

P124b **Dynamics of jets/outflows from high-mass young stellar objects revealed by KaVA and ALMA observations**

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We have started survey observations of the 22 GHz water maser sources associated with high-mass young stellar objects (HM-YSOs) as a part of the KaVA (KVN and VERA Array) large program. The aim of our large program is to understand dynamical evolution of jets/outflows from HM-YSOs by analyzing 3D velocity structures of water maser features. In the first year (2016-2017), an imaging survey toward 25 HM-YSOs has been conducted to check detectability and variability of the 22 GHz water masers. To complement physical properties in the vicinity of HM-YSOs, we have also carried out ALMA cycle 3 observations of thermal molecular lines and continuum emissions toward 11 selected samples. In this presentation, we will report summary of the KaVA first year observations and the initial results from the ALMA and KaVA data toward one of the observed HM-YSOs, G25.82-0.17. We identified a 1.3 mm dust continuum source powering the water masers with high angular resolution ($0.2''$ - $0.3''$). The high velocity ($\sim 10 \text{ km s}^{-1}$) SiO $J = 5 - 4$ emission was detected indicating the presence of outflowing gas from the source. In addition, the thermal methanol line emission showed a velocity gradient within the compact core, which is possible signature of a rotating disk. In the future, we are going to investigate dynamical structures of jets/outflows and mass loss/accretion processes by combining the ALMA results with proper motions of water masers measured with the KaVA.