

Abstract:

Observations over the past decade suggest that most of the energy in the Universe is in the form of Dark Energy and Dark Matter. The hunt is on for the identity of these new substances as we strive to understand how they fit in to the rest of physics. Recently, attention has turned to another possibility: there is no dark sector but Einstein's theory of gravity needs to be modified. We are now faced (again!) with a contest between two competing ideas about the fundamental laws of Nature. Which will win and how will we find out?