

# Absence of Magnetohydrodynamic Turbulence in Circumplanetary Disks

Yuri I. Fujii, Satoshi Okuzumi, and Shu-ichiro Inutsuka (Nagoya University)

Gaseous disks form around gas giant planets during their creation. These disks are called circumplanetary disks, and are believed to be the formation sites of satellites. Although an understanding of disk evolution is required for developing theories of satellite formation, gas accretion rates of circumplanetary disks are very uncertain. The most promising mechanism of gas accretion is thought to be magnetic turbulence which is driven by magnetorotational instability (MRI), and recent studies of MRI have shown that even thin MRI-active layers can drive mass accretion. We investigate the sizes of MRI-active regions in circumplanetary disks of various surface densities by calculating the ionization degree of the disk gas. If there are no dust grains, thin active layers may appear at large radii; however, we find that there are not even thin active layers in regions of satellite formation with sufficient small dust grains. Our results suggest that gas accretion mechanism other than MRI should be taken into account.