



Canadian Association
of Physicists

Association canadienne
des physiciens et physiciennes

Contribution ID: 19

Type: Oral (Non-Student) / Orale (non-étudiant(e))

Scalar-tensor gravity as an imperfect fluid, with applications

Monday, 7 June 2021 11:55 (3 minutes)

Scalar-tensor gravity can be described as general relativity plus an effective imperfect fluid corresponding to the scalar field degree of freedom of this class of theories. A symmetry of electrovacuum Brans-Dicke gravity translates into a symmetry of the corresponding effective fluid. We present the formalism and an application to an anomaly in the limit of Brans-Dicke theory to Einstein gravity.

[Based on V. Faraoni & J. Côté, Phys. Rev. D 98, 084019 (2018); Phys. Rev. D 99, 064013 (2019)]

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Session Classification: M1-2 Classical and Quantum Gravity I (DTP) / Gravité classique et quantique I (DPT)

Track Classification: Theoretical Physics / Physique théorique (DTP-DPT)