

[구IM-11] FUV Emission-line Morphologies of the SNR G65.3+5.7

Il-Joong Kim¹, Kwang-IlSeon¹, Kyoung-Wook Min²

¹*Korea Astronomy and Space Science Institute (KASI),*

²*Korea Advanced Institute of Science and Technology (KAIST),*

We present the far-ultraviolet (FUV) emission line morphologies in the whole region of the supernova remnant G65.3+5.7 using the FIMS/SPEAR data. The morphologies of the C IV $\lambda\lambda 1548, 1551$, H2 $\lambda 1608$, He II $\lambda 1640$, and O III] $\lambda\lambda 1661, 1666$ lines appear to correlate clearly with the optical emission line images or the ROSAT X-ray (0.11–0.284 keV) image obtained in some of the previous studies. We found that a foreground dust cloud, resonant scattering, and incompleteness of radiative shocks have made the definite differences between the morphologies of the above FUV emission lines. We also present the FUV spectra and line intensities from a few sub-regions.

[부IM-12] KARI infrared observations of the Crab Nebula

Soo-Jin Im¹, Bon-Chul Koo¹, Jae-Joon Lee², Ho-Gyu Lee³

¹*Seoul National University,* ²*Pennsylvania State University,* ³*University of Toronto*

We present near- and mid-infrared images of the Crab Nebula, taken with the Infrared Camera (IRC) onboard the AKARI infrared space telescope. These images have a field-of-view of $10' \times 10'$ and show the full extent of the nebula at 3, 4, 7, 11, 15, and 24 μm . The Crab nebula in near infrared is dominated by synchrotron emission while, in mid infrared, the ionic forbidden lines of Ar, Ne, S, and Fe makes significant contribution.

We separate the line emission from synchrotron emission in 3–15 μm AKARI bands using the ISOCAM CVF data, and present separate images for the line and synchrotron emissions in each band. We derive the total synchrotron fluxes of the Crab nebula in these bands, which are used to complete the synchrotron spectral energy distribution of the Crab nebula from radio to X-rays. We discuss the spectral variations of the Crab nebula.