

Abstract

Results from numerical simulations including non-equilibrium chemistry, stellar evolution, metal spreading and radiative transfer will be discussed in order to shed light on the primordial cosmological epochs. Simulation results will be compared against observational data and employed to study the formation of the first galaxies, investigate their impact on reionization, constrain the role of molecules and metals, address the effects of different assumptions for the initial mass function, and explore the formation path of early massive black holes.