abstract

Interferometric observations of the Sunyaev-Zel’dovich Effect (SZE) toward clusters of galaxies provide sensitive cosmological probes. We present results from 1 cm observations (at BIMA and OVRO) of a large, intermediate redshift cluster sample. In addition, we describe a proposed, higher sensitivity array which will enable us to survey large portions of the sky. Simulated observations indicate that we will be able to survey one square degree of sky per month to sufficient depth that we will detect all galaxy clusters more massive than $2 \times 10^{14} h_{50}^{-1} M_\odot$, regardless of their redshift. We describe the cluster yield and resulting cosmological constraints from such a survey.