



ID de Contribution: 73

Type: Non spécifié

## Combining gravitational lensing and gravitational redshift to measure the anisotropic stress with future galaxy surveys

*vendredi 18 novembre 2022 14:40 (20 minutes)*

Galaxy surveys provide one of the best ways to constrain the theory of gravity at cosmological scales. They can be used to constrain the two gravitational potentials encoding time,  $\Psi$ , and spatial,  $\Phi$ , distortions, which are exactly equal at late time within General Relativity. Hence, any small variation leading to a non-zero anisotropic stress, i.e. a difference between these potentials, would be an indication for modified gravity. Current analyses usually consider gravitational lensing and redshift-space distortions to constrain the anisotropic stress, but these rely on certain assumptions like the validity of the weak equivalence principle, and a specific time evolution of the functions encoding deviations from General Relativity. In this talk, I will discuss a recently proposed reparametrization of the gravitational lensing observable, together with the use of the relativistic dipole of the correlation function of galaxies to directly measure the anisotropic stress with a minimum amount of assumptions.

**Auteur principal:** TUTUSAUS, Isaac (IRAP)

**Orateur:** TUTUSAUS, Isaac (IRAP)

**Classification de Session:** Review and contribution talks