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A crisis in the standard model?

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The standard Λ CDM cosmological model of structure formation provides an amazing description of a wide range of astrophysical and astronomical data. However, there are a few statistically significant anomalies and tensions between observations at early and late cosmological time that can indicate a failure of the Λ CDM model. I will show briefly these tensions, with a particular focus on the curvature of the universe, and the indication for a closed universe at a few percent level coming from the Planck 2018 data. This picture calls for a more conservative approach when discussing cosmological bounds on the parameters, and the necessity of further data and investigations to fully confirm a flat universe.

Presenter: DI VALENTINO, Eleonora (Institut d'Astrophysique de Paris)

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