LABORATOIRE DE L'ACCÉLÉRATEUR LINÉAIRE

Séminaire LAL

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Mardi 24 janvier 2017 à 11h00

Quantifying Tensions in Cosmology

Modern Cosmology is blessed by a wealth of high precision data sets, putting independent constraints on the underlying cosmological model.
In this context, an important test for every model is the consistency and agreement of the constraints derived from the different independent measurements. We present here a recently development measure of data set consistency, the 'Surprise', derived from the information theory, and show how the Surprise can be estimated from samples of the prior and posterior distributions. Furthermore, we present different applications of the Surprise in cosmological context. We detect some well known tensions on the amplitude of the matter density fluctuation and the expansion rate of the Universe. We also reveal a new tension concerning the value of the spatial curvature of the Universe. Finally, we discuss possible origins of these tensions.

Salle 101 - Bât. 200, Orsay

Thé et café seront servis 15 mn avant le séminaire
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