

# Manifesting hidden dynamics of a sub-component dark matter

*Wednesday, 10 July 2024 17:10 (20 minutes)*

A distinctive cosmological dynamics of a sub-component dark matter will be discussed. The thermal evolution of the sub-component is significantly affected by the sizable self-scattering and the required annihilation cross section of the sub-component sharply increases as we consider a smaller relative abundance fraction among the dark-matter species. Therefore, contrary to a naive expectation, it can be easier to detect the sub-component with smaller abundance fractions in direct/indirect-detection experiments and cosmological observations.

**Primary author:** SHIN, Seodong (Jeonbuk National University)

**Presenter:** SHIN, Seodong (Jeonbuk National University)

**Session Classification:** Poster session

**Track Classification:** Parallel session: Cosmology Dark Matter