

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Colin Rogers**

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报告题目:

**A Ermakov Reduction in  
2+1-dimensional  
Magnetogasdynamics**

邀请人: 胡星标研究员

报告时间: **2011年3月21日(周一)**

**上午 10:00**

报告地点: 科技综合楼三层 **311**

计算数学所报告厅

## **Abstract:**

**An elliptic vortex-type ansatz introduced into a 2+1-dimensional system governing rotating homentropic magnetogasdynamics with a parabolic gas law is shown to lead to an eight-dimensional nonlinear dynamical system which admits exact analytical solution in terms of an elliptic integral representation.**

**A novel magnetogasdynamic analogue of the pulsrodon of shallow water f-plane theory is isolated thereby.**

**In the case of a purely transverse magnetic field, the general dynamical system is shown to have underlying Hamiltonian structure of Ermakov-type.**

**欢迎大家参加!**