

Cosmic Reionization On Computers

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Abstract

Cosmic Reionization On Computers (CROC) is a long-term program of numerical simulations of cosmic reionization. Its goal is to model fully self-consistently (albeit not necessarily from the first principles) all relevant physics, from radiative transfer to gas dynamics and star formation, in simulation volumes of up to 100 comoving Mpc, and with spatial resolution approaching 100 pc in physical units. We describe our numerical method, the design of simulations, the calibration of numerical parameters, and compare simulation results with the observational data.