Gas kinematics in the potential high-mass binary NGC6334 ALMAe9

○Fernando Olguin[1, 2] Yoko Oya[1] Patricio Sanhueza[3] (1.Kyoto University 2.NAOJ 3.The University of Tokyo)

Most high-mass stars (masses larger than 8 solar masses) are in binary systems formed through disk/core fragmentation or interactions in their clustered environments. Yet how the members of binary systems formed through fragmentation at <1000 au scales gain their masses is still unknown: do they share a common envelope with individual accretion flows or one of the members grows faster than the other? To resolve the kinematics of the gas around individual members, high-angular resolution observations are needed toward relatively nearby systems. In this presentation, we will show high-resolution 1.3 mm ALMA observations with the 12m array to resolve the kinematics around of the individual members of the potential high-mass binary NGC6334 ALMAe9 (distance 1.35 kpc). With an angular resolution of 0.05'' (~70 au), these observations can resolve the kinematics of the gas around each of the members separated by ~700 au. Preliminary results show that they share a common gas disk/ inner envelope, while the gas around the sources is rotating in the same direction. Sub-structures in the common disk/envelope could also imply that they are fed by stream-like inflows. We discuss whether these inflows could be feeding individual sources or if gas is being dump mostly to one of the sources.