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Introductory course: DM

Monday 5 February 2024 10:45 (1h 15m)

In this lecture, we will discuss the basics of dark matter. In particular, we discuss the evidence of dark matter from astrophysical scales to cosmological scales, for instance, galaxy rotation curves, lensing, cosmic microwave background, etc. We then discuss the cosmological origin of dark matter, namely how it is produced in the first few seconds of the universe, how it evolves throughout the history of the universe, and how it affects the structure of the universe we observe today. Lastly we will briefly discuss possible ways to detect dark matter with terrestrial detectors and with astrophysical observation. This includes conventional dark matter direct and indirect detection strategies.

Chair: Dieter Horns

Presenter: KIM, Hyungjin (T (Cosmology))