X28a ALMA observation of a giant barred spiral at z=2.467

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Bar structures are common in local disk galaxies and play pivotal roles in secular galaxy evolution by redistributing material and angular momentum. They are believed to be long-lived structures and are now identified at redshift $z > 2$. Yet, little is known about the onset and effect of bars in the early cosmic epoch because spectroscopy of distant bars at sufficient resolution is scarce. We report 0.15 arcsec resolution ALMA CO(4-3)/[CI](1-0) and 2.1 dust continuum observation of the dusty star-forming galaxy J0107a at $z = 2.467$ which shows textbook barred spiral morphology. We find the bar of J0107a has gas distribution and motion in the same way as local bars. At the same time, the bar drives largescale non-circular motions that dominate over disk rotation, funneling molecular gas into its center at a rate of ≈ 1000 solar masses per year, powering a bright submillimeter galaxy.