

The impact of dark energy on the thermal Sunyaev-Zel'dovich effect

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The distribution of matter in the Universe is a powerful probe of cosmology. Measuring the efficiency with which gravity produces clusters against expanding Universe is the key to understanding, e.g. the equation of state of dark energy. The thermal Sunyaev-Zel'dovich (tSZ) effect, being sensitive to the baryonic content of the Universe, also shows sensitivity to dark energy. In this work, I investigate the impact of dark energy on the tSZ effect. To this end, I conducted new simulations varying the equation of state of dark energy within RAMSES, and compared different quantities such as the matter and tSZ power spectrum. In this talk, I will present and discuss my results on these comparisons across different cosmologies.

Orateur: AYÇOBERRY, Emma (CEA / DAp)

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