

[구GC-13] Probing Cosmic Near Infrared Background using AKARI Data

Hyun Jong Seo¹, Toshio Matsumoto^{2,3}, Woong-Seob Jeong⁴, Hyung Mok Lee¹,
 Shuji Matsuura², Hideo Matsuhara², Shinki Oyabu⁵, Jeonghyun Pyo⁴, and
 Takehiko Wada²

¹*Seoul National University*, ²*ISAS/JAXA*, ³*ASIAA(Taiwan)*, ⁴*KASI*, ⁵*Nagoya University*

The first generation stars in the universe are not observed as discrete objects by using current observational facilities, but their contributions are redshifted to the near infrared wavelength bands at present universe. Therefore, investigation of background radiation at near infrared is important for the study of the first stars. In this study, we present new observations of spatial fluctuations in sky brightness toward the north ecliptic pole using data from AKARI. Among pointed observation program of AKARI, we used two pointing surveys named Monitor field and NEP wide field at three wavelength bands 2.4, 3.2, and 4.1 μm . To obtain spatial fluctuations from observed images, first of all, we exclude pixels affected by resolved foreground objects and then obtain diffuse map which consists of diffused radiation only. Because the diffuse map contains not only cosmological components but also various foreground components, in order to detect cosmological components, we estimate the contributions of foreground components separately. The results of this study show that there remains excess spatial fluctuation that cannot be explained by known foreground sources. This work is based on observations with AKARI, a JAXA project with the participation of ESA.

[구GC-14] 초은하단의 선형지수를 이용한 중력 검증

심준섭, 이정훈
 서울대학교

초은하단을 구성하고 있는 은하단들의 분포를 통해 선형지수를 구하고 이를 이용하여 초은하단 규모에서 다양한 중력 모델을 검증한다.