
The role of magnetic fields in pre-main sequence stars

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Abstract

Strong, kilo-Gauss, magnetic fields are required to explain a range of observational properties in young, accreting pre-main sequence systems. I will review the results from a long running campaign aimed at characterising the magnetic field properties of young T Tauri stars. The magnetic field observations have been used to build 3-D models exploring the role of magnetic fields and the efficiency with which magnetic fields can channel accretion from circumstellar disks on to the young star. In addition I will present the first results from a new programme aimed at investigating the evolution of magnetic fields in the intermediate mass (2-5 Msun) pre-main sequence stars tracing their transition from the convective T Tauri stars to their fully radiative counterparts.

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