

第28回 RESCEU コロキウム



東京大学大学院理学系研究科 附属ビッグバン宇宙国際研究センター

日 時: 2018年6月13日(水) 13:30 ~ 14:30

場 所: 理学部4号館1階ピロティ RESCEU セミナー室

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Hunting for Dark Matter with SuperCDMS, GAPS and GRAMS

The existence of dark matter has been indicated in many astrophysical phenomena, but the nature of dark matter still remains a great mystery. Complementary dark matter searches with different detection methods are crucial to illuminate the nature and the origin of dark matter. In this talk, I will be presenting my research on both the SuperCDMS (direct dark matter search) and the GAPS (indirect dark matter search) experiments as well as the scientific roles of the projects in the dark matter search. While SuperCDMS measures the dark matter scattering within the detector, GAPS focuses on low-energy antiprotons and antideuterons produced by dark matter annihilation and decay in the dark matter halo. Both projects are funded for a science run/flight and will begin taking data in 2020. I will also be introducing a new project/concept, GRAMS (gamma-ray and antimatter survey) that I have been developing over the past year. GRAMS is the first experiment aiming for both MeV gamma-ray observation and antimatter-based dark matter search using a LAr-TPC detector. Through GRAMS, we can explore astrophysical objects in the MeV energy domain (“MeV gap”) while pursuing dark matter.

興味をお持ちの方の聴講を歓迎致します。お茶とお菓子を用意しております。