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标题: Multi-chroic Feed-Horn Coupled TES Polarimeters

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摘要: Multi-chroic polarization sensitive detectors offer an avenue to increase both the spectral coverage and sensitivity of instruments optimized for observations of the cosmic-microwave background (CMB) or sub-mm sky. We report on an effort to adapt the Truce Collaboration horn coupled bolometric polarimeters for operation over octave bandwidth. Development is focused on detectors operating in both the 90 and 150 GHz bands which offer the highest CMB polarization to foreground ratio. We plan to deploy an array of 256 multi-chroic 90/150 GHz polarimeters with 1024 TES detectors on ACTPol in 2013, and there are proposals to use this technology for balloon-borne instruments. The combination of excellent control of beam systematics and sensitivity make this technology ideal for future ground, balloon, and space missions.

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