

[구AL-03] Circumstellar disk study with ALMA

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"Circumstellar disks, exoplanets and the solar system" is the one of ALMA proposal categories, which is closely related to the one of the fundamental questions in astrophysics, "when, where, and how planets form". I will review the Cycle-0/1 observational results of this topic, which had only 16/32 antennas and the maximum angular resolutions of 0.45/ 0.16 arcsec at 345GHz at that time. Eventually, ALMA equipped with 66 antennas and 0.01 arcsec angular resolution will allow us to study details of the circumstellar disks with the 1AU resolution at the distance of 100pc.

[구AL-04] Astrochemistry in the ALMA era

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Astrochemistry is a tool to understand the physical processes occurring in the interstellar medium in a variety of astrophysical environments. Many ALMA sciences are utilizing our knowledge of astrochemistry, which has grown explosively in recent years thanks to sensitive observations and laboratory work. We will review the ALMA sciences employing astrochemistry and discuss how astrochemistry can serve to answer some unique astrophysical questions.