



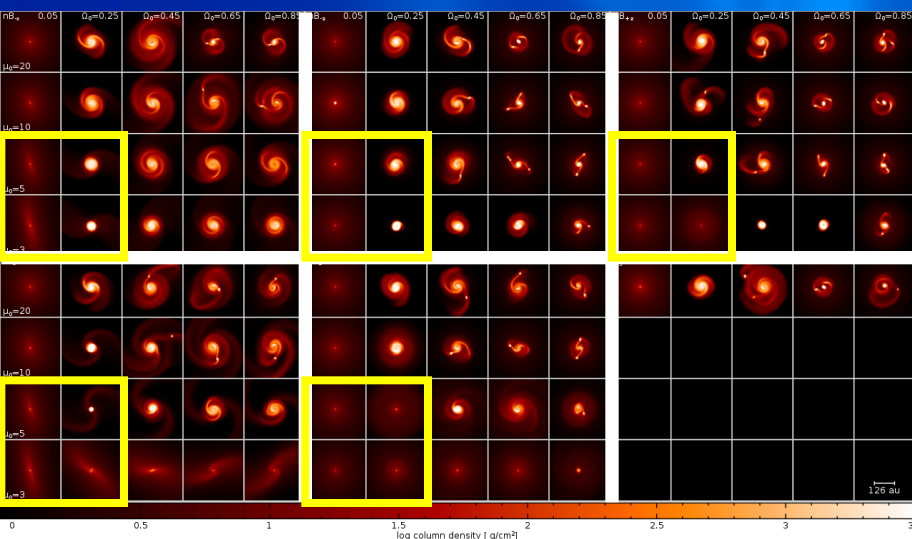
Formation of Protostellar Discs

James Wurster & Matthew R. Bate

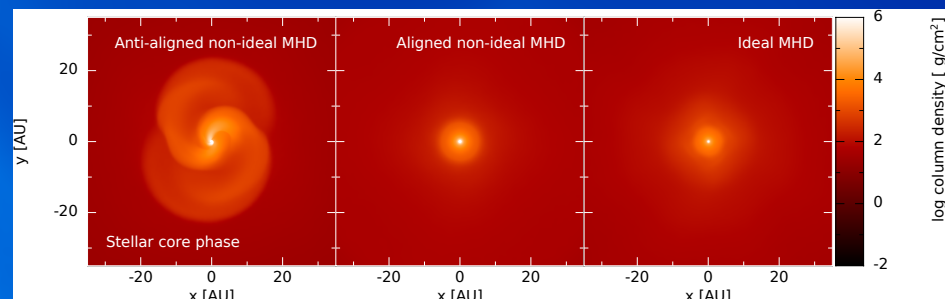
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Disc formation: A parameter study



Disc formation during protostar formation



- Discs form preferentially with faster initial rotation and/or weaker initial magnetic field strengths
- Non-ideal MHD promotes disc formation in the observationally motivated parameter space
- Wurster & Bate (2019)

- In slowly rotating, strongly magnetised cores:
 - Anti-aligned non-ideal MHD: Large ~ 25 au disc forms during the first core phase
 - Aligned non-ideal MHD: Small ~ 1 au disc forms during the stellar core phase
 - Ideal MHD: No disc forms
- Wurster, Bate & Price (2018)