## [구IGR-04] Auto-guiding Performance from IGRINS Test Observations (Immersion GRating INfrared Spectrograph)

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In astronomical spectroscopy, stable auto-guiding and accurate target centering capabilities are critical to increase the achievement of high observation efficiency and sensitivity. We developed an instrument control software for the Immersion GRating INfrared Spectrograph (IGRINS), a high spectral resolution near-infrared slit spectrograph with (R=40,000). IGRINS is currently installed on the McDonald 2.7 m telescope in Texas, USA. We had successful commissioning observations in March, May, and July of 2014. The role of the IGRINS slit-viewing camera (SVC) is to move the target onto the slit, and to provide feedback about the tracking offsets for the auto-guiding. For a point source, we guide the telescope with the target on the slit. While for an extended source, we use another a guide star in the field offset from the slit. Since the slit blocks the center of the point spread function, it is challenging to fit the Gaussian function to guide and center the target on slit. We developed several center finding algorithms, e.g., 2D-Gaussian Fitting, 1D-Gaussian Fitting, and Center Balancing methods. In this presentation, we show the results of auto-guiding performances with these algorithms.

## [구IGR-05] IGRINS Observations of Star Forming Clouds in NGC 6822 Hubble V

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NGC 6822 is a dwarf irregular galaxy in the Local Group. Unlike clouds in the Large Magellanic Cloud and the Small Magellanic Cloud, molecular clouds in NGC 6822 are not influenced by the Galactic tidal force. Therefore the star forming processes are only dictated by local conditions. Hubble V is the brightest of the several bright H II region complexes in NGC 6822. The core of Hubble V, surrounded by a molecular cloud complex, contains compact clusters of bright blue stars. During the commissioning runs of the new high-resolution near-infrared spectrometer, IGRINS (Immersion GRating near-INfrared Spectrometer), we observed Hubble V and detected many emission lines from the H II regions and from the photodissociation region at the interface between the ionized gas and the molecular cloud. In this presentation, we report preliminary results of the IGRINS observations. We discuss the implications of the observed lines ratios and kinematics for our understanding of the evolution of star forming molecular clouds.