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# Design of a testbed for the study of system interference in space CMB polarimetry

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LiteBIRD is a proposed JAXA satellite mission to measure the CMB B-mode polarization with unprecedented sensitivity ($\sigma_r \sim 0.001$). To achieve this goal, $\sim$ 4000 state-of-the-art TES bolometers will observe the whole sky for 3 years from L2. These detectors, as well as the SQUID readout, are extremely susceptible to EMI and other instrumental disturbances e.g. static magnetic field and vibration. As a result, careful analysis of the interference between the detector system and the rest of the telescope instruments is essential. This study in an early phase of the project is particularly important in order to reduce risks and do a sanity-check before final assembly of the whole instrument. We report a plan for the preparation of a cryogenic testbed to study the interaction between the detectors and other subsystems, especially a polarization modulator unit consisting of a magnetically-rotating half wave plate. We also present the requirements, current status and preliminary results.

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

Y

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

Y

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