

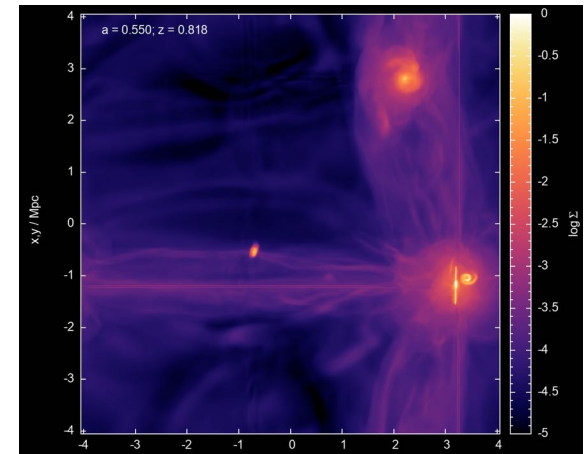
Freitag, 7. Juli 2023, 13 Uhr c.t. im Hörsaal I des Physikalischen Instituts



Pavel Kroupa

Universität Bonn

„The dark-matter-free Universe“



Contrary to general belief, the matter content of the Universe is not dominated by dark matter particles. This is shown by a number of tests using modern astrophysical data all of which lead to mutually consistent conclusions. This implies that the dark-matter-based cosmological models are not relevant for accounting for the observed cosmological structures and their time evolution. I will outline our steps towards a comprehensive non-dark-matter (and non-dark-energy) based cosmological model which have matured to simulations of structure formation that appear to be consistent also with the JWST observations of galaxies at redshifts larger than 10.