studies has been increasing, with remarkable results and performances. For instance, the discovery of an impact scar near Jupiter's south polar region (A. Wesley, 2009) led to an international campaign of professional observations to understand the asteroidal collision responsible for the scar. Citizen science at KMLA has been and will be mainly conducted by members of the astronomical observation club 'Apple-Pie' through amateur telescopes. Members of 'Apple-Pie' are specialized in various fields related to astronomy, from planetary science to cosmology. The spectrum not only includes fields that are directly related to astronomy but also fields such as computer science and astrophotography. The scheduled construction of a new observatory will further enable students to participate in higher level projects such as planetary monitoring over long timescales and the observation and detection of solar system bodies and exoplanets. In addition, a new supervisor with expertise and research experience in galactic astronomy, planetary science, and meteorology has joined the school faculty. He will supplement students with fundamental theoretical backgrounds and essential research techniques to enhance astronomical research at KMLA. KMLA's ultimate goal is to deploy a remote-controlled observatory available to aspiring scientists around the world to create a network of citizen science system. The prime observational conditions of KMLA and the willingness of the students and faculty members will provide a competitive edge for KMLA over other similar institutes in Korea.

[포SE-04] ctivity Report of Young Astronomers Meeting in 2017-18 Season

Doohyun Choi[1], Jinhyub Kim[2], Doori Han[3], Seok-jun Chang[1], Jisu Kang[4], Donghyun Kim[5], Sophia Kim[4], Mina Park[6], So-Myoung Park[7]
[1]Department of Astronomy and Space Science, Sejong University, [2]Department of Astronomy, Yonsei University, [3]Department of Astronomy, Space Science and Geology, Chungnam National University, [4]Department of Physics and Astronomy, Seoul National University, [5]Department of Astronomy and Atmospheric Sciences, Kyungpook National University, [6]Department of Astronomy and Space Science ,University of Science and Technology (UST), [7]School of Space Research, Kyung Hee University

지난 2017년 4월, 젊은 천문학자 모임 (Young Astronomers Meeting, YAM) 정기총회에서 2017-18년도 임원진으로 회장 최두현 회원(세종대학교), 부회장 김진협 회원(연세대학교), 총무 한두리 회원(충남대학교)를 선출하였다. 임원진은 경북대학교 김동현 회원, 경희대학교 박소명 회원, 과학기술연합대학원 박민아 회원, 서울대학교 김소피아 회원을 학교별 운영위원으로 임명하였다. 현 임원진은 본 모임의 온라인 소식지인 <하늘 사랑>을 2017년 가을에 7호, 2018년 봄에 8호를 발간하였다. 이와 더불어 2017년 일본 이시가키에서 개최된 EAYAM에 권유나 회원 외 6명의 회원이 참여하여 동아시아 젊은 천문학자들과 함께 학술 발표 및 교류를 하였다. 2018년 2월에는 We Love Galaxies – Young Astronomers Meet Universe 워크샵을 개최하고 YAM의 지속적인 학술 모임을 위한 기반을 다졌다. 이번 포스터에서는 2017-18년도 동안의 활동 내용을 보고하고 이후의 계획에 대해 논의하려고 한다.

성간물질/별생성/우리은하

[포IM-01] IGRINS observations of a Herbig Be star, MWC 1080

Il-Joong Kim[1], Heeyoung Oh[1], Woong-Seob Jeong[1]
[1]Korea Astronomy and Space Science Institute

Through MIRIS Paα Galactic plane survey, a lot of Paα blobs were detected along the plane. To reveal their characteristics, we are planning to collect NIR high-resolution spectroscopic data for them by using Immersion GRating INfrared Spectrograph (IGRINS). Here, we present the preliminary results of the IGRINS observations for a Herbig Be star, MWC 1080, which is one of the Pa α blobs detected in Cepheus. This Herbig Be star is known to possess a lot of young stellar objects (YSOs) and bright MIR (10-20 μm) nebulosity in its vicinity. From IPHAS Hα data, we revealed large extended Hα features that correlate well with MIR and 13CO morphologies around MWC 1080. A part of the Hα features shows a bow shock shape to the northeast of the primary star MWC 1080A, which seems to be due to an outflow from MWC 1080A. Through IGRINS observations, we detected faint [Fe II] λ1.644 μm and H2 1-0 S(1) λ2.122 μm emission lines around the bow shock feature. Interestingly, to the east region of MWC 1080A, we also detected strong [Fe II] and H2 emission lines with a couple of velocity components, which suggests the detection of a new outflow from another YSO. Broad Brγ λ2.1662 μm line and H2 lines with various velocity components were detected around the bright MIR and Hα nebulosity as well.

[포IM-02] High-resolution Optical and Near-infrared Monitoring Observations of 2MASS J06593158-0405277

Sunkyung Park[1], Jeong-Eun Lee[1], Tae-Soo Pyo[2], Hyun-Il Sung[3], Sang-Gak Lee[4], Wonseok Kang[5],

Tae Seog Yoon[6], and Won-Kee Park[3]
[1]School of Space Research, Kyung Hee University, [2]Subaru Telescope, National Astronomical Observatory of Japan, [3]Korea Astronomy and Space Science Institute, [4]Seoul National University, [5]National Youth Space Center, [6]Kyungpook National University

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)

Hyeong-Sik Yun[1], Jeong-Eun Lee[1], Yunhee Choi[1], Seokho Lee[1], Giseon Baek[1], Yong-Hee Lee[1], Minho Choi[2], Hyunwoo Kang[2], Ken'ichi Tatematsu[3], Brandt A. L. Gaches[4], Mark H. Heyer[4], Neal J. Evans II[2,5], Stella S. R. Offner[5], Yao-Lun Yang[5]
[1]School of Space Research, Kyung Hee University, Republic of Korea, [2]Korea Astronomy and Space Science Institute, Republic of Korea, [3]National Astronomical Observatory of Japan, Japan, [4]Department of Astronomy, University of Massachusetts, Amherst, USA, [5]Department of Astronomy, University of Texas, Austin, USA

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

Yong-Hee Lee[1], Jeong-Eun Lee[1], Hyeong-Sik Yun[1], Jongsoo Kim[2], Yunhee Choi[1], Steve Mairs[3], Doug Johnstone[3]
[1]Kyung Hee University, School of Space Research. [2]Korea Astronomy and Space Science Institute, [3]NRC Herzberg Astronomy and Astrophysics.

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

Jaehun Jung[1], Young Sun Lee[2], Young Kwang Kim[2]
[1]Department of Astronomy, Space Science, and Geology, Chungnam National University, Daejeon 34134, South Korea
[2]Department of Astronomy and Space Science, Chungnam National University, Daejeon 34134, South Korea

We present distinct chemical and kinematic