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Detector fabrication development for the LiteBIRD satellite mission

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LiteBIRD is a satellite mission designed to measure the polarization of the cosmic microwave background and cosmic foregrounds from 34 to 448 GHz. This experiment aims to measure primordially generated B-mode polarization at large angular scales and will generate a dataset capable of probing many scientific inquiries such as the sum of neutrino masses. The experiment will have three optical telescopes each covering a portion of the entire frequency range. The broad frequency coverage and low optical loading conditions require development of detectors suitable for the mission. The focal plane design is driven by heritage from ground based experiments and will include both lenslet-coupled sinuous antenna pixels and horn-coupled pixels. This detector development and fabrication will take place at UC Berkeley and NIST. We present on current development status as well as future fabrication plans for LiteBIRD.

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

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

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