[S13-5] FIMS/SPEAR Far Ultraviolet Spectral Images of the Cygnus Loop

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We present far-ultravilet (FUV) spectral images, measured at C IV 1550, He II 1640, Si IV+O IV] 1400, O III] 1664, of the entire Cygnus Loop, observed with the FIMS/SPEAR instrument. The spatial distribution of FUV emission generally corresponds with a limb-brightened shell, and is similar to optical, radio and X-ray images. The features found in the present work include a "carrot", diffuse interior, and breakout features, which have not been seen in previous FUV studies. Shock velocities of 140-160 km/s is found from a line ratio of O IV] to O III], which is insensitive not only to resonance scattering but also to elemental abundance. The estimated velocity indicates that the fast shocks are widespread across the remnant. By comparing various line ratios with steady-state shock models, it is also shown that the resonance scattering is widespread.

[S13-6] Infrared Supernova Remnants in the Spitzer GLIMPSE Field

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We have searched for infrared emission of supernova remnants (SNRs) included in Spitzer Galactic Legacy Infrared Mid-Plane Survey Extraordinaire (GLIMPSE) field ($10° < |l| < 65°$, $|b| < 1°$). At the positions of 100 known SNRs, we made 3.6, 4.5, 5.8, and 8.0 μm band images covering the radio continuum emitting area of each remnant. In-depth examinations of four band images based on the radio continuum images of SNRs, result in identification of sixteen infrared SNRs in the GLIMPSE field. Eight SNRs show distinct infrared emission in nearly all four band, and the other eight SNRs are visible in more than one band. We present RGB images of identified SNRs. These images are first high resolution (1″.2) infrared images with comparative resolution of radio continuum (2″.1 - 43″) for SNRs detected in mid-infrared. The images show usually very thin filaments along the SNR boundaries. Most SNRs are well identified in 4.5 and 5.8 μm bands. We will briefly discuss about the nature of infrared emission.