

Abstract :

We present observations of SSTau 042021 (ALMA archive and new NOEMA data 0.3"). This disk is almost perfectly edge-on with an inclination of $90.6 \pm 0.4^\circ$. We use the tomographic method described in Dutrey et al. to reconstruct the 2D brightness distribution $T_b(r,z)$ of the observed molecular lines (^{12}CO , ^{13}CO and C^{18}O). These new studies give some more interesting and unexpected results. SSTau 042021 confirms that edge-on disks are ideal laboratories to provide a direct view of the molecular stratification in protoplanetary disk, allowing a strong improvement of the comparison between chemical models and observations, leading to a more quantitative understanding of planetary forming regions.