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## Testing Unified Dark matter-energy models in the non-linear regime

*Thursday, 7 July 2022 10:40 (10 minutes)*

In this talk I will present the work of testing, for the first time, a Unified Dark Matter-Energy model in the non-linear regime. Starting from a linear implementation, which includes a non linear effect named backreaction, in the Boltzmann code CLASS of a UDM Chaplygin Gas model tested against weak lensing, CMB, SNe IA and BAO, we focus on a simpler UDM model lagrangian to be implemented as a first test in an N-Body DM simulation code. I will present a spherical solution for the model as a test in the non-linear regime and the ongoing work in the implementation of the model in the N-Body code.

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**Session Classification:** Scientific session