Contribution ID: **83** Type: **not specified**

Quantifying the S8 tension with the Redshift Space Distortion data set

Sunday 11 September 2022 16:10 (10 minutes)

One problem of the ÎCDM model is the tension between the S8 found in Cosmic Microwave Background (CMB) experiments and the smaller one obtained from large-scale observations in the late Universe. The Ï8 quantifies the relatively high level of clustering. Bayesian Analysis of the Redshift Space Distortion (RSD) selected data set yields S8 = 0.700+0.038 â0.037. The fit has 3Ï tension with the Planck 2018 results. With the Gaussian processes method a model-independent reconstruction of the growth history of matter in-homogeneity is studied. The fit yields S8 = 0.707+0.085 â0.085, 0.701+0.089 â0.089, and 0.731+0.063 â0.062 for different kernels. The tension reduces and is smaller than 1.5 Ï. With future measurements the tension may be reduced, but the possibility the tension is real is a plausible situation.

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