
[C II] line-intensity mapping: current forecasts and future directions

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Abstract

[C II] is one of the most promising non-hydrogen lines for mapping out the epochs of reionisation and galaxy assembly, with experiments like TIME expected to make detections or set limits within the next few years, and more such as CONCERTO and CCAT-prime being funded and designed. Realistic forecasts of signals are crucial to informed survey and instrument design, and this talk will consider recent forecasts of [C II] auto-correlation (arXiv:1812.08135) based on the SFR-halo mass relation of Lagache+18 (A&A 609, A130; arXiv:1711.00798) and the star-formation model of the UniverseMachine framework of Behroozi+18 (arXiv:1806.07893), with the intention of discussing where simulations stand, how they could improve, and what they could tackle next.

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