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A weak lensing perspective on baryons in the Universe

Friday, 12 April 2024 11:00 (20 minutes)

“In this talk, I present a weak lensing view of baryonic feedback effects.

Key to leveraging the power of weak lensing surveys is an accurate modelling of the matter power spectrum, including the baryonic content. I present a rigorous comparison of state-of-the-art modelling approaches to mitigate baryons in cosmological analyses. I show new constraints on cosmological and astrophysical parameters from a joint analysis of the Dark Energy Survey cosmic shear and Atacama Cosmology Telescope kinetic Sunyaev Zel’dovich. Weak lensing surveys have consistently reported low values of the clustering amplitude (S_8) compared to that predicted by Planck primary Cosmic Microwave Background. Finally, I make the case that this tension could be due to modelling choices that underestimate the extent of baryonic feedback on the matter distribution.”

Presenter: AMON, Alexandra