

Gravitational Origin of Dark Matter

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Dark matter makes up the largest fraction of the Universe's matter content. Despite extensive efforts to better understand its nature and properties, the origin of dark matter is still entirely unknown. Indirect and direct detection experiments have not yielded any positive results so far. In my talk I will suggest that this could be a consequence of the fact that the dark matter particle has spin 2 and is therefore part of the gravitational sector. I will introduce the consistent theory for a massive spin-2 field interacting with gravity and discuss the properties of this dark matter candidate. Interestingly, the corresponding particle does not decay into massless gravitons and its interactions with baryonic matter are naturally suppressed by the Planck scale due to its gravitational origin.