Contributed Talk

Splinter Euclid

The Magneticum Simulations

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Upcoming astronomical surveys and instruments like Planck, SPT, PanStars, DES, Euclid, LOFAR, eRosita and many more will need a theoretical counterpart in form of simulations which follow the formation of cosmological structures in so far unaccomplished detail, taking into account enough physical processes to allow a self consistent comparison to observations at multiple wavelength and throughout the entire epoch of structure formation. I will report the results from a recent simulation campaign (Magneticum, www.magneticum.org), where we followed the formation of cosmological structures in so far unaccomplished detail, performing a large set of cosmological, hydrodynamical simulations covering up to Gpc^3 volumes, taking into account enough physical processes (star-formation, chemical enrichment, AGN feedback) to allow a self consistent comparison to observations at multiple wavelength.