

포스터발표초록

교육홍보/기타

[포 AE-01] Observation of the Bright Spectroscopic Binary Systems with DOAO/eShels Spectrograph

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Based on the DOAO/eShels observations, we have derived radial velocity curves of the three Algol-type spectroscopic binary systems : Algol, β Aur, and ϵ Per. The radial velocity amplitudes of the primary and the secondary (K1 and K2) were consistent within a few % of the values from the previous studies. Mass ratio between the two stars that constitutes each system ranges ~ 1 to ~ 10 . In addition to the orbital elements derived, we discuss about the spectroscopic ability of the DOAO/eShels instrument.

성간물질/별생성/우리온하

[포 IM-01] Top-Heavy Initial Mass Function of Star Clusters near the Galactic Centre

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Star clusters are important in understanding star formation. In star-forming regions, the number of stars with mass forms with an initial mass function (IMF), i.e. Chabrier, Salpeter, Kroupa, etc. In our simulations, initially sub-virial fractal star clusters evolve to become surviving sub-regions in strong tidal fields. We investigate the slope of the mass function (MF) of these

sub-regions with time near the Galactic centre (GC). These sub-regions would appear to have a top-heavy IMF at ~ 2 Myr. Therefore, although our star-forming region near the GC has a normal IMF, stars in surviving 'clusters' can have a top-heavy 'IMF' due to the violent environment.

[포 IM-02] A Small Star Forming Region in the Molecular Cloud MBM 110

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MBM 110 is one of the molecular clouds at high Galactic latitude discovered by Magnani et al., and is one of a dozen cometary clouds in the Orion-Eridanus superbubble.

We have conducted optical photometry and spectroscopy for a comprehensive study of the region. Recently released Gaia DR2 astrometric data as well as WISE mid-infrared data were used for the complete census of member stars. We select 17 member stars with H α emission and/or Li absorption. The total mass of stars in the region is only about 16 M_{\odot} . We found that the star formation efficiency in the region is less than 5%. We discuss the origin of the cloud and the star formation history in MBM 110.

[포 IM-03] Inner Circumstellar Ring of Galactic Luminous Blue Variable G26.

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Luminous blue variables (LBVs) are luminous evolved massive stars (thus with very large initial masses) typified by their irregular variabilities, which are sometimes associated with eruptive mass loss. G026.47+0.02 is one of the known Galactic LBV surrounded by large circumstellar shell ($r \sim 1'$) detected in far IR. In this presentation, we report the identification of another shell of smaller radii ($r \sim 20''$) indicating that the central star experienced multiple episodes of eruptions. We present detailed multi-wavelength study of the inner shell in near IR and sub-mm, with which we reconstruct its mass-loss history.

[포 IM-04] Near-Infrared Spectroscopy of SN 2017eaw in 2017: Carbon Monoxide and Dust Formation in a Type II-P Supernova