

Discovery of a warped infalling disk around an O-type YSO

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I will present the first direct imaging of an accretion disk revealed with ALMA around an O-type young stellar object. The disk appears warped, and, by comparing the observed and modeled (including full radiation transfer) pv-plots along the disk plane, I will show there is a significant infalling motion towards the central star. The circumstellar disk drives a molecular jet which arises from the inner regions, where rotation takes over and approaches centrifugal equilibrium. I will also show how the different ALMA configurations change the appearance of the modeled pv-plot, providing a strong diagnostic tool for the observations. I will finally present new ALMA dust polarization observations which unveil the magnetic field morphology across the warped disk.

Outflow Disks