THE INTERNATIONAL SHEWOOD THEORY CONFERENCE
ANNUAL CONTROLLED FUSION THEORY CONFERENCE

Gunter Hotel - San Antonio, Texas
April 3-5, 1989

MONDAY REGISTRATION: 7:45am - 5:00pm

MONDAY MORNING: 8:30am - 12:30pm

WELCOME: 8:20am

1A REVIEW SESSION
8:30am Crystal Ballroom
Presiding: Bruno Coppi

1A1 Experimental Status of the High-Beta, Second Stability Regime in Tokamaks and Stellarators. M. E. Mauel.

1B ORAL SESSION
9:30am Crystal Ballroom
Presiding: F. Troyon

1B1 Information Content of Transient Synchrotron Radiation in Tokamaks. N. J. Fisch and A. H. Kritz.
1B2 Theory of Fast Wave Current Drive for Tokamak Plasmas. S. C. Chiu, V. S. Chan, R. W. Harvey, and M. Porkolab.
1B3 The Status of Statistical Transport Theory for Plasma Turbulence. John A. Krommes.
1B4 Theoretical Studies of Tight Aspect Ratio Tokamaks. A. Sykes, P. S. Haynes, T. C. Hender, T. N. Todd, Y-K. M. Peng, and J. C. Whitson.
1B5 The Stability of the High Density Z-Pinch. A. H. Glasser and R. A. Nebel.
1B6 Soft and Hard Thresholds for Ion Temperature Gradient Driven Transport. A. B. Hassam, T. M. Antonsen, Jr., J. F. Drake, and P. N. Guzdar.

LUNCH 12:30 - 2:00pm

MONDAY AFTERNOON 2:00 - 6:00pm

1C POSTER SESSION
Gunter Terrace
2:00 - 4:00pm

1C1 Numerical Solutions of Statistical Closures for Anisotropic Terry-Horton Dynamics. John C. Bowman and John A. Krommes.
1C2 Simulation of Neutral Helium Transport in Flat Vented Divertors and Limiters. H. H. Abou-Gabal and G. A. Emmert
1C3 Current-Drive by Circularly Polarized Alfven Waves. M. A. Schalit and P. M. Bellan.

1C4 RFP Dynamo and Reversal in MHD and Hall MHD. R. A. Nebel, J. M. Finn, K. L. Sidikman.

1C5 Spectra of Intermittent Magnetic Turbulence. G. Craddock.

1C6 The Rayleigh-Taylor Instability in a Homogeneously Expanding Plasma. S. Cable, R. S. Steinolfson, and T. Tajima.

1C7 Alpha Particle Confinement in Tokamaks. R. B. White, H. E. Mynick, M. S. Chance, and J. Manickam.

1C8 Resistive Helical MHD States with Flow. D. Montgomery, L. Phillips, and M. L. Theobald.

1C9 Three-Dimensional Global Simulation of Electron Drift Mode Turbulence. R. E. Waltz.

1C10 A Simple Method for Calculation of Magnetic Island Widths. James D. Hanson, John R. Cary, Ben Carreras, and V. E. Lynch.

1C11 Dipole Magnetic Field for an Advanced Fuel Reactor. A. Hasegawa.

1C12 Effects of a Toroidal Magnetic Field on the Nonlinear Evolution of the Internal Tilt Mode in an FRC. D. C. Barnes, R. C. Bishop, R. D. Milroy.

1C13 Simulation of the Ion Cyclotron Emission in the JET Tokamak. F. Kazeminejad, R. Bingham, J. M. Dawson, J. N. Leboeuf.

1C14 Computer Simulation of Transport Driven Current in Tokamaks. W. J. Nunan, R. D. Sydora, J. M. Dawson.

1C15 Two-Fluid Theory for Collisional Presheath with Viscosity. B. J. Lee and J. D. Callen.

1C16 Transport Coefficients for the Plasma Thermal Energy and Empirical Scaling "Laws". B. Coppi.

1C17 Relativistic Damping of Electron Cyclotron Waves in Anisotropic Plasmas and Its Application. Kyoko Matsuda and J. Y. Hsu.

1C18 Ideal Stability of Cylindrical Plasma in the Presence of Mass Flow. A. Bondeson and R. Iacono.

1C19 Particle and Heat Pinch Effects in Collisionless Tokamak Discharges. J. Weiland, A. Jarmén and H. Nordman.

1C20 Anomalous Diffusion in Stochastic Magnetic Field. Qi Chen and J. D. Meiss.

1C21 Disruptions in DIII-D. A. D. Turnbull, T. S. Taylor, M. S. Chu, F. J. Helton, W. Howl, L. L. Lao, J. K. Lee, and E. J. Strait.

1C22 A Linearized Resistive MHD Stability Code. T. R. Harley, C. Z. Cheng, and S. C. Jardin.

1C23 The Effect of Parallel Thermal Conductivity on the Stability of Resistive Ballooning Modes. F. Romanelli, J. W. Connor and R. J. Hastie.

1C24 Finite Beta MHD Effects on Thermal Transport. H. R. Strauss.

1C25 The Case for Cold Ions Diffusing Inwards in Tokamaks Too Rapidly to Thermalize. A. A. Ware.

1C26 Effects of Finite Aspect Ratio on High-n Instabilities in Tokamaks. G. Rewoldt and W. M. Tang.

1C27 Theory of Weak Ion Temperature Gradient Driven Turbulence in Flat Density Discharges. D. T. Katt, Y. B. Kim, P. H. Diamond, N. Mattor.

1C28 Bounded Multi-Scale Particle Simulation: The Sheath Problem. S. E. Parker, C. K. Birdsall, A. Friedman and S. L. Ray.

1C29 Localized Profiles of a Self-Focused Optical Beam in a Plasma. T. Kurki-Suonio, P. J. Morrison, and T. Tajima.

1C30 Study of the Magnetic Fluctuations in Resistive Pressure-Gradient-Driven Turbulence. G. S. Lee and B. A. Carreras.

1C31 Electron Transport with Steep Temperature Profiles and Atomic Physics Effects. R. Marchand and J. P. Matte.

1C32 Effects of Temporal and Spatial Bandwidth of a Pump Wave on Parametric Instabilities. Richard L. Berger.

1C33 Ballooning Modes in a Rotating Plasma. E. Hameiri and S. T. Chun.
1C34 Nonlinear Gyrokinetic Moment Equations for Tokamak Plasmas. A. Brizard, L. Chen, and R. B. White.
1C35 Convergence of a Numerical Approximation to the One-Dimensional Vlasov-Poisson System. Stephen Wollman.
1C36 Resistive Interchange Modes and Ion Temperature Gradient Modes in Heliotron/Torsatron. M. Wakatani, H. Sugama, M. Yagi, B. G. Hong, and W. Horton.
1C37 Momentum Transport Process in Plasma Collective Modes. Bruno Coppi.
1C38 Suppression of Wall Field Perturbations in Reversed Field Pinches. M. K. Bevir, R. W. Moses, A. Patel, and H., Y. W. Tsui.

1D POSTER SESSION
Gunter Terrace
4:00 - 6:00 pm

1D1 Effect of Density and Temperature Gradients and Shear on the Dipole Vortex Solution of Drift Wave Plasma. X. Su, P. J. Morrison, and W. Horton.
1D2 A Self-Consistent Theory of Radial Transport of Parallel Current by Microturbulence. P. W. Terry, P. H. Diamond.
1D3 Stability of Semicollisional Modes in Divertor Tokamaks. S. Briguglio.
1D4 Ballooning Stability Optimization of Helias Equilibria. J. Nührenberg, R. Zille.
1D5 Parametric Turbulence Effect on LH Heating and Current Drive. Sasha Rubinchik.
1D6 Particle Confinement in Realistic 3D Rotamak Equilibria. P. M. Bellan.
1D7 Theoretical Studies of Profile Control Using Lower Hybrid Current Drive and Electron Cyclotron Resonance Heating. P. T. Bonoli, R. Myer, M. Porkolab, D. T. Blackfield, R. S. Devoto, M. E. Fenstermacher, G. R. Smith, A. H. Kritz.
1D8 One and Two Dimensional Modelling of the RFP Dynamo Effect. D. A. Baker, M. S. Hoyt, K. M. Ling, L. W. Mann, S. C. Jardin.
1D9 Guiding Center Drift in a Rotating Tokamak Plasma. M. D. Calvin, Andrew Ware, and R. D. Hazeltine.
1D10 Three-Dimensional Fluid Computer Calculations of Ion Temperature Gradient Driven Instabilities. J. N. Leboeuf, B. A. Carreras, P. H. Diamond.
1D11 Toroidal Equilibrium of Plasma-Beam Systems. Zensho Yoshida.
1D12 Quiver Kinetics. Peter J. Catto and J. R. Myra.
1D13 Numerical Simulations of Sawteeth in Tokamaks. G. Vlad, A. Bondeson.
1D14 Modification of m=1 Kink Mode Theory Due to Arbitrary Larmor Radius and Hot Electrons. Y. Z. Zhang, H. L. Berk, and S. Mahajan.
1D15 Saturation of a Single Mode in High Energy Particle Driven Systems. H. L. Berk and B. Breizman.
1D16 Delta-F Algorithm for the Integration of the Electrostatic Gyrokinetic Equation. H. V. Wong and H. L. Berk.
1D17 Non-Thermal Modification of the Current Profile in a Tokamak by Electron Cyclotron Heating. V. I. Krivenski, H. L. Berk and Y. Z. Zhang.
1D18 Stability of Magnetic Vortices. G. Rowlands.
1D19 Fast Ion Thermalization in a Hot Deuterium Plasma. T. L. Talley.
1D20 Edge Electric Field Effects on Orbits in Tokamaks and Stellarators. C. L. Hedrick.
1D21 Transport Barrier in Simulations of Eta-i Turbulence. J. F. Drake, P. N. Guzdar, A. Dimits and A. B. Hassam.

1D22 Streamers Driven by the Ion Temperature Gradient Instability. A. M. Dimits, J. F. Drake, P. N. Guzdar, and A. B. Hassam.
1D23 Computation of Magnetic Coordinates and Action-Angle Variables. A. H. Reiman and N. Pomphrey.
1D24 Local Kinetic Stability Analysis of the Ion Temperature Gradient Mode. R. R. Dominguez and M. N. Rosenbluth.
1D25 Radiative Collapse of a Bennett-Relaxed Z-Pinch. Leaf Turner.
1D26 Stability of an FEL E-beam in a Corrugated Waveguide. L. D. Pearlstein and V. K. Neil.
1D27 Transport of Charged Particles Interacting with Coherent Wave-Fields in a Tokamak Plasma. K. Kupfer, A. Bers, and A. K. Ram.
1D28 Collisional Effects on Low Frequency Turbulent Transport of Flux, Particles, and Energy in a FRC. N. A. Krall.
1D29 Three-Dimensional Flux-Tube Dynamics. R. Kinney and T. Tajima.
1D30 Effects of Temperature Anisotrophy, Rotation and Collisions on Eta-i Mode in the Columbia Linear Machine. O. Mathey, A. K. Sen, S. Migliuolo.
1D31 Further Implications for Tokamak Transport from the gBL Transport Formalism. H. E. Mynick and R. E. Duvall.
1D32 Particle-Simulation of Toroidicity-Induced Drift Modes. M. J. LeBrun and T. Tajima.
1D33 Scaling Laws for Resistive Turbulence. W. A. Newcomb.
1D34 TnTau-E Comparisons of Tokamak Reactors of Different Aspect Ratios. Y-K. Martin Peng.
1D35 Bifurcation Theory of Electrostatic Instabilities. C. Kueny, J. D. Crawford, and P. J. Morrison.
1D36 Modifications of the PIES Code to Enhance Convergence. D. A. Monticello and A. H. Reiman.
1D37 Electrical Conductivity in Tokamaks Modified by the Ohmic Loop-Voltage. C. S. Chang.
1D38 Beta Optimization of Ignited Plasmas. J. Manickam.

RECEPTION 6:00pm - 8:00pm

1E TRANSPORT TASK FORCE IMPACT ON THEORY
Crystal Ballroom
8:00pm - 10:00pm

Moderator: D. Baldwin

International Panel: R. Kraichnan, M. N. Rosenbluth, J. B. Taylor, F. Wagner, M. Wakatani.

Invited Speakers include R. Hunter, Jr., J. D. Callen and K. Molvig.

TUESDAY MORNING 8:30 am - 12:30pm

2A REVIEW SESSION
8:30am Crystal Ballroom
Presiding: R. D. Hazeltine

2A1 Can Dynamical Systems Approach Turbulence? P. Holmes.

2B ORAL SESSION
9:30am Crystal Ballroom
Presiding: S. P. Hirshman

2B1 Sawtooth and Other MHD Effects in Tokamaks. W. Park and D. A. Monticello.
2B2 The Theory of Neoclassical Ion Temperature-Gradient-Driven Turbulence. Y. B. Kim, P. H. Diamond, H. Biglari, and J. D. Callen.
2B3 Current Drive via Plasma Waves with Intrinsic Helicity. R. R. Mett and J. A. Tataronis.
2B4 Fast Wave Current Drive in Large Noncircular Tokamaks - A Global Wave Calculation. E. F. Jaeger, D. B. Batchelor, M. D. Carter, and D. W. Swain.
2B5 Drift Fluctuation Driven Transport and Shear in Tokamaks. J. Kesner.
2B6 Electron Temperature Gradient Driven Turbulence and Skin Depth Transport. W. Horton, N. Bekki, and B. G. Hong.

TUESDAY AFTERNOON FREE

2C POSTER SESSION
Gunter Terrace
7:00 - 9:00pm

2C1 Neutral Hydrogen Deposition in a Spheromak Plasma. R. M. Mayo and C. K. Choi.
2C2 Boundary Conditions for the Darwin Model. H. Weitzner and W. S. Lawson.
2C3 Energetic Trapped Effects on the Internal Kink Modes. C. Z. Cheng.
2C4 Comparison of RF codes: ORION, HYPERION, and SHOOT. J. S. Tolliver, E. F. Jaeger, B. A. Carreras, V. E. Lynch, D. B. Batchelor, P. L. Colestock, and D. N. Smithe.
2C5 Theory of High-n Shear Alfvén Gap Mode in Tokamaks. G. Y. Fu, J. W. Van Dam, C. Z. Cheng.
2C6 Bottom Launch for Electron-Cyclotron Current Drive in ITER. Gary R. Smith, G. D. Kerbel, Y. Matsuda, and M. G. McCoy.
2C7 Simulation of Dense Z-Pinch Plasmas. William Grossmann and Alan Mankofsky.
2C8 Magnetic Field Diffusion into High Drift Kinetic Beta Plasma Beams. J. Koga, B. S. Newberger, T. Tajima, and N. Rostoker.
2C9 Simulation of R. F. Driven Plasma Edge. W. S. Lawson and C. K. Birdsall.
2C10 Particle Simulation of Alfven Instabilities in a Neutral-Beam Current-Driven Plasma in a Sheared-Slab Geometry. Y. Matsuda, M. Tanaka and T. Sato.
2C11 Tokamak to Tokamak Variation in Scaling Laws. K. S. Riedel.
2C12 Effect of Arbitrary Larmor Radius on Tearing Modes. S. M. Mahajan and Y. Z. Zhang.

2C13 Design Considerations for Advanced Toroidal Experiments. F. J. Helton, J. M. Greene, and J. W. Helton.

2C14 Tearing Mode Stability of Tokamaks at Finite Beta. M. S. Chu, M. S. Chance, J. M. Greene, and T. H. Jensen.

2C15 Ballooning Modes in Double-Adiabatic and Guiding-Center Plasmas in the Presence of Rotation. X.-H. Wang and A. Bhattacharjee.

2C16 Plasma Current Drive by Helicity Injection in Relaxed States. J. B. Taylor and M. F. Turner.

2C17 The m=1 Internal Kink Mode in a Toroidal Plasma with an Arbitrary q-Profile. H. J. de Blank and T. J. Schep.

2C18 Ultra-Fast Numerical Solutions to the Transport Equations using Variational Techniques. J. P. Freidberg, P. Hakkarainen, J. Kesner, E. Chaniotakis.

2C19 Eta-e Transport, Detached Plasmas and Density Limits. P. N. Guzdar and C. S. Liu.

2C20 Extension of Braginskii Fluid Equations to the Banana-Plateau Regime and Application to Resistive Instabilities. D. A. Spong, K. C. Shaing, B. A. Carreras.

2C21 Nonlocal Energy Transfer Due to Inverse Mode Conversion of Ion Bernstein Waves. Hugo A. Romero and G. J. Morales.

2C22 Low Aspect Ratio Stellarator Optimization. S. P. Hirshman, R. N. Morris, J. A. Rome, C. L. Hedrick, J. F. Lyon.

2C23 Particle Simulations with Predictive Dynamic Load Balancing on Hypercube and Ncube Multiprocessors. Robert W. Huff and John M. Dawson.

2C24 Equations of Motion in Non-Canonical Coordinates for Particle Trajectories in Toroidal Geometries. Alkesh Punjabi, Maria Lam, and Allen Boozer.

2C25 Synchrotron Radiation in Fusion Power Reactors. M. Heindler, A. Nassri, W. Kernbichler, G. H. Miley, F. T. Gratton.

2C26 Modern Software Documentation: A New WEB System for Fortran, Rational Fortran, and C. John A. Krommes.

2C27 MHD Analysis of Peaked Density Profiles Produced by Pellet Injection in JET. L. A. Charlton, L. R. Baylor, B. A. Carreras, J. T. Hogan, G. S. Lee, S. L. Milora, A. Edwards and J. O'Rourke.

2C28 Coherent Structures and Heat Transport in Ion Pressure Gradient Driven Turbulence. M. Ottaviani, F. Romanelli, R. Benzi, M. Briscolini, P. Santangelo, S. Succi.

2C29 Calculation of Hamada Coordinates and its Application in the Moment Equation Approach to Neoclassical Transport Theory for a Large-Aspect-Ratio Tokamak. M. Coronado and J. Galindo.

2C30 The Beta Limit in ATF Due to Local Ideal MHD Instabilities. W. A. Cooper, S. P. Hirshman, D. K. Lee.

2C31 Self-Organization in Sheared Drift-Wave Turbulence. Bruce D. Scott and Hamid Biglari.

2C32 Transport in a Tokamak Based on the Braginskii Model. W. Kerner and Harold Weitzner.

2C33 Energy Transport in JET and Comparison With Theory. T. E. Stringer, F. Tibone.

2C34 Broadening of the Lower Hybrid $N_{\parallel}$ Spectrum by Toroidal Effects. E. Barbato, F. Romanelli.

2C35 Hybrid (Particle-Fluid) Simulations of Low Frequency Plasma Microinstabilities. P. M. Lyster and J-N. Leboeuf.

2C36 Studies in ICRF Heating: (A) Explicit Solutions for Minority Heating; (B) Scattering of a Magnetosonic Wave by Density Turbulence. Huanchun Ye, Daniel R. Cook, and Allan N. Kaufman.

2C37 Nonlinear Solution Branches of Reduced MHD Equations. E. K. Maschke and J. Morros Tosas.

2D POSTER SESSION
Gunter Terrace
9:00 - 11:00pm

2D1 Parametric Decay of Lower Hybrid Waves in Tokamak Plasmas. A. Cardinali, R. Cesario, F. Paoletti.

2D2 Plasma Physics Considerations in the Fusion Ignition Experiment Ignitex. R. Carrera, G. Fu, J. Helton, L. Hively, E. Montalvo, C. Ordonez, M. N. Rosenbluth, S. Tamor, and J. W. Van Dam.

2D3 A Lagrangian Method for Collisional Equations. Giovanni Russo.

2D4 Strong Impurity Transport in Rotating Tokamak Plasma Including Temperature Variations. C. T. Hsu and D. J. Sigmar.

2D5 Nonlinear Interaction of Resistive Modes for $q < 1$ in Tokamaks. J. A. Holmes.

2D6 A Theory of Microwave-Produced Potentials in Plasmas - The Pleiade Experiments Revisited. R. F. Post.

2D7 MHD Modeling of the Fueling of a Tokamak Reactor by Compact Toroids. A. A. Mirin, D. E. Shumaker, and J. H. Hammer.

2D8 Alpha Particle Diagnostics Using Laser Scattering Techniques. R. E. Aamodt.

2D9 Gyroviscous Treatment of Stability in a Field Reversed Configuration. L. C. Steinhauer, and A. Ishida.

2D10 Linear 3D Ideal MHD Global Internal Mode Stability Analysis with the Terpischore Code. W. A. Cooper, D. V. Anderson, R. Gruber, U. Schwenn.

2D11 Matrix Solvers for 3D Ideal MHD Equilibrium and Stability Calculations. D. V. Anderson, W. A. Cooper, R. Gruber and U. Schwenn.

2D12 Transport Timescale Simulation of ITER Operating Scenarios. Thomas B. Kaiser, Neil Pomphrey.

2D13 Dynamical Study of Axisymmetric Stability in Alcator C-Mod. J. J. Ramos, S. W. Haney, D. A. Humphreys, and J. P. Freidberg.

2D14 Stability Beta Limit of Local Modes for the TJ-II Flexible Heliac. A. Varias, C. Alejaldre, Luis Garcia, A. Lopez-Fraguas, B. A. Carreras, N. Dominguez and V. Lynch.

2D15 Bounds on Instability Growth Rates in Tokamaks. T. K. Fowler and P. J. Morrison.

2D16 Thermoelectric Currents in the Scrape-off Layer of Diverted Tokamaks. G. M. Staebler and F. L. Hinton.

2D17 TF-Rippled Equilibrium for ITER. L. M. Hively, S. P. Hirshman, J. A. Rome.

2D18 Coil Realization for Low Aspect Ratio Stellarators. James A. Rome, Ronald H. Fowler, Peter K. Merkel.

2D19 Physics Scaling of D-T Reactor Plasmas. R. J. Bickerton.

2D20 Natural Elongation,Oan Old Fashioned MHD Problem. S. P. Hakkarainen, R. Betti, J. P. Freidberg, R. Gormley.

2D21 Decay of Long Time Correlations in Hamiltonian Systems. Hyung-tae Kook and James D. Meiss.

2D22 Equilibrium of a Plasma in the Fluid and Kinetic Theory. Wann-Quan Li and Swadesh M. Mahajan.

2D23 ECH Deposition Profiles in TJ-II With a Non-Maxwellian Electron Tail. C. Alejaldre and F. Castejon.

2D24 Transport of High Power 140 and 250 ghz Radiation from an FEL Waveguide up to and Through the Entrance of the Microwave Tokamak Experiment. J. A. Byers, T. D. Rognlien, B. Stallard, M. Makowksi, T. Samec.

2D25 Particle-in-Cell Simulations of Electron Heating by Upper Hybrid Waves Using the Massively Parallel Processor. C. S. Lin, J. D. Menietti and H. K. Wong.

2D26 Spatial Effects on the Ignition and Burn of Dl-^{3}He Mixtures. L. E. Sugiyama.

2D27 Mercier Stability Criterion with Plasma Flows. S. T. Chun and E. Hameiri.

2D28 Drift-Rippling Theory of Edge Turbulent Transport. D. R. Thayer, P. H. Diamond, B. A. Carreras, J. A. Holmes, J. N. Leboeuf, Ch. P. Ritz and A. J. Wootton.

2D29 Impurity-Driven Drift Waves in the Reversed Field Pinch. Richard A. Gerwin.

2D30 Extension of Fluid Moment Descriptions to Include Kinetic Effects. J. D. Callen and Z. Chang.

2D31 Effects of Particle Transport on Sustained Ignition in the ITER Design. M. H. Redi and S. A. Cohen.

2D32 MHD Fluctuation Level and Transport in Reversed Field Pinch. K. Miyamoto.

2D33 Non-Local 1-D Kinetic Stability of FRC. P. Papanikolaou, H. R. Lewis, and C. K. Choi.

2D34 Access to the Second Stability Regime in the PBX-M Tokamak. S. C. Jardin, M. S. Chance, and M. Okabayashi.

2D35 Fishbones and Sawtooth Stabilisation in the Kinetic Bulk Ion Regime. F. Pegoraro, F. Porcelli, T. J. Schep, B. Coppi and S. Migliuolo.

2D36 DC-Helicity Injection in an RFP. Y. L. Ho.

2D37 Thermally Driven Magnetic Edge Turbulence. F. T. Plänt, G. Craddock, and P. W. Terry.

2D38 Simulation of Plasma Flow in a Non-Uniform Magnetic Field. Makarem Hussein and G. A. Emmert.

WEDNESDAY MORNING 9:00 - 1:00pm

3C POSTER SESSION
Gunter Terrace
9:00 - 11:00am

3C1 Collisionless Magnetic Reconnection. K. Sandusky, I. Doxas, W. Horton, and T. Tajima.

3C2 Second Stability Region Studies for PBXM and TFTR. M. W. Phillips, M. H. Hughes, A. M. M. Todd.

3C3 The Relationship Between Local Transport and Global Confinement. W. A. Houlberg, S. E. Attenberger, H. C. Howe, and N. A. Uckan.

3C4 A General Asymptotic Solution for Large Aspect Ratio High Beta Equilibrium. S. C. Cowley, R. S. Kelly, R. M. Kulsrud, and P. K. Kaw.

3C5 Ray Tracing of Mode-Converted Ion-Bernstein Waves in Toroidal Plasmas. A. K. Ram and A. Bers.

3C6 The Effect of Poloidal Field on Ion-Ion Hybrid Resonance in Large Tokamaks. Kaya Imre, H. Weitzner, D. C. Stevens, and D. B. Batchelor.

3C7 Comparison of Equilibrium Plasma Profiles with Theory Based on the Gauss-Hertz Principle. Richard L. Moore.

3C8 Two Timescale Analysis of a Coherent Current Filament in the Presence of Magnetic Microturbulence. N. Mattor, P. W. Terry, and J. D. Callen.

3C9 Error Field Behavior and the Parallel Current Profile in an RFP. K. L. Sidikman, J. D. Callen, R. A. Nebel.

3C10 A Theory of Collisionless Trapped Electron Mode Turbulence. F. Y. Gang, P. H. Diamond, H. Biglari, and M. N. Rosenbluth.

3C11 A Free Boundary Algorithm for the BETAS Code. Octavio Betancourt.

3C12 Global Energy Confinement Degradation Due to Mirnov Oscillations and Other Macroscopic Phenomena in Tokamaks. Z. Chang and J. D. Callen.

3C13 A Self-Consistent Wave-Kinetic Formulation of Wave-Plasma Interactions. E. R. Tracy, A. H. Boozer and A. J. Neil.

3C14 Three Dimensional Gyrokinetic Plasma Simulation Models for the Study of Low Frequency Microinstabilities. R. D. Sydora, H. Naitou, W. W. Lee, J. M. Dawson and T. S. Hahm.

3C15 Strong Electron Heating and Stimulated Brillouin Backscatter in FEL-Heated Magnetized Plasma. Bruce I. Cohen and Thomas D. Rognlien.

3C16 Dynamics of Fluid-Polymer Solutions: An Analogue of Magnetohydrodynamic Turbulence. P. H. Diamond, D. R. Nelson.

3C17 Temperature Gradient Driven Instabilities in FRCS. R. Farengo, P. N. Guzdar and Y. C. Lee.

3C18 Stability Window for Internal Global Modes in Igniting Plasmas. B. Coppi, P. Detragiache, and S. Migliuolo, F. Pegoraro, and F. Porcelli.

3C19 3-D Modeling, Simulation and Evaluation of ICRF Antennas. W. Grossmann, K. Ko, A. Drobot, R. Majeski, T. Tanaka, N. Hershkowitz.

3C20 Dissipative Trapped Electron Modes in Lamda = 2 Torsatrons. N. Dominguez, K. C. Shaing, and B. A. Carreras.

3C21 Finite Mean Free Path Corections to Parallel Heat Flow in Divertors. T. D. Rognlien.

3C22 Particle Simulations of Finite Beta Resistive g-Mode in Sheared Slab Geometry. J. H. Han and J.-N. Leboeuf.

3C23 A Knowledge Engineering Based Expert System Interface for an NMFECC Plasma Physics Tool Box Utility. G. D. Kerbel and M. G. McCoy.

3C24 Coupled Energy and Particle Transport Near a Separatrix. F. L. Hinton.

3C25 Effects of Neutral Injection and Neutral Recycling on Tokamak Confinement. H. Okuda, C. Z. Cheng, and S. Hiroe.

3C26 Magnetohydrodynamics and Nonlocal Resistivity Combined in Reversed Field Pinch Profile Sustainment. R. W. Moses.

3C27 Nonlinear Core Plasma Response to RF Power Absorption and Transport in Tokamaks. M. D. Carter, D. B. Batchelor, E. F. Jaeger.

3C28 Unified Theory of Ballooning Instabilities and Temperature Gradient Driven Trapped Ion Modes. X. Q. Xu, M. N. Rosenbluth.

3C29 A New Method to Measure q-Profiles Using a Diagnostic Neutral Beam. P. M. Valanju.

3C30 Transport of Modeling PBXM. M. H. Hughes, M. W. Phillips and A. M. M. Todd.

3C31 Test for Rippling Mode Transport at the Edge of TFTR. R. J. Goldston, E. Fredrickson, M. C. Zarnstorff, C. E. Bush, T. S. Hahm, D. K. Mansfield, H. Park, A. T. Ramsey, J. Schivell, G. Taylor.

3C32 Pulse Length and Ignition Probability Studies for the Compact Ignition Tokamak. D. P. Stotler, N. Pomphrey, R. J. Goldston, and M. G. Bell.

3C33 On the Role of Electromagnetic Microturbulence in Ohm's Law and Dissipative Fluid Instabilities. H. Biglari and P. H. Diamond.

3C34 The Effect of Neutral Beam-Driven Currents on the Nonlinear Dynamics of Magnetic Islands. C. Hegna and A. Bhattacharjee.

3C35 ICRF Full Wave Field Solutions and Absorption for D-T and D-He Scenarios. J. Scharer and R. Sund.

3C36 Kinetic Modification of Nonlinear Toroidal Eta-i Mode. B. G. Hong and W. Horton.

3C37 Helical Coil Driven Sawteeth. M. E. Kress and K. S. Riedel.

3C38 Influence of Trapped-Electron-Pressure-Gradient-Driven Turbulence on Supershot Confinement. T. S. Hahm and W. M. Tang.

3D POSTER SESSION
Gunter Terrace
11:00 - 1:00pm

3D1 Consequences of n=1 Toroidal Misalignments Between Coil and Inner Wall Limiters. B. G. Lane.

3D2 Considerations of Electron Dynamics in a Gyrokinetic Plasma. W. W. Lee, T. S. Hahm, and J. V. W. Reynders.

3D3 The Bootstrap Current in Stellarators. Allen H. Boozer, Henry Gardner.

3D4 Self-Consistent Collision Code for Beam Tracking. T. Tajima and J. Koga.

3D5 Inverse Cascades in 2D Compressible Turbulence. J. P. Dahlburg, R. B. Dahlburg, J. H. Gardner and J. M. Picone.

3D6 Analytic Model for Electron Cyclotron Heating Profiles. R. C. Goldfinger, D. B. Batchelor.

3D7 Lower Hybrid Wave Propagation and Absorption in a Tokamak. D. C. Stevens and H. Weitzner.

3D8 Singular Adiabatic Approximation to Low-Resistivity Magnetofluid Dynamics. Albert A. Blank and Michael E. Kress.

3D9 Lower-Hybrid Wave Penetration with GW Pulsed Power in ITER. R. H. Cohen, T. D. Rognlien, P. T. Bonoli and M. Porkolab.

3D10 Turbulent Transport in Tokamaks Due to Drift-Alfven Fluctuations. A. A. Thoul, P. L. Similon and R. N. Sudan.

3D11 Comparison of Ballooning Mode Stability Properties of Tokamaks with Different Cross Sections and the Same Poloidal Flux. J. L. Johnson, J. Manickam, and A. Miller.

3D12 Dependence of Faraday Shield Sputtering Rate on the Local Plasma Density. M. J. Gerver, D. A. D'Ippolito and J. R. Myra.

3D13 Radial Electric Field and Enhanced Confinement Regimes in Tokamaks and Stellarators. K. C. Shaing, W. A. Houlberg, G. S. Lee, B. A. Carreras, and E. C. Crume, Jr.

3D14 The "Dynamic Layer Model" for L- to H-mode Transition. Y.-T. Lau

3D15 Heat Pulse Propagation with Drift-Wave-Turbulence Models for Thermal Conductivity. F. W. Perkins.

3D16 Alpha Particle Microinstabilities and Stabilization of MHD Modes. C. Litwin.

3D17 Numerical Simulations of the Ion Pressure Gradient Driven Turbulence. S. Hamaguchi and W. Horton.

3D18 Study of Limiter/Separatrix Effects on Tau-p. Emilia R. Solano.

3D19 Stability Analysis of Free Boundary Modes for ATF. F. Bauer and P. Garabedian.

3D20 Studies of Axisymmetric Modes in Tokamak Plasmas with Active and Passive Feedback. D. J. Ward, S. C. Jardin, C. Z. Cheng.

3D21 Analytic Studies of ICRF Heating. C. Chow, V. Fuchs, and A. Bers.

3D22 Investigation into Resistive Drift Ballooning Modes in a Poloidal Divertor Tokamak. E. Uchimoto and H. R. Strauss.

3D23 Electron Cyclotron Wave Propagation and Transport Studies in the Compact Ignition Tokamak. R. C. Englade, P. T. Bonoli, R. C. Myer, M. Porkolab, G. R. Smith, A. H. Kritz.

3D24 Modeling of Fluctuations in the Edge of the Text Tokamak. D. K. Lee, B. A. Carreras, R. H. Fowler, J. A. Holmes, J. N. Leboeuf, Ch. P. Ritz, A. J. Wootton, D. R. Thayer, P. H. Diamond.

3D25 Access to Second Stability in ATF. B. A. Carreras, N. Dominguez, J. N. Leboeuf, V. E. Lynch, L. A. Charlton, J. H. Harris, M. Murakami, J. D. Bell, V. K. Paré, J. L. Dunlap.

3D26 Ballooning Beta Threshold for the Second Region of Ideal MHD Stability in Tokamaks. S. A. Sabbagh, M. W. Phillips, G. A. Navratil, and A. A. M. Todd.

3D27 Resistive Tearing Instability with Equilibrium Shear Flow. X. L. Chen and P. J. Morrison.

3D28 Nonlinear Effect of Waves in the Ion Cyclotron Range of Frequencies on Ion Temperature Gradient Drift Modes. J. B. McBride.

3D29 Calculation of Saturated Tearing Modes Using the PIES Equilibrium Code. N. Pomphrey, A. H. Reiman and D. Monticello.

3D30 Toroidal Field in Field-Reversed Configurations During Translation. A. G. Sgro.

3D31 Nonlinear Tearing Modes in the Reversed Field Pinch. Guthrie Miller.

3D32 Second-Stability MHD Equilibrium Candidates for a Reactor. Kenneth Evans, Jr. and David A. Ehst.

3D33 Scattering From Magnetic Fluctuations in Tokamaks. Linda Vahala, George Vahala, Dieter Sigmar.

3D34 Three-Dimensional Kinematic Reconnection in the Presence of Field Nulls and Closed Field Lines. J. M. Finn and Y.-T. Lau.

3D35 Revised Stability for the Z-pinch, and Prediction of a Class of Magneto-static Plasma Oscillations. N. A. Salingaros.

3D36 The Effect of the Ideal Kink Mode on Sawtooth Behavior. R. E. Denton.

3D37 New Particle Algorithms for Fusion Applications. M. Kotschenreuther.