



Tollmien-Schlichting Waves in Planetary Disks.

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We investigate the existence of Tollmien-Schlichting waves in cold protoplanetary disks. This linear study is facilitated by the use of the quasi-hydrostatic semi-geostrophic approximation of the equations of disk motion. Both analytical and numerical methods are used to uncover the essential features of the dynamics to emerge as a result of the imposition of an inner boundary. We find that instability is manifest in the system when the appropriately defined Froude number exceeds unity. As the unstable waves are driven by the inner boundary condition we conjecture that this process may lead to the generation of free-decaying turbulence downstream. We reflect upon the implications of this process.