

observations of the Spitzer and AKARI revealed a signature caused by substantial heating, toward many embedded protostars at the quiescent phase.

We present the AKARI IRC 2.5–5.0 μm spectra for embedded protostars to trace down the characteristics of accretion burst across the evolutionary stages. The ice compositions obtained from the absorption features therein are used as a clock to measure the timescale after the burst event, comparing the analyses of the gas component that traced the burst frequency using the different refreeze-out timescales. We discuss ice abundances, whose chemical change has been carved in the icy mantle, during the different timescales after the burst ends.

[포 IM-05] Chemical and Kinematic Properties of Sagittarius Stellar Streams

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We use Sloan Digital Sky Survey, Large Sky Area Multi-Object Fibre Spectroscopic Telescope, and Apache Point Observatory Galactic Evolution Experiment data to analyze the kinematic and chemical properties of stellar members in Sagittarius(Sgr) tidal streams. Using distances, positions, proper motions, and angular momenta of stars around the Sgr streams, we gather clean sample of Sgr member stars. We find that the leading arm has different chemical, kinematic, orbital characteristics from those of the trailing arm and the remnant of Sgr. In particular, the leading arm shows relatively lower eccentricity distribution than the trailing arm, suggesting their origin may differ or they have experienced different dynamical evolution, which is in somewhat mystery.

[포 IM-06] Investigation of heating and accretion event of Milky Way disk

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We present preliminary results on the chemical and kinematic analysis of accreted and heated metal-rich ($-1.0 < [\text{Fe}/\text{H}] < -0.3$) stars in the Galactic disk. These stars are in the ranges of $e >$

0.7 , $-100 < V_{\phi} < 100$ km/s, and $|Z| < 3$ kpc, and are presumably heated (accreted) by (from) past merger events such as Gaia Enceladus and Sausage (GSE). These stars are largely separated into two groups based on the level of $[\alpha/\text{Fe}]$ and radial velocity dispersion. The first group has low $[\alpha/\text{Fe}]$ and high radial velocity dispersion, and the second group shows high $[\alpha/\text{Fe}]$ and low radial velocity dispersion. We propose that the first group of stars are accreted from the GSE galaxy, whereas the second group of stars are dynamically heated by the GSE merger event.

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[포 GC-01] Properties of Shocks in Simulated Merging Clusters

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Shocks are induced in the intracluster medium by mergers of subclusters during the hierarchical structure formation of the universe. Radio relics detected in the outskirts of galaxy clusters have been interpreted as diffuse synchrotron emission from cosmic ray electrons accelerated at such merger shocks. Using a set of cosmological hydrodynamic simulations, we study how the properties of merger-driven shocks depend on the parameters such as the mass ratio and impact parameter of mergers. In particular, we examine the distribution of the Mach number and energetics of shocks associated with synthetic radio relics in simulated merging clusters. In this poster, we will present the preliminary results and the implications.

[포 GC-02] How to quantify the similarity of 2D distributions: Comparison of spatial distribution of Dark Matter and Intracluster light

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