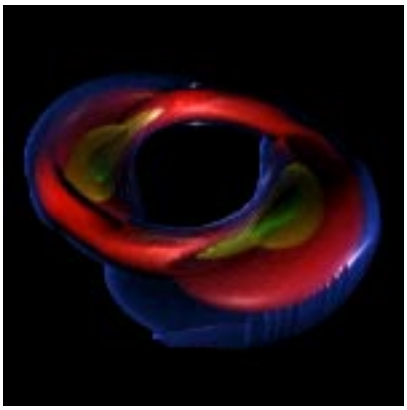
Movies
Produced by LSU's Astrophysics Theory Group

Department of Physics & Astronomy
Louisiana State University

Papaloizou-Pringle Instability
[1997]

Movie



Quicktime (834K)
24-bit mpeg (515K)

We have completed an exhaustive study of the onset of nonaxisymmetric instabilities in geometrically thick, self-gravitating protostellar disks (Woodward, Tohline & Hachisu 1994). An animation sequence illustrating one of the simulations from this study is available in formats indicated in the caption to the "Movie Icon" shown here. The movie illustrates the nonlinear development of the "Papaloizou-Pringle" instability in a massless disk. Through simulations of this type we have been able to demonstrate that our nonlinear simulations produce nonaxisymmetric growth rates that match the predictions of linear theory (Papaloizou and Pringle 1984; Frank and Robertson 1988; Kojima 1986; Andalib et al. 1997) to very high precision.

References

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- Papaloizou, J. C. B., and Pringle, J. E. 1984, M. N. R. A. S., 208, 721.
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