

UK MHD Meeting, May 09-10, 1996

Department of Mathematics, University College London

Thursday 09 May

SESSION 1: DYNAMOS

- 1:30 M.R.E. Proctor, Cambridge
Curious characteristics of wave number selection in simple nonlinear dynamo models.
- 1:45 Andrew Gilbert, Exeter
A fast dynamo of alpha-omega type.
- 2:00 David Hughes, Leeds
Helicity and Fast Dynamos.
- 2:15 Sarah Tanner, Leeds
Fast Dynamos.
- 2:30 Graeme Sarson, Exeter
Self-consistent mean-field dynamos of varying equatorial symmetry.
- 2:45 Jean-Claude Thelen, Leeds
The effects of magnetic buoyancy on the solar dynamo.
- 3:00 **Coffee and Discussion**

SESSION 2: CONVECTION

- 4:00 Chris Jones, Exeter
Convection-driven geodynamo models: Field generation mechanisms.
- 4:15 Andrew Soward, Exeter
to be announced. ~~looked nothing convection~~ by topography
- 4:30 Philip Tucker, Exeter
Convection and magnetic instability in a plane layer.
- 4:45 Mat Walker, Newcastle
Magnetoconvection in a rapidly rotating sphere.
- 5:00 Paul Matthews, Nottingham
Magnetic buoyancy and sunspot formation.
- 5:15 Alastair Rucklidge, Cambridge
The transition from pores to sunspots.
- 5:30 Paul Dellar, Cambridge
~~*Magnetostrophic flows and the geodynamo*~~ *accretion discs.*

Coffee and Discussion

Conference Dinner 7:30pm

Friday May 10
SESSION 3: MHD THEORY I

- 9:00 Eric Priest, St Andrews
Bifurcations of magnetic topology.
- 9:15 Axel Brandenburg, Newcastle
Is Cowling's anti-dynamo theorem valid near a rotating black hole?
- 9:30 Atta Chui, Cambridge
Magnetic modons (pair of eddies).
- 9:45 Douglas R. McLean, Glasgow
Magnetic instabilities in a rapidly rotating system.
- 10:00 Konrad Bajer, Cambridge
On the effect of a central vortex on a stretched magnetic flux tube.

Coffee and Discussion

SESSION 4: MHD THEORY II

- 11:00 Sam Falle, Leeds
Upwind Schemes and Intermediate Shocks.
- 11:15 Tim Horbury, Imperial
Evolving MHD turbulence in the polar heliosphere.
- 11:30 Anne Juel, Oxford
Magnetohydrodynamic convection in liquid Gallium.
- 11:45 Peter Davidson, Cambridge
The role of angular momentum in magnetic damping.
- 12:00 Rainer Hollerbach, Glasgow
The dynamical balance in semi-Taylor states.

Lunch

SESSION 5: SOLAR ATMOSPHERE

- 2:00 Antonio Ferriz Mas, Instituto de Astrofisica de Canarias
Asymmetries of bipolar active regions: an analytical approach.
- 2:15 Aaron Longbottom, St Andrews
Nonlinear evolution of axisymmetric loops in the corona.
- 2:30 Jason Smith, St Andrews
Ducted waves in curved coronal loops.
- ...

SESSION 5 CONTINUED...
Chair: Mitchell Berger, UCL

- 2:45 Valera Nakariakov, St Andrews
Nonlinear dynamics of fast magnetosonic waves guided by a smooth inhomogeneity of plasma density.
- 3:00 Jack Ireland, St Andrews
Phase mixing of Alfvén waves in the solar corona.
- 3:15 Ulf Torkelsson, Cambridge
Dissipation of nonlinear Alfvén waves.
- 3:30 Eun-jin Kim, Leeds
Turbulent Diffusion of Large Scale Magnetic Fields in the Presence of Ambipolar Drift.
- 3:45 Isaac Klapper, UCLA
A Lagrangian model of singularity formation in 3D ideal MHD.
- Coffee and Discussion**