

High-precision polarimetry design for Space Solar Telescope

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High polarization accuracy and high spatial resolution measurement of solar magnetic field is the most important mission of Space Solar Telescope. Although there is no seeing induced error in the outer space, the mass flow and evolution in the solar atmosphere may become the main source of false polarization signals. To reduce this source of polarization errors, a high-speed polarimetry is required. In this paper, we present our newly designed polarimeter based on high-speed electro-optical modulation. We employ Mueller Matrix to analyses the polarization characteristics of optical elements and evaluate the polarization errors. By these discussions, we also determine the requirements to the imaging process system of SST.