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The CMB-S4 Experiment

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CMB-S4 is a next generation CMB experiment and is a major focus of the ground based CMB community. Three key science goals driving the technical requirements for CMB-S4 are: 1) searching for primordial gravitational waves resulting from an early period of accelerated expansion (inflation), 2) searching for new light relic particles in the early universe, and 3) providing a legacy survey of nearly half the sky at centimeter to millimeter wavelengths. To achieve these goals, CMB-S4 will field nearly 500,000 superconducting detectors on multiple small and large aperture telescopes at both the South Pole and the Atacama plateau. This poster presents an overview of the CMB-S4 experiment including its projected science reach and challenges for superconducting detector technologies.

Less than 5 years of experience since completion of Ph.D

N

Student (Ph.D., M.Sc. or B.Sc.)

N

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