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Inflation in non-local hybrid metric-Palatini gravity

Within the framework of hybrid metric-Palatini gravity, we incorporate non-localities introduced via the inverse of the d'Alembert operators acting on the scalar curvature. We analyse the dynamical structure of the theory and, adopting a scalar-tensor perspective, assess the stability conditions to ensure the absence of ghost instabilities. Focusing on a special class of well-defined hybrid actions – where local and non-local contributions are carried by distinct types of curvature – we investigate the feasibility of inflation within the resulting Einstein-frame multi-field scenario. We examine how the non-minimal kinetic couplings between the fields, reflecting the non-local structure of the original frame, influence the number of e-folds and the field trajectories. To clarify the physical interpretation of our results, we draw analogies with benchmark single-field inflation scenarios that include spectator fields.

Authors: Prof. VAN DE BRUCK, Carsten (University of Sheffield); Dr BOMBACIGNO, Flavio (Centro Mixto Universitat de Valencia); DE ANGELIS, Mariaveronica (University of Sheffield); Dr GIARÈ, William (University of Sheffield)

Presenter: DE ANGELIS, Mariaveronica (University of Sheffield)

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