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We present the results of high-resolution optical (R ~ 30,000) and near-infrared (R ~ 45,000) spectroscopic monitoring observations of a new FU Orionis-like young stellar object, 2MASS J06593158-0405277. FU Orionis objects (FUors) are well-studied examples of episodic accretion because of their outburst phenomenon. Recently, 2MASS J06593158-0405277 exhibited an outburst and was identified as a FUor. It provides an important opportunity to investigate the whole FUors phenomenon from its pre-outburst to its post-outburst phase. We monitored 2MASS J06593158-0405277 with the BOES and the IGRINS since Dec 25, 2014 (UT). We detected several wind and disk features and present here our analysis for time variations of those spectral lines.

[포IM-03] TRAO Key Science Program: mapping Turbulent properties In star-forming MolEcular clouds down to the Sonic scale (TIMES)

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Turbulence is a phenomenon which largely determines the density and velocity fields in molecular clouds. Turbulence can produce density fluctuation which triggers a gravitational collapse, and it can also produce a non-thermal pressure against gravity. Therefore, turbulence controls the mode and tempo of star formation. However, despite many years of study, the properties of turbulence remain poorly understood. As part of the Taeduk Radio Astronomy Observatory (TRAO) Key Science Program (KSP), "mapping Turbulent properties In star-forming MolEcular clouds down to the Sonic scale (TIMES; PI: Jeong-Eun Lee)", we have mapped two star-forming clouds, the Orion A and the ρ Ophiuchus molecular clouds, in 3 sets of lines (13CO 1-0/C18O 1-0, HCN 1-0/HCO+ 1-0, and CS 2-1/N2H+ 1-0) using the TRAO 14-m telescope. We aim to map entire clouds with a high-velocity resolution (~0.05 km/s) to compare turbulent properties between two different star-forming environments. We will present the preliminary results using a statistical method, Principal Component Analysis (PCA), that is a useful tool to represent turbulent power spectrum.

[포IM-04] Differences between N-PDFs derived from Continuum and Molecular Emission Toward the Orion A Molecular Cloud

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The probability distribution function of column density (N-PDF) has been used for studying the characteristics of molecular clouds. In particular, the properties of N-PDF can reveal the nature of turbulence and gravity inside the molecular cloud. We use the dust continuum emission at 450 μm and 850 μm observed as part of the JCMT Gould Belt Survey (GBS) (Mairs et al. 2016), the 12CO J=1-0 line observed with the 45 m telescope at Nobeyama Radio Observatory (NRO) (Shimajiri et al. 2011), 13CO, C18O and HCO+ J=1-0 observed with the 13.7 m telescope at Taeduk Radio Astronomy Observatory (TRAO), as part of the TRAO key science project, "mapping Turbulent properties In star-forming MolEcular clouds down to the Sonic scale" (TIMES; PI: Jeong-Eun Lee). We here present the N-PDFs derived from the continuum and the molecular line emission toward the Orion A molecular cloud and compare their behaviors in order to investigate the chemical and optical depth effects on the N-PDF.

[포IM-05] Dichotomy of the Galactic Halo as Revealed by Carbon-Enhanced Metal-Poor Giants

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We present distinct chemical and kinematic