

第3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

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場 所: 理学部4号館1階ピロティ RESCEU セミナー室

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Dark matter searches in anisotropic gamma-ray sky

As a viable candidate of dark matter, weakly interacting massive particle (WIMP) has been studied. WIMP is considered to annihilate with itself, and as its consequence, to produce high-energy gamma rays. Since dark matter has been annihilating (if ever happens) since the beginning of the structure formation, it gives contributions to the diffuse gamma-ray background measured with the Fermi satellite. The measurement of the gamma-ray background spectrum already gives one of the tightest constraints on the annihilation cross section. Since Fermi already collected more than 5 million photons from the whole sky (above 1 GeV), it is possible to discuss ***anisotropy*** of the gamma-ray background. I will discuss (1) the angular power spectrum, (2) one-point PDF of the gamma-ray flux, and (3) cross correlation with local galaxy catalogs, and prospects on discovering dark matter particles in the near future in the gamma-ray data.

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。