

The sound of DHOST

In generic higher-order scalar-tensor theories which avoid the Ostrogradsky instability, the presence of a scalar field significantly modifies the propagation of matter perturbations, even in weakly curved backgrounds. This affects notably the speed of sound in the atmosphere of the Earth. It can also generate instabilities in homogeneous media. I will use this to constrain the viable higher-order scalar-tensor models.

Authors: Dr LEHÉBEL, Antoine (University of Nottingham); Dr BABICHEV, Eugeny (Laboratoire de Physique Théorique)

Presenters: Dr LEHÉBEL, Antoine (University of Nottingham); Dr BABICHEV, Eugeny (Laboratoire de Physique Théorique)