

Characteristic length-scales in the study of the MRI in multifluid accretion disks

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Abstract:

In this talk we describe the challenge of modelling how stars form, and in particular the dynamics of the accretion disks through which the forming star accretes virtually all of its mass. These disks are interesting as we have not yet understood precisely how material can accrete through them, and they are also believed to be the location of planet formation. We provide an overview of work to date in the field, describing the approximations made in the equations governing the dynamics of these disks. We describe some new results obtained with large-scale simulations which shed some light on the acceptability of some of these approximations.