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Interfacing galaxy formation with precision cosmology

physikalisches

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16:00 Uhr
Ort: H34

Numerical simulations of cosmic structure formation have become a powerful tool in astrophysics. Starting right after the Big Bang, they predict the dark matter backbone of the cosmic web far into the non-linear regime and follow complex galaxy formation physics with rapidly improving fidelity.

In my talk, I discuss extremely large simulations of the Universe and describe how they help to constrain cosmological parameters, including the mass of neutrinos.



A galaxy proto cluster region in a cosmological simulation. Two massive galaxy groups have formed (orange) and high speed gas motions (in white) reveal galactic-scale outflows driven by feedback.