 solar masses as the last best hope for PBH dark matter.

Orateur: Dr KAVANAGH, Bradley (GRAPPA, University of Amsterdam)

Classification de Session: Dark Universe