perpendicular to dense ones. Furthermore, the magnetic field directions with respect to density gradients vary again with density in denser core regions, which is understood by core formation and pinched fields.

Note: (PI) D. Ward-Thompson, (co-PIs) P. Bastien, T. Hasegawa, W. Kwon, S. Lai, and K. Qiu

[포 IM-04] MIRIS Paα Galactic Plane Survey: The results in l = 276°-296°

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The Multipupose InfraRed Imaging System (MIRIS) Paα Galactic Plane Survey (MIPAPS) covers the whole Galactic plane with the latitude range of $-3° < b < +3°$. Next to the first result in l = 96°-116° (Cepheus), we present the results in l = 276°-296° (Carina). This region with the direction toward the inner Galaxy, has much higher extinction but much more Paα-emitting sources than Cepheus. We list up the detected Paα sources, and compare them with the WISE H II region catalog (there are 308 H II regions and candidates in this region) and VPHAS+ Hα image. By detecting the Paα and Hα recombination lines, 71 H II region candidates are newly confirmed as definite H II regions, out of which 53 H II regions are detected at Paα. For the Paα-detected sources, we measure the Paα and Hα fluxes and estimate the E(B-V) color excesses for the extended sources.

[포 IM-05] Determination of Nitrogen Abundance Ratio from Low-Resolution Stellar Spectra

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We present a method for determining the abundance ratio of nitrogen to iron ([N/Fe]) from low-resolution (R~2000) stellar spectra from large spectroscopic surveys such as Sloan Digital Sky Survey (SDSS) and Large Sky Area Multi-Object Fiber Spectroscopic Telescope (LAMOST). The basic idea of the method is to match a grid of synthetic spectra with an observed spectrum in the CN band region around 3883 Å. To calibrate our estimate of [N/Fe], we make use of the giants observed in Apache Point Observatory Galaxy Evolution Experiment (APOGEE), which are also observed in the SDSS. This method will be applied to the Galactic halo stars to determine [N/Fe], and the measured nitrogen abundance ratios will be used to investigate the C-N anti-correlation, which is observed in globular clusters, to trace their origin with their kinematic properties.

[포 IM-06] Spatial Variations of Chemical Abundances in The Galactic Disk

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We present spatial variations of chemical abundances ([Fe/H] and [α/Fe]) in the Galactic disk, using a large number of dwarfs and giants from Large Sky Area Multi-object Fiber Spectroscopic Telescope (LAMOST). Specifically, we investigate how the metallicity distribution function (MDF) and the alpha abundance distribution function (ADF) change with the distance from the Galactic center to understand the chemical evolution history of the Galactic disk. We also study the difference (if any) in the MDF and ADF between dwarfs and giants to provide valuable clues to the formation history of the Galactic disk.

[포 IM-07] On the properties of six cores in the λ Orionis cloud: triggered or non-triggered star formation?

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We present preliminary results of 1.1 and 1.3 mm dust continuum and ^{12}CO (J=2-1) line data obtained with the Submillimeter Array toward six cores harboring Class 0/I objects in the λ Orionis cloud. They are located in bright rimmed clouds, which are exposed to the far-ultraviolet radiation field by the O-type star λ Ori. Compact dust continuum emission is observed from all six cores. Among the six cores, only one core G196.92-10.37 shows a signature of binarity with separation of 4000 AU. The numbers of singles and binaries in our sample are five and one, respectively and the derived multiplicity frequency (MF) is 0.17. This value is lower than those found in the binary surveys toward Class 0/I objects, which may be a hint for negative feedback by the nearby massive