

Turbulence in protoplanetary disks and planet formation

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I will talk on the turbulence in protoplanetary disks. The turbulence plays an important role in the planet formation, because it affects on the coagulation process of the dust. However, we have not understood well the properties of the turbulence in the protoplanetary disks yet. We do not know how the turbulence in the protoplanetary disks sets in, and when the turbulence ceases. We do not know how the dust grows up in the turbulent gas disk, either. There are many hypotheses for the source of the turbulence. I will review the various mechanisms proposed as the turbulent source. I will also talk on the growth of the dust in the turbulent gas disk.