



Contribution ID: 143

Type: **Regular plenary talk**

## **Tomographic cross-correlation of the CMB gravitational lensing and galaxy clustering - effect of photometric redshift errors**

*Thursday, 20 February 2025 17:35 (10 minutes)*

The effect of gravitational lensing of the cosmic microwave background (CMB) provides a unique opportunity to obtain a picture of the gravitational potential of the large-scale structure of the Universe at very high redshifts. Tomographic cross-correlation of the gravitational potential with other tracers of the large-scale structure at known redshifts allows tracing the evolution of the structure and testing cosmological models. However, the analysis of upcoming data will require a very good understanding of any systematic errors that may bias cross-correlation measurements. In this talk we will present studies of systematic errors arising from redshift bin mismatch of galaxies with photometric redshift uncertainties. We show their impact on the cross-correlation measurement and cosmological parameter estimates for future data sets. We also present an efficient method for mitigation of the errors.

**Primary author:** BIELEWICZ, Pawel

**Presenter:** BIELEWICZ, Pawel

**Session Classification:** Multiwavelength Surveys & CMB

**Track Classification:** Multiwavelength Surveys & CMB