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Particle Physics at LPTHE

Mardi 27 Mars 2018, 11 :00
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Domaines : hep-ph

Titre : *Wilsonian dark matter candidates in heterotic-string vacua*

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Résumé : *Stable string states arise in string models due to Wilson line breaking of GUT symmetries. I will describe a new class of such Wilsonian dark matter states that emerge in string derived Z' model. The string construction utilises the spinor-vector duality symmetry to obtain a viable low scale Z' model. I will describe the nature of this duality and its role in the construction of the string model. I will describe the systematic classification tools, developed with Kounnas and Rizos, to analyse large classes of free fermionic string vacua. These methods were instrumental in the discovery of the spinor-vector duality, as well as in the trawling of the string Z' model. Other dark matter candidates that arise in string model will be briefly discussed.*