



Contribution ID: 464

Type: **Invited talk in the parallel session**

Cosmological and astrophysical results exploiting magnification bias with high-z submillimeter galaxies

Monday, July 5, 2021 7:11 PM (19 minutes)

The high-z submillimeter galaxies (SMGs) can be used as background sample for gravitational lensing studies thanks to their magnification bias (Gonzalez-Nuevo et al. 2017), which can manifest itself through a non-negligible measurement of the cross-correlation function between a background and a foreground source sample with non-overlapping redshift distributions. In particular, the choice of SMGs as background sample enhances the cross-correlation signal so as to provide an alternative and independent observable for cosmological studies regarding the probing of mass distribution.

In particular (Bonavera et al. 2020), the magnification bias can be exploited in order to constrain the free astrophysical parameters of a Halo Occupation Distribution (HOD) model and some of the main cosmological parameters. Urged by the improvements obtained when adopting a pseudo-tomographic analysis (Gonzalez-Nuevo et al. 2021), we adopt a tomographic set-up to explore not only a Λ CDM scenario, but also the possible time evolution of the dark energy density in the ω_0 CDM and $\omega_0\omega_a$ CDM frameworks (Bonavera et al. tbs). The results that have been obtained so far by our group will be discussed.

Primary author: BONAVERA, Laura (University of Oviedo)

Co-authors: M. CUELI, Marcos (University of Oviedo); GONZALEZ-NUEVO, Joaquin (University of Oviedo)

Presenter: BONAVERA, Laura (University of Oviedo)

Session Classification: Cosmic Backgrounds from Radio to Far-IR

Track Classification: Cosmic Microwave Background: Cosmic Backgrounds from radio to far-IR