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Properties of Charney-Hasegawa-Mima zonal turbulence

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Abstract content (Max 300 words)Formatting & Special chars

Turbulence with strong zonal flows occurs on all scales in nature, the most famous is the flow streams in Jupiter's atmosphere. In fusion plasmas zonal turbulence is a feature of drift waves. The governing equation in geophysical fluid dynamics and in plasma physics has the same form and this equation and the properties of the flow will be discussed in the context of plasmas. In the model sheared flow is imposed by prescribing the background density gradient. Of the known solutions of bipolar and monopolar vortices only monopolar vortices survive due to the interaction between vortices and the destructive effects of the sheared flow. The longevity of the monopoles in different zonal flow configurations will be discussed and analysed.

Apply to be considered for a student award (Yes / No)?

No

Level for award (Hons, MSc, PhD)?

NA

Main supervisor (name and email) and his / her institution

Not applicable

Would you like to submit a short paper for the Conference Proceedings (Yes / No)?

No

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