

Abstract Submitted
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THE EFFECT OF EARLY SUPERNOVAE ON THE COSMIC MICROWAVE BACKGROUND RADIATION BRANDON VERNON, Brigham Young University, JOSEPH SMIDT, Los Alamos National Lab, DAVID NEILSEN, Brigham Young University — The first atoms formed about 380,000 years after the big bang, making the universe largely transparent to photons. These photons from the early universe are observable today in the cosmic microwave background (CMB) radiation. The first stars that formed were the massive population iii stars, and supernovae from these first stars interacted with the cmb through the sunyaev-zel'dovich effect: high energy electrons from supernova explosions scatter with cmb photons, boosting their energy through inverse Compton scattering. We are investigating the effect of early supernovae on the cmb using a halo model to predict the power spectrum of the SZ effect on the cmb. We will discuss the halo model and some preliminary results of this research.

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