

Abstract Submitted  
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**Mapping Luminous Red Galaxies at High Redshift** RONGPU ZHOU, Lawrence Berkeley National Laboratory, DESI COLLABORATION — The Dark Energy Spectroscopic Instrument (DESI) will observe millions of galaxies and quasars, including 8 million luminous red galaxies (LRGs) in the redshift range of  $0.3 < z < 1.0$ . With higher redshifts and higher density than the earlier LRG samples from SDSS, the DESI LRGs will enable precise measurements of the expansion history of the Universe and the growth of structure. In this talk, I will give an overview of the science that has been and will be done with the DESI LRG sample. I will describe new clustering measurements made using the LRG target sample based purely on imaging data, including studies of the galaxy-dark matter connection and determination of the baryon acoustic oscillation scale at  $z \sim 0.9$ . I will also discuss the new science opportunities that will be enabled by spectroscopic redshifts from DESI.

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