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Information from Cosmology Experiments

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Bayesian statistical methods have become common place in cosmology and numerous new experiments have reported posterior results on cosmological parameters. With all of these measurements we can ask basic questions such as: how much have given experiments contributed to our knowledge of the Universe? and are the results from different experiments consistent with each other? In this talk I will present a discussion of relative entropy and how this powerful statistical tool can be used to condense complex results to address these important questions. To demonstrate this tool I will present results from the CMB, before moving to large scale structure measures such as the Dark Energy Survey, for which we have recently published our first cosmology results. In particular I will focus the last part of the talk on the challenges of making precision weak lensing measurements and the prospects for the upcoming data that we are processing now.