

# Cosmological gravitational particle production: Starobinsky vs Bogolyubov, uncertainties, and issues

*Monday 7 July 2025 16:00 (20 minutes)*

Gravitational particle production provides an ever-present background in non-thermal dark matter studies. I discuss the correspondence between the Starobinsky and Bogolyubov approaches to the problem of inflationary particle production, and derive strong constraints on frameworks with scalar dark relics.

(Based on D. Feiteira, O. Lebedev, arXiv:2503.14652)

**Authors:** DA SILVA FEITEIRA, Duarte Miguel (University of Helsinki); Prof. LEBEDEV, Oleg (University of Helsinki)

**Presenter:** DA SILVA FEITEIRA, Duarte Miguel (University of Helsinki)

**Session Classification:** Parallel 2