

Extreme Dust: Precision and Position

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Dust suffuses our diffuse universe, obscures our view, and is a direct product of the formation of stars and galaxies. In this era of large area digital surveys it is both necessary and possible to explore dust in our universe at a level once unheard of. I will discuss new results on dust, both extreme in precision and extreme in position. In my discussion of high precision dust observations, I show how crucial accurate dust maps are to our understanding of cosmology, and I will introduce a new cosmological parameter: the opacity of the universe, τ_z . Perhaps even more interestingly, I will show new results on dust in low density environments, both at the surface of our own galaxy and filling the virial radii of galaxies throughout the universe. I will introduce the idea of exploring feedback from galaxies by studying their dust, and using these observations to constrain our models of galaxy formation.