ABSTRACT

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SPT surveys the millimeter sky

The South Pole Telescope (SPT) is conducting a survey to mJy depths over thousands of square degrees in the southern sky in the millimeter waveband to constrain cosmological parameters through a census of massive galaxy clusters identified via the Sunyaev-Zel'dovich effect. An exciting and unanticipated result of this survey has been the discovery of a new population of extraordinarily bright, dusty, star-forming galaxies. Our extensive followup campaign indicates that these sources are at high-redshift (z>3) and strongly-lensed. The long-wavelength selection (1.4 mm), which favors high redshift systems, and the magnification of these objects makes them the best window we have to directly investigate massive galaxy formation in the early universe. I will present the status of our followup observations of these remarkable sources and discuss them within the context of present and upcoming sub-mm observatories. I will also give a general overview of the SPT project and recent results, including the recently released SZ cluster catalog and the CMB powerspectrum.