Contribution ID: **36** Type: **not specified**

On-sky Optical Calibration for CMB Experiments

Wednesday, 22 June 2022 11:30 (15 minutes)

The goal of Cosmic Microwave Background (CMB) observations is to study cosmology and astrophysics via increasingly high precision measurements. To achieve that, we must first understand the instruments to high precision, primarily via on-sky optical calibrations.
In this talk, I will first describe the on-sky optical calibration of the Cosmology Large Angular Sky Surveyor (CLASS), describing how we calibrate the intensity beam to 90-deg radius, how we constrained the temperature-to-polarization leakage to 10e-5, and how we calibrate the polarization angle to sub-deg levels. Then I will discuss the ongoing effort to develop the calibration pipeline within the Simons Observatory. I will also discuss using drone-carrying RF sources for calibration, and the current development along this approach.

Primary author: XU, Zhilei

Presenter: XU, Zhilei

Session Classification: Cosmic Physics