[구CO-03] The Inhomogeneous Background of Hydrogen-Molecule Dissociating Radiation during Cosmic Reionization

Kyungjin Ahn
Chosun University

The first, self-consistent calculations of the cosmological H2 dissociating UV background produced during the epoch of reionization (EOR) by the sources of reionization are presented. Large-scale radiative transfer simulations of reionization trace the impact of all the ionizing starlight on the IGM from all the sources in our simulation volume down to dwarf galaxies of mass ~ 100 million solar mass, identified by very highresolution N-body simulations, including the self-regulating effect of IGM photoheating on dwarf galaxy formation. The UV continuum emitted below 13.6 eV by each source is then transferred through the same IGM, attenuated by atomic H Lyman series resonance lines, to predict the evolution of the inhomogeneous background in the Lyman-Werner band of H2 between 11 and 13.6 eV. The impact of this background on the formation of first stars and its observables at high redshift are also discussed.

[구CO-04] Probing Dark Energy Properties through Strong Lensing Statistics

채규현(Kyu-Hyun Chae)[1], 이석천(Seokcheon Lee)[2]
[1]*세종대학교(Sejong University),* [2]*Academia Sinica, Taiwan*

We probe dark energy evolution properties through strong lensing statistics based on radio-selected lens systems, SDSS galaxy samples and dark haloes from N-body simulations. The investigated dark energy evolution models include the CPL parameterization of dark energy equation of state and holographic dark energy models.