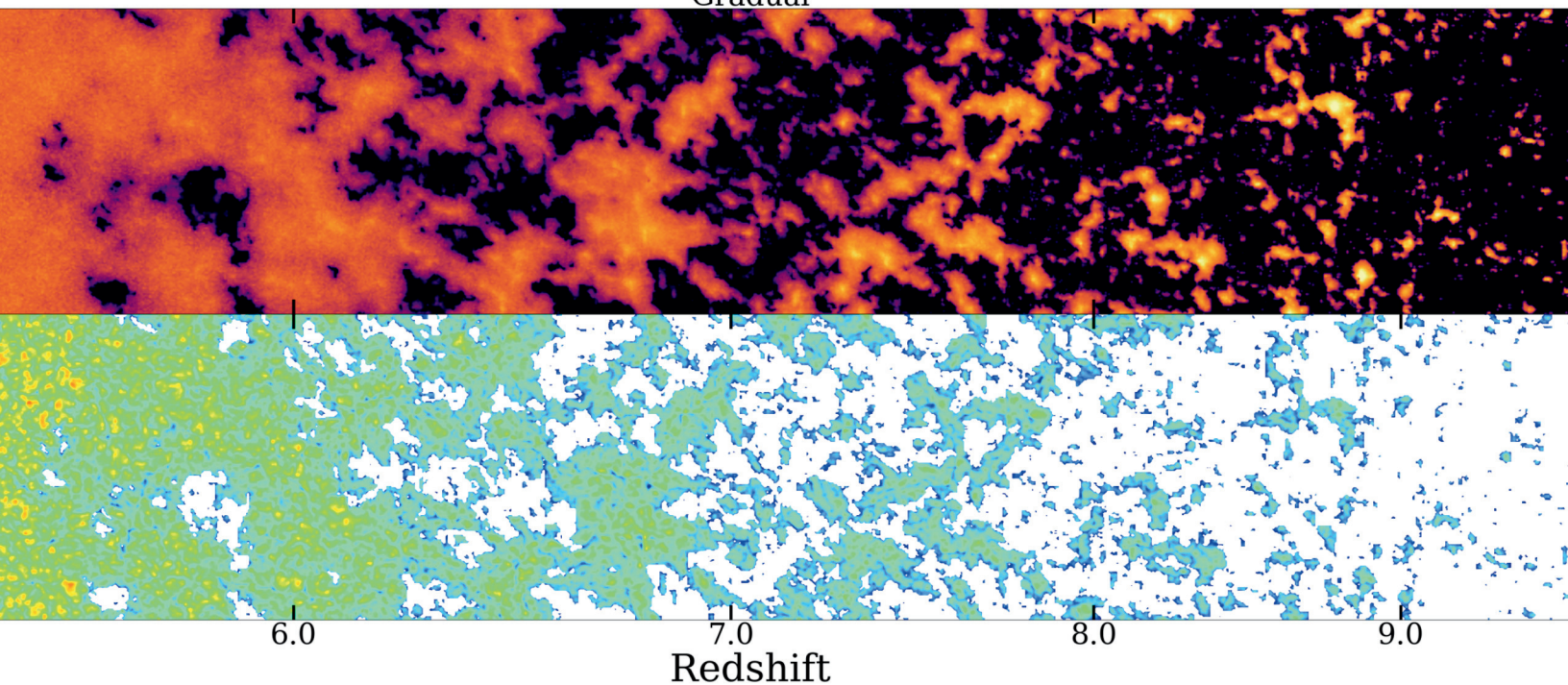


Gradual



COSMOLOGICAL REIONIZATION: NEW INSIGHTS, NEW PUZZLES

Anson D'Aloisio | UC Riverside

When the first galaxies formed, their starlight likely reionized and heated the intergalactic hydrogen that had existed since recombination. In the past few years, there has been significant progress toward understanding the reionization process. I will highlight this progress, including the possibility that we have already observed evidence of reionization's tail end in the spectra of high-redshift quasars. I will also discuss (1) the role that small-scale structure in the cosmic web played in shaping reionization, (2) what we might learn about early galaxy formation and cosmology from reionization observables, and (3) a novel observational approach that may someday be used to map the reionizing intergalactic medium directly. Lastly, the improving constraints on reionization have turned up some new puzzles; I will discuss these too.

19-MAR-2024

3:30 PM ET

BELL ROOM