TSF07-2007-000188

Abstract for an Invited Paper
for the TSF07 Meeting of
the American Physical Society

Probing the Universe in the Infrared with the Spitzer Space Telescope

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Nearly all stars in the Universe form deep within clouds of gas and dust. This gas and dust obscures the light emitted from these stars and radiates it as heat in the infrared. I will present a brief history of astronomical observations of infrared light, and I will discuss how we learn about star formation from infrared observations. In particular, I will discuss the Spitzer Space Telescope (the last of NASA's Great Observatories), which is extremely sensitive to the infrared light from faint sources that are otherwise invisible from the Earth. I will focus on several recent results from the Spitzer Space Telescope that have both revolutionized our understanding of how stars form in nearby galaxies and improved our understanding of the formation of the most distant galaxies.