ID de Contribution: **14** Type: **Non spécifié**

The resilience of the Etherington–Hubble relation

vendredi 6 mai 2022 10:15 (15 minutes)

The Etherington reciprocity theorem, or distance duality relation (DDR), describes the relationship between luminosity and angular diameter distances in pseudo-Riemannian spacetimes where photons are massless and photon number is conserved. In this talk, I will show the first joint constraints on H0 and the DDR with percentage accuracy obtained with late-time data, and use this result to construct a consistency check for beyond-ΛCDM cosmological models. I will show that extensions to ΛCDM involving massive neutrinos and additional dark radiation are in perfect agreement with the DDR, while models with non-zero spatial curvature imply DDR violation at the level of ~1.5σ. I will further show that there is a mild 2σ discrepancy between the validity of the DDR and the latest publicly available Cepheid-calibrated SNIa constraint on H0.

Auteur principal: HOGG, Natalie (IPhT CEA-Saclay)

Orateur: HOGG, Natalie (IPhT CEA-Saclay)

Classification de Session: Neutrinos