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## Simulation framework for HI power spectrum measurement with CHIME

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HI intensity mapping offers a unique window to map the distribution of matter by tracing the distribution of neutral hydrogen. The Canadian Hydrogen Intensity Mapping Experiment (CHIME) aims to measure the clustering of HI through its 21cm emission at redshifts 0.8 to 2.5. In this talk, I will present a simulation framework for modeling and interpreting CHIME HI power spectrum measurement. I will discuss the methods to simulate the HI signal corresponding to CHIME frequency channels accurately and incorporate instrumental effects into power spectrum modeling. These simulations play a crucial role in validating our analysis pipeline and improving the reliability of the cosmological measurements.

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