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Presentation Requested: poster
Category: Evolution of the Interstellar Medium and Star formation over Cosmic Time
Question: Is there a common Schmidt-Kennicutt law at all redshifts and all scales? How is this "law" affected by different measurement limitations or conversion factors from tracer molecules or emission / absorption lines to amounts of gas and SFR?

Carbon Monoxide Intensity Mapping in the Epoch of Galaxy Assembly

We present a study of CO intensity mapping at $z \gtrsim 2.4$ for the Carbon monOxide Mapping Array Pathfinder (COMAP), quantifying both the strength of the expected signal and the ability of an observed signal to place constraints on galaxy formation at high redshifts. We generate mock CO line intensity maps and corresponding power spectra, using an empirical model linking galaxies' dark matter halos to their star formation and CO luminosity. Additionally, through Markov Chain Monte Carlo inference, we place constraints on the model parameter space from hypothetical observations of the CO signal. This approach can be extended to more detailed models of galaxy formation, which are sure to be informed by current and upcoming multiwavelength observations of individual high-redshift galaxies.