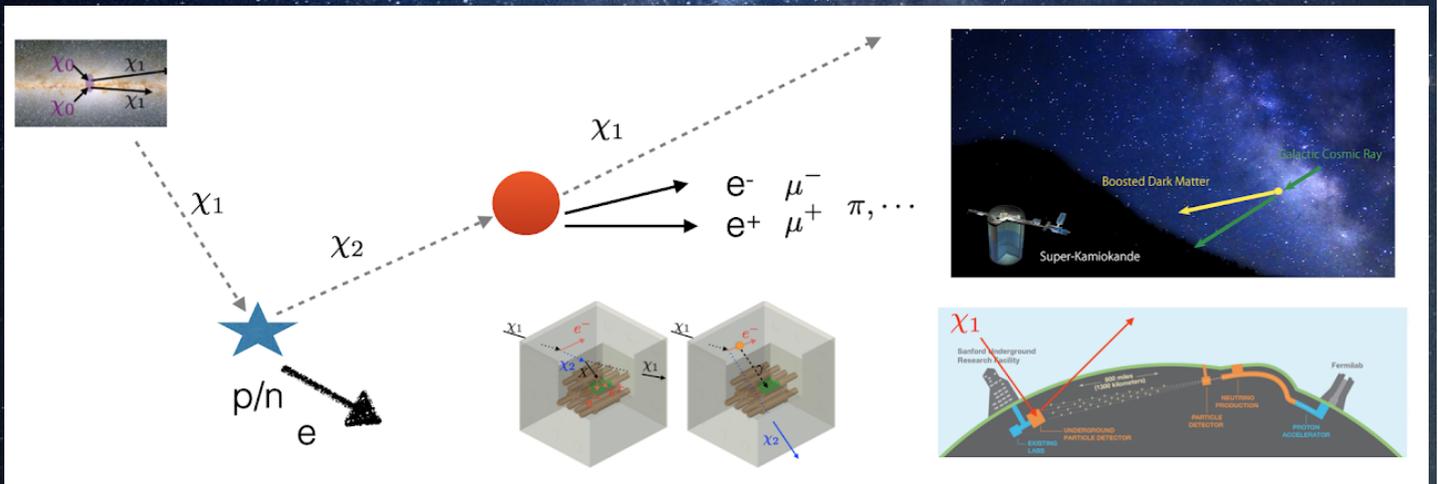




# The 1st workshop on Boosted Dark Matter (BDM 2023)



The 1st workshop on Boosted Dark Matter (BDM 2023) will take place in Institute for Basic Science, Daejeon, Korea on June 16 - 18, 2023. This is a satellite workshop followed by the 16th International Conference on Interconnections between Particle Physics and Cosmology (PPC 2023) <https://indico.ibs.re.kr/event/540/> (June 12 - 16).

BDM 2023 is aiming to gather various theoretical and experimental experts who have worked on the fast-moving dark sector scenarios, which we dub "Boosted Dark Matter (BDM)" for simplicity.

Recently, various new ideas of dark sector theories including a light energetic dark matter with relativistic or semi-relativistic kinetic energy boosted by dark sector structures, highly energetic cosmic-rays or neutrinos, and astrophysical objects such as supernovae, primordial

blackhole, etc, have been actively proposed. It is intriguing that these new types of signals have been seriously searched by current neutrino and dark matter experiments such as Super-Kamiokande, COSINE-100, PANDA-X, and CDEX. Moreover, the collaborations of future generation experiments such as DUNE and COSINE-200 will join the probes of BDM. We would like to have an opportunity to boost up

### **Invited speakers**

Christopher Cappiello (Queen's U.): Boosting Light Dark Matter with Cosmic Rays and Supernovae

Koun Choi (IBS-CUP): SK BDM search results and future prospect with SK/HK

Yanou Cui (UC Riverside): Multi-component BDM + Boosted Axion

Anirban Das (Seoul Nat'l U.): BDM from DSNB

Atanu Guha (Chungnam Nat'l U.): Cosmic-ray BDM

Yongsoo Jho (Weizmann Institute): Upscattered light dark matter by stellar neutrinos and cosmic rays

Ayuki Kamada (U. of Warsaw): Manifesting hidden dynamics of a sub-component DM

Doojin Kim (Texas A&M U.): Inelastic scattering of BDM

Kyungwon Kim (IBS-CUP): Search for BDM in COSINE-100

Xuyang Ning (Shanghai Jiao Tong U.): Search for boosted light DM in PandaX experiment

Volodymyr Takhistov (KEK & IPMU): DM and fundamental physics from atmospheric collider

Yun-Tse Tsai (SLAC): BDM at DUNE

Meng-Ru Wu (Academia Sinica): Searching for Afterglow - light DM boosted by supernova neutrinos

Rui Xu (Tsinghua U.): The cosmic-ray BDM and the Earth shielding effect in CDEX-10 experiment

Zhenhua Zhang (Tsinghua U.): Search for boosted keV-MeV light DM particles and evaporating primordial black holes at the CDEX-10 experiment

More..

### **Organizers**

Jong-Chul Park (Chungnam National University)

Seodong Shin (Jeonbuk National University)