

Particle Cosmology after Planck



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**Particle Cosmology
after Planck**

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On the Spectrum of Superspheres

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Non-linear sigma-models play an important role in physics and mathematics. In String Theory they are extensively used to describe compactifications. Homogeneous target spaces are particularly relevant. In the context of the AdS/CFT correspondence, sigma-models based on supergroups play an important role. Understanding sigma-models at small radius of the target space is of central importance. To this end, we will analyse one of the simplest cases, that of the supersphere $S^{(3|2)}$, on which the sigma-model is conformal. We will give an explicit analysis of the spectrum and use previously obtained results to compare with a deformed WZNW model, which has been conjectured to provide a free field description of the sigma-model at strong coupling.

Primary authors: Dr CAGNAZZO, Alessandra (DESY); Prof. SCHOMERUS, Volker (DESY); Mr TLAPÁK, Václav (DESY)

Presenter: Mr TLAPÁK, Václav (DESY)

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