

Programme for MHD93 meeting at Exeter

Friday 14th May

Session 1. Chairman D.R. Fearn.

9.00 a.m. A.M. Soward (Newcastle). "An asymptotic solution of a fast dynamo caused by a two-dimensional pulsed flow"

9.20 a.m. A.D. Gilbert (Exeter). "Random fast dynamos"

9.40 a.m. R.W. James (Sydney). "Applications of Computer Algebra to dynamo theory"

10.00 a.m. R. Kerswell (Newcastle). "The instability of precessing flows"

10.20 a.m. R. Davis (Leeds). "Experimental observations of spin-up and topographic forcing in a rotating hemisphere"

10.40 a.m. - 11.10 a.m. Coffee

Session 2. Chairman A.M. Soward.

11.10 a.m. C. Lamb (Glasgow). "Magnetic instability with finitely conducting boundaries"

11.30 a.m. K. Hutcheson (Glasgow). "Nonlinear magnetic instabilities in cylindrical geometry"

11.50 a.m. D.R. Fearn (Glasgow). "Convection in the mushy zone at the Earth's inner-outer core boundary"

12.10 a.m. D. Gubbins (Leeds). "Incorporating diffusion in core motion calculations"

12.30 p.m. J. Love (Leeds). "Electromagnetic core-mantle coupling"

Lunch

Session 3. Chairman M.R.E. Proctor.

2.10 p.m. C.C. Sellar (Glasgow). "Rapidly rotating magnetoconvection in the Earth's core"

2.30 p.m. K. Zhang (Exeter). "Magnetoconvection in a rapidly rotating sphere"

2.50 p.m. P. Bell (Newcastle). "The influence of bumps on convection in the Earth's core"

3.10 p.m. G. Sarson (Leeds). "High magnetic Reynolds number 3D kinematic dynamos"

3.30 p.m. P. Hoffin (Sydney). "Small amplitude solutions of Model-Z"

3.50 p.m. C.F. Barenghi (Newcastle). " $\alpha^2\omega$ models and the geodynamo"

4.10 p.m - 4.40 p.m. Tea

Session 4. Chairman D.W. Hughes.

4.40 p.m. R. Hollerbach (Exeter). "A geodynamo model incorporating an inner core"

5.00 p.m. P.G. Watson (Cambridge). "Magnetosconvection in a box with oblique side-walls"

5.20 p.m. A.M. Rucklidge (Cambridge). "Shearing instabilities in magnetosconvection"

5.40 p.m. M.R.E. Proctor (Cambridge). "Linear and nonlinear 3D magnetic buoyancy"

6.00 p.m. P.C. Matthews (Cambridge). "Compressible magnetosconvection in three dimensions" (Video)

6.20 p.m. P.K. Browning (UMIST). "The MHD dynamo in laboratory plasma"

8.00 p.m. Conference Dinner

Saturday 15th May

Session 5. Chairman D. Gubbins.

9.00 a.m. C.A. Jones (Exeter). "Further developments in twisted magnetosconvection"

9.20 a.m. D.W. Hughes (Leeds). "Strange consequences of magnetic buoyancy"

9.40 a.m. M. Walker (Newcastle). "A numerical model of the galactic dynamo"

10.00 a.m. A.Y.K. Chui (Cambridge). "Minimum energy states of magnetic flux tubes with arbitrary topology"

10.20 a.m. D. Linardatos (Cambridge). "The topological significance of the Moffatt signature functions"

10.40 a.m. - 11.10 a.m. Coffee

Session 6. Chairman N.O. Weiss.

11.10 a.m. S. Tobias (Cambridge). "Quasi-periodicity and chaos in a low-order model of stellar dynamos"

11.30 a.m. A. Longbottom (Napier). "Stability of current sheet models of prominences"

11.50 a.m. N. Cartledge (St. Andrews). "External and internal solutions for the twisted flux tube prominence model"

12.10 p.m. R. Fiedler (St. Andrews). "Modelling sheared coronal arcades with applications to solar prominences"

12.30 p.m. G. Vekstein (St. Andrews). "Magnetic energy release via turbulent relaxation in astrophysical plasmas"

12.50 p.m. C. Anderson (St. Andrews). "Magnetic annihilation"