[구GC-13] Optical Follow-up Observation of Gamma-ray Bursts

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Gamma-ray bursts (GRB) are the most energetic phenomena in the universe. The bursts are followed by optical afterglows which are also extremely bright. Due to the extreme brightness, the afterglow can be detected out to a very high redshift, providing a unique way to explore the high redshift universe. In this talk, we will present the first results from the GRB afterglow follow-up observations using the Mt. Lemmon 1-m telescope operated by the Korea Astronomy Space Science Institute. Since October 10, 2007, we have successfully observed 9 GRB afterglow events, and reported more than a dozen GCN Circulars. Some of the afterglows are found to be quite interesting - a GRB at $z = 0.97$ with a very long jet break time, and a GRB at $z \sim 5$. This demonstrates that even a small telescope can study the high redshift universe.

[포GC-14] Near-Infrared Observation of the Blazar S5 0716+714 using KASINICS

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Blazar variability can be broadly divided into 3 classes; microvariability or intra-day variability (over one day or less), short-term outbursts (range from weeks to months), and long-term trends (of several years). Multi-wavelength observations are required for modeling of the blazar phenomenon and understanding the causes for their variability. However, there have been very few studies of micro and short-term variability of blazars in the near-infrared wavelengths. We report results from the monitoring of the blazar S5 0716+714 in J, H, and Ks bands. The observations were carried out over 8 nights using the KASI Near Infrared Camera System (KASINICS) at the 1.8 m telescope of the Bohyunsan Optical Astronomy Observatory (BOAO). Significant (0.2-0.3 magnitudes) short-term variability has been detected in all of the three near-infrared bands and also in the colors of J-H and J-Ks.