Magnetorotational instability: a review

Joyce Shi Sim, David P. Larson, and Wonjae Lee
University of California, San Diego

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The abstract goes here like this.

1. Introduction

Background
Review paper Julien & Knobloch (2010)

2. Theoretical Work

Derive governing equations, linearize to small perturbations, and determine conditions for stability.

2.1. *Governing Equations*

Julien & Knobloch (2010) states the governing equations as

$$\rho\left[\frac{\partial u}{\partial t}+(u\cdot\boldsymbol{\nabla})u\right]=\boldsymbol{\nabla}p-\frac{1}{2\mu_0}\boldsymbol{\nabla}B^2+\frac{1}{\mu}(B\cdot\boldsymbol{\nabla})B \tag{2.1}$$

$$\frac{\partial B}{\partial t}+(u\cdot\boldsymbol{\nabla})B=(B\cdot\boldsymbol{\nabla})u \tag{2.2}$$

$$\boldsymbol{\nabla}\cdot u=\boldsymbol{\nabla}\cdot B=0 \tag{2.3}$$

where μ_0, B

2.2. *Linearization*

Linearize governing equations to small perturbations

2.3. *Stability Analysis*

3. Experimental Work

Discuss on experimental work that has been done related to this topic.

4. Numerical Work

Have there been any numerical experiments done that involve the topic.

5. Conclusion

Concluding remarks

REFERENCES

Julien, K. & Knobloch, E. 2010 Magnetorotational instability: recent developments. *Philosophical Transactions of the Royal Society A* **368**, 1607–1633.