

Conference Presentations

Sherwood '96
Doubletree Hotel
Philadelphia, Pennsylvania
March 18–20

The registration desk will be located by the active sessions

Monday Morning

Welcome: 8:20 a.m. — Morrell Chance, *Local Chairman*

- 1A Review Talk** Ormandy Ballroom — lobby level
Monday, 8:30 a.m.–9:20 a.m.
Morrell Chance, *presiding*
- 1A01. Rip Perkins, *ITER Physics: Design and Operations***

Coffee: 9:15 a.m. — Preassembly Area

- 1B Oral Presentations** Ormandy Ballroom — lobby level
Monday, 9:30 a.m.–12 noon
Mike Kotschenreuther and Ernie Valeo, *presiding*
- 1B01.** Theoretical approaches to turbulent transport near marginal stability
J. A. Krommes and S. Boldyrev
- 1B02.** Local reversed magnetic shear and the formation of a transport barrier
J. F. Drake, Y.-T. Lau, P. N. Guzdar, A. B. Hassam, S. V. Novakovskii, and A. Zeiler
- 1B03.** Core transport barriers predicted by drift wave models with flow shear
G. M. Staebler, R. E. Waltz, and J. C. Wiley
- 1B04.** Theory and 3D fluid simulations of turbulences in detached SOL plasmas
X. Q. Xu and R. H. Cohen
- 1B05.** Theoretical analysis of the magnetic reconnection experiment, MRX
D. Uzdensky, R. M. Kulsrud, and M. Yamada
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Lunch Break: 12 noon–2:00 p.m.

Monday Afternoon

- 1C Poster Presentations** Symphony Ballroom — third floor
Monday, 2:00 p.m.–4:00 p.m.
Beverages: 3:30 p.m. — Overture Room
- 1C01.** Charge particle dynamics in the field of two monochromatic waves in a magnetized plasma
D. R. Shklyar, A. Sen, and S. Benkadda

- 1C02. Scoring in Degas 2
C. F. F. Karney, D. P. Stotler, and A. Yu. Pigarov
- 1C03. Plasma confinement with an RF trap
R. A. Nebel, J. M. Finn, and A. H. Glasser
- 1C04. MHD stability study for the ITER reference case
O. Sauter, D. Boucher, F. Porcelli, M. N. Rosenbluth, M. S. Chu, H. Lütjens, A. Bondeson, and A. D. Turnbull
- 1C05. Effect of 3D shear flow and 3D neutral turbulence on the propagation of a heat front towards the divertor plate in the gas blanket regime
G. Vahala, L. Vahala, J. Morrison, S. I. Krasheninnikov, and D. J. Sigmar
- 1C06. Exactly conservative integrators
B. A. Shadwick, J. C. Bowman, and P. J. Morrison
- 1C07. Isotopic mass dependence of the transport of hydrogenic species in TFTR discharges
R. V. Budny
- 1C08. Spectral theory for the inviscid vortex
N. J. Balmforth and P. J. Morrison
- 1C09. Pseudo-MHD ballooning modes in tokamak plasmas
J. D. Callen and C. C. Hegna
- 1C10. Recurrent and random explosive events: relevant theoretical models
A. C. Coppi and B. Coppi
- 1C11. Long wavelength ITG gyrofluid simulations
S. A. Smith and G. W. Hammett
- 1C12. Application of adaptive gridding to magnetohydrodynamic flows
D. D. Schnack, I. Lotatti, and P. Satyanarayana
- 1C13. Implementation of the Quiet Implicit PIC (QIP) moment equations in toroidal geometry
W. D. Nystrom, D. C. Barnes, and R. A. Nebel
- 1C14. Gyrokinetic simulations of the effect of negative magnetic shear on trapped particle drift instabilities
R. D. Sydora, S. E. Parker, and W. W. Lee
- 1C15. Finite orbit width and Larmor radius effects of fast particle drive on low- n TAE stability
N. N. Gorelenkov and C. Z. Cheng
- 1C16. Generalized ballooning and sheath instabilities in the divertor scrape-off layer
J. R. Myra, D. A. D'Ippolito, and J. P. Goedbloed
- 1C17. MHD stability of reversed shear configurations
J. Manickam
- 1C18. Comparison of two drift wave models in transport simulations
A. H. Kritz, A. J. Redd, J. E. Kinsey, and G. Bateman
- 1C19. Effect of a plasma turbulence on the properties of the sheath in a grazing magnetic field
R. H. Cohen and D. D. Ryutov
- 1C20. Catastrophe in the stochastic layer due to dipole perturbation for a single-null divertor tokamak
H. Ali, M. Watson, A. Punjabi, and A. H. Boozer
- 1C21. Parallel shear-driven instability for detached divertors
Yu. A. Tsidulko, H. L. Berk, R. H. Cohen, and X. Q. Xu

Posters: Monday, 2:00 p.m.–4:00 p.m.

- 1C22. Renormalized theory of MHD turbulence with electron compressibility
P. W. Terry, E. Fernandez, and A. S. Ware
- 1C23. Coupling the UEDGE plasma model and EIRENE neutrals model
M. E. Rensink, T. D. Rognlien, and D. P. Coster
- 1C24. Full-wave modeling of high harmonic heating and current drive in NSTX
E. F. Jaeger, D. B. Batchelor, and R. Majeski
- 1C25. The influence of collisional and anomalous radial diffusion on parallel ion transport in edge plasmas
P. Helander, R. D. Hazeltine, and P. J. Catto
- 1C26. Symbolic analysis of turbulent fluctuations
M. Lehrman, A. B. Rechester, and R. B. White
- 1C27. Full-wave and Fokker Planck analysis of ICRF heating experiments in the Alcator C-Mod tokamak
P. T. Bonoli, S. Golovato, M. Porkolab, and Y. Takase
- 1C28. Ballooning mode stabilization by moderate sheared rotation
E. Hameiri
- 1C29. Kinetic features of TdeV tokamak SOL plasmas
M. M. Shoucri, O. V. Batishchev, A. A. Batishcheva, S. I. Krasheninnikov, D. J. Sigmar, and I. P. Shkarofski
- 1C30. Simulation of lower hybrid current drive in enhanced reversed shear plasmas in the TFTR using the lower hybrid simulation code
R. Kaita, S. Bernabei, R. V. Budny, J. Hosea, D. Ignat, S. C. Jardin, F. Jobes, B. LeBlanc, F. Levinton, J. Manickam, D. McCune, K. M. McGuire, D. Mikkelsen, C. K. Phillips, E. J. Valeo, J. R. Wilson, and M. C. Zarnstorff
- 1C31. Simulations of enhanced reversed shear TFTR discharges with lower hybrid current drive
J. Kesner and G. Bateman
- 1C32. Interpretive 2-D treatment of scrape-off-layer plasmas
M. Umansky, A. Allen, W. Daughton, R. Nachtrieb, K. Shadman, J. P. Freidberg, J. Kesner, and B. LaBombard
- 1C33. Nonlinear evolution of magnetic islands in a two fluid torus
L. E. Sugiyama and W. Park
- 1C34. Stability of an antisymmetric discrete point vortex row in electron-magnetohydrodynamics
F. Pegoraro, S. V. Bulanov, T. J. Esirkepov, and M. Lontano
- 1C35. Modeling of finite aspect ratio effects on current drive
J. C. Wright and C. K. Phillips
- 1C36. MHD stability of plasmas with hollow current profiles
E. K. Maschke
- 1C37. On the evidence for breaking gyro-Bohm scaling in toroidal transport
W. Horton, T. Tajima, G. Furnish, Y. Kishimoto, and J.-Y. Kim
- 1C38. Notched velocity profiles, radial electric field shear and ion thermal confinement in TFTR supershots
D. R. Ernst and S. D. Scott

Posters: Monday, 2:00 p.m.–4:00 p.m.

- 1C39. Kinetic simulation of detachment in a scrape-off-layer plasma
O. V. Batishchev, J. A. Byers, R. H. Cohen, S. I. Krasheninnikov, T. D. Rognlien, D. J. Sigmar, and X. Q. Xu
- 1C40. Nonlinear particle-wave kinetics in weakly unstable plasmas
B. N. Breizman, H. L. Berk, M. S. Pekker, J. Fitzpatrick, H. V. Wong, and K. L. Wong
- 1C41. Linear and nonlinear studies of resistive-ballooning modes in a tokamak edge plasma with scrape-off layer
Y.-T. Lau, S. V. Novakovskii, J. F. Drake, P. N. Guzdar, A. B. Hassam, and C. S. Liu
- 1C42. A stellarator with the symmetry of a tokamak
P. R. Garabedian
- 1C43. A hybrid symplectic PIC/spectral scheme for one-dimensional electrostatic simulations
I. Doxas and J. R. Cary
- 1C44. Finite- β minimum energy states of a two-fluid flowing plasma
L. C. Steinhauer
- 1C45. Fluctuations in multicomponent plasmas: magnetic effects on the short-wave convective cells
P. P. Sosenko and M. O. Vakulenko
- 1C46. Ripple induced trapped particle loss in tokamaks
R. B. White
- 1C47. Improved core-edge tokamak transport simulations with the CORSICA 2 code
A. Tarditi, R. H. Cohen, J. A. Crotinger, N. N. Mattor, G. D. Porter, T. D. Rognlien, and G. R. Smith
- 1C48. On the dynamics of a radiatively cooling divertor plasma
B. Meerson and H. R. Strauss
- 1C49. The modeling of non-axisymmetric halo currents in tokamaks
J. McCarrick and J. P. Freidberg
- 1C50. Trapped particle stabilization of the resistive wall mode
R. Betti and J. P. Freidberg
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1D Poster Presentations Symphony Ballroom — third floor

Monday, 4:00 p.m.–6:00 p.m.

Beverages: 3:30 p.m. — Overture Room

- 1D01. Numerical studies of magnetic turbulence in the 3-field reduced MHD model
E. Fernandez and P. W. Terry
- 1D02. Theory-based transport modelling of tokamak temperature and density profiles
G. Bateman, J. E. Kinsey, A. H. Kritz, A. J. Redd, S. Kaye, J. Weiland, and B. Brown
- 1D03. Triggering internal disruptions in tokamaks at high β
L. Zakharov, R. V. Budny, Z. Chang, and B. Rogers
- 1D04. Progress on first-principles turbulence simulations for realistic tokamak parameters
A. M. Dimits and T. J. Williams

Posters: Monday, 4:00 p.m.–6:00 p.m.

- 1D05. The breaking of up-down symmetry of trapped particle orbits by a toroidal electric field
P. Martin and M. G. Haines
- 1D06. Omnigenous transport barriers
L.-J. Zheng, M. Tessarotto, and J. L. Johnson
- 1D07. Omnigenous non-quasihelical systems
J. R. Cary and S. G. Shasharina
- 1D08. Transport matrix of orbit squeezing and finite orbit width effects on plasma transport
K. C. Shaing, C. T. Hsu, and M. C. Zarnstorff
- 1D09. Resistive toroidal MHD equilibria
D. Montgomery
- 1D10. Hybrid simulations of the interaction of hot gyrokinetic particles with MHD waves
E. V. Belova, R. E. Denton, M. K. Hudson, and A. A. Chan
- 1D11. Nonlinear saturation of the parallel velocity shear instability
S. Migliuolo, W. Daughton, and B. Coppi
- 1D12. Neoclassical transport theory in a tokamak plasma with large spatial gradients
C. S. Chang
- 1D13. Thermal transport from a phenomenological description of ion-temperature-gradient-driven turbulence
M. Ottaviani, W. Horton, and M. Erba
- 1D14. First principles analysis of advanced confinement regimes
M. Kotschenreuther and W. Dorland
- 1D15. Energy conserving truncations for convection with shear flow
J.-L. Thiffeault and W. Horton
- 1D16. Robust and accurate numerical methods applied to the edge plasma equations
D. A. Knoll and P. R. McHugh
- 1D17. Reduction of transport in stellarators by self-shielding
A. H. Boozer
- 1D18. The theory of the quasi-optical grill: a lower hybrid wave launcher in the 4–10 GHz range for high field tokamaks
J. Preinhaelter, L. Vahala, and G. Vahala
- 1D19. Definition of collisional radiative rate coefficients in plasma
B. J. Braams
- 1D20. A gyro-Landau-fluid transport model
R. E. Waltz, W. Dorland, G. W. Hammett, and M. Kotschenreuther
- 1D21. Symbolic analysis of spatio-temporal systems: the measurement problem
R. Brown, X. Tang, and E. R. Tracy
- 1D22. Quasi-spherical multipinch configuration
F. Winterberg
- 1D23. Low current approach to ignition
G. Cenacchi, L. E. Sugiyama, A. Airoidi, and B. Coppi
- 1D24. Neoclassical and anomalous transport in toroidal plasmas with drift-ordered turbulence
H. Sugama and W. Horton
- 1D25. Tests of the improved Weiland ion temperature gradient transport model
J. E. Kinsey, G. Bateman, J. Weiland, A. H. Kritz, and A. J. Redd

Posters: Monday, 4:00 p.m.–6:00 p.m.

- 1D26.** Non-linear interaction of Alfvén waves with fast particles
S. D. Pinches, J. Candy, S. E. Sharapov, L. C. Appel, B. N. Breizman, T. C. Hender, K. I. Hopcraft, G. T. A. Huysmans, and W. Kerner
- 1D27.** Magnetic field reconnection in collisionless plasmas
D. Grasso, E. Cafaro, A. Saluzzi, F. Pegoraro, and F. Porcelli
- 1D28.** The radiative condensation instability in non-coronal equilibrium
D. R. McCarthy and S. Krasheninnikov
- 1D29.** Forced reconnection in a rotating plasma
C. Ren, J. D. Callen, and C. C. Hegna
- 1D30.** Resistive MHD studies of reversed shear current profiles
M. H. Hughes and M. W. Phillips
- 1D31.** Theory of probe measurements at the divertor plate
G. D. Porter and D. D. Ryutov
- 1D32.** Relativistic gyrokinetic equation in the presence of strong drifts
M. Pozzo and M. Tessarotto
- 1D33.** 2-D WKBJ-ballooning numerical analysis of high- n TAE modes
C. T. Hsu, C. Z. Cheng, L. Chen, G. Y. Fu, G. Rewoldt, and W. M. Tang
- 1D34.** Onset of the radial electric field oscillations in the neoclassical plasmas
C. S. Liu, S. V. Novakovskii, R. Z. Sagdeev, A. A. Galeev, V. B. Lebedev, P. N. Yushmanov, and P. H. Diamond
- 1D35.** Double-cross instability in nonuniform plasma
A. J. Brizard, A. N. Kaufman, J. J. Morehead, and E. R. Tracy
- 1D36.** Global stability and operational regimes of Ignitor, ITER, and Alcator C-Mod
P. Detragiache, F. Bombarda, B. Coppi, A. H. Glasser, and S. Migliuolo
- 1D37.** Second stable regime of mixed slab-toroidal ITG mode with an isotropic η_i^*
H. Song and A. K. Sen
- 1D38.** Stabilization of the resistive wall mode using a fake rotating shell
R. Fitzpatrick and T. H. Jensen
- 1D39.** Effects of molecular hydrogen and plasma recombination on plasma flow in divertor
S. I. Krasheninnikov, A. Yu. Pigarov, D. J. Sigmar, and T. K. Soboleva
- 1D40.** Nonlinear theory for fishbone modes
F. Porcelli, H. L. Berk, B. N. Breizman, and J. Candy
- 1D41.** A transport bifurcation model for L to reverse shear mode transition
K. Avinash, P. Kaw, and R. Singh
- 1D42.** Effects of beam-driven poloidal rotation on the neoclassical bootstrap current
Y. R. Lin-Liu and F. L. Hinton
- 1D43.** E_r shear suppression of turbulence in enhanced reversed shear mode plasmas
T. S. Hahm
- 1D44.** Nonlinear saturation of high mode number toroidal Alfvén eigenmodes
L. Chen and T. S. Hahm
- 1D45.** Computation of resistive instabilities with DCON and MATCH
A. H. Glasser
- 1D46.** Bifurcation analysis and nonlinear self-sustainment of drift turbulence
S. Boldyrev and J. A. Krommes

Posters: Monday, 4:00 p.m.–6:00 p.m.

1D47. Scaling of magnetic turbulence with Lundquist number in relaxed state devices

N. N. Mattor

1D48. Modeling SOL evolution during disruptions

T. D. Rognlien, R. H. Cohen, J. A. Crotinger, L. D. Pearlstein, G. D. Porter, and G. R. Smith

1D49. Combined JET and DIII-D temperature and density profile parameterization and ITER prediction

K. Imre, K. S. Riedel, D. P. Schissel, and B. Schunke

1D50. A thermal transport coefficient for ohmic and ICRF plasmas in Alcator C-Mod

W. Daughton, B. Coppi, F. Bombarda, L. E. Sugiyama, and M. Greenwald

Monday Evening

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“Philadelphia Style” Reception

Ormandy Ballroom — lobby level

7:00 p.m.–9:00 p.m.

No-host cocktails from 6:30 p.m.

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Tuesday Morning

2A Review Talk Ormandy Ballroom — lobby level

Tuesday, 8:30–9:20 a.m.

Fred Jaeger, *presiding*

2A01. David Graves, *Modeling and Simulation of Plasma Materials Processing Devices*

Coffee: 9:15 a.m. — Preassembly Area

2B Oral Presentations Ormandy Ballroom — lobby level

Tuesday, 9:30 a.m.–10:30 a.m.

John Johnson, *presiding*

2B01. Feasibility of ignition experiments: major issues for debate

B. Coppi

2B02. Predictions of reactor performance using anomolous transport models

W. Dorland and M. Kotschenreuther

2C Poster Presentations Symphony Ballroom — third floor

Tuesday, 10:30 a.m.–12:30 p.m.

2C01. Destabilization of contained interacting modes by fusion products

G. Penn, C. Riconda, and B. Coppi

2C02. Two-dimensional modeling of plasma diagnostic reflectometry

T. B. Kaiser and B. I. Cohen

2C03. Slow temporal evolution of long mean free path Laminar tokamaks

H. Weitzner

2C04. Growth rate for core-localized toroidal Alfvén eigenmodes

J. W. Van Dam, B. N. Breizman, J. Candy, and S. E. Sharapov

2C05. Physics of advanced, high magnetic field experiments

A. Airoidi, G. Cenacchi, and B. Coppi

2C06. Neoclassical transport in ERS regime

Z. Lin, W. M. Tang, and W. W. Lee

2C07. Mercier criterion modified by kinetic effects

M. N. Rosenbluth and F. Porcelli

2C08. Determination of eddy transport coefficients in thermo-lattice Boltzmann modeling of two-dimensional turbulence

L. Vahala, G. Vahala, P. Pavlo, and M. Soe

2C09. Stability of high bootstrap fraction low aspect ratio tokamaks

V. S. Chan, Y. R. Lin-Liu, R. L. Miller, and A. D. Turnbull

2C10. Fast wave current drive in low aspect ratio tokamaks

S. C. Chiu, V. S. Chan, T. K. Mau, Y. R. Lin-Liu, R. L. Miller, and A. D. Turnbull

Posters: Tuesday, 10:30 a.m.–12:30 p.m.

- 2C11.** Application of multi-species, collisional radiative model to the recombining divertor plasma
A. Yu. Pigarov and S. I. Krasheninnikov
- 2C12.** Self-generated magnetic chains in plasma flow
J. Vranješ and D. Jovanović
- 2C13.** The spectral problem of global microinstabilities in tokamak-like plasmas using a gyrokinetic model
S. Brunner, J. Václavík, M. Fivaz, and K. Appert
- 2C14.** Predictive transport simulations of tokamak discharges
R. Gatto and T. K. Fowler
- 2C15.** Linear and nonlinear dynamics of Alfvén modes driven by energetic particles
G. Vlad, S. Briguglio, F. Romanelli, and F. Zonca
- 2C16.** Theory of discrete dynamo activity in laboratory plasmas: RFP sawteeth
C. C. Hegna, C. G. Gimblett, S. C. Prager, and A. Thyagaraja
- 2C17.** Kinetic Alfvén eigenmodes in JET and DIII-D
A. Jaun, T. Hellsten, K. Appert, A. Fasoli, J. Lister, J. Václavík, L. Villard, W. W. Heidbrink, and E. Carolipio
- 2C18.** Strong drifts effects on neoclassical transport
M. Tessarotto, D. Gregoratto, R. B. White, and L.-J. Zheng
- 2C19.** A self-organized criticality model for plasma transport
B. A. Carreras, D. E. Newman, and V. E. Lynch
- 2C20.** 1-D kinetic divertor gas-box simulations and development of a 2-D code
J. A. Byers, O. V. Batishchev, R. H. Cohen, S. I. Krasheninnikov, T. D. Rognlien, D. J. Sigmar, and X. Q. Xu
- 2C21.** Realistic magnetic equilibria in global nonlinear gyrokinetic simulations
T. M. Tran, M. Fivaz, G. DeRidder, K. Appert, O. Sauter, S. E. Parker, and V. K. Decyk
- 2C22.** Ballooning modes in Heliotron/Torsatrons
N. Nakajima
- 2C23.** Particle motion in a sheath in a strongly tilted magnetic field
D. D. Ryutov and R. H. Cohen
- 2C24.** Radial structure of toroidal drift modes in tokamaks
H. E. Mynick and S. E. Parker
- 2C25.** Explanation of $L \rightarrow H$ mode transition based on gradient stabilization of edge thermal fluctuations
W. M. Stacey
- 2C26.** A toroidal boundary-value problem in resistive MHD
J. W. Bates and H. R. Lewis
- 2C27.** Implementation of bootstrap current effects in the PIES code
D. A. Monticello and A. H. Reiman
- 2C28.** What's fair is fair
R. Nachtrieb and J. P. Freidberg

Posters: Tuesday, 10:30 a.m.–12:30 p.m.

- 2C29.** Orbit squeezing in a magnetic well
E. R. Solano, K. C. Shaing, M. C. Zarnstorff, and C. T. Hsu
- 2C30.** Simple map for single-null divertor map
A. Verma, A. Punjabi, and A. H. Boozer
- 2C31.** Neoclassical rotation velocities in multispecies plasmas
W. A. Houlberg, S. P. Hirshman, and K. C. Shaing
- 2C32.** Nonlinear stability studies of coupled tearing modes in toroidal finite- β plasmas using PEST-3
A. Pletzer
- 2C33.** Magnetic error field effects on magnetic island formation in a tokamak plasma
T. A. Gianakon, J. D. Callen, and C. C. Hegna
- 2C34.** Topology, finite time Lyapunov exponents, and barriers for diffusive transport in advection-diffusion problems
X. Tang and A. H. Boozer
- 2C35.** Three-dimensional calculations using the quiet implicit PIC method
D. C. Barnes, R. A. Nebel, C. R. Sovinec, and W. D. Nystrom
- 2C36.** Curvature and temperature gradient driven instabilities in tokamak edge plasmas with SOL
S. V. Novakovskii, P. N. Guzdar, J. F. Drake, and C. S. Liu
- 2C37.** Spectral reduction for two-dimensional turbulence
J. C. Bowman, B. A. Shadwick, and P. J. Morrison
- 2C38.** Hamiltonian description of toroidal magnetic fields in vacuum
H. R. Lewis and J. W. Bates
- 2C39.** Importance of radial localization on the interaction of fusion products with high-frequency modes
C. Riconda, G. Penn, and B. Coppi
- 2C40.** Detonation and ballooning modes
S. Cowley, B. Fong, and O. Hurricane
- 2C41.** Multi-dimensional conversion to the ion-hybrid mode
E. R. Tracy, A. N. Kaufman, A. J. Brizard, and J. J. Morehead
- 2C42.** Simulation studies of high- β disruptions and alpha particle loss in reversed shear plasmas
W. Park, E. D. Fredrickson, and L. E. Sugiyama
- 2C43.** Observations on resistive wall modes
R. A. Gerwin and J. M. Finn
- 2C44.** Nonlinear simulation study of the toroidal Alfvén eigenmode
Y. Todo and T. Sato
- 2C45.** MHD and current profile control studies of reversed shear tokamak configurations
J. J. Ramos, P. T. Bonoli, and M. Porkolab
- 2C46.** Relaxation of poloidal rotation in tokamak plasmas in the plateau regime
V. B. Lebedev, P. N. Yushmanov, P. H. Diamond, S. V. Novakovskii, and A. I. Smolyakov
- 2C47.** Disruptions in DIII-D
A. H. Reiman, P. Taylor, A. Kellman, and R. LaHaye

Posters: Tuesday, 10:30 a.m.–12:30 p.m.

- 2C48.** Interactive Exploration of tokamak turbulence simulations in virtual reality
G. D. Kerbel, T. Pierce, J. L. Milovich, D. E. Shumaker, A. Verlo, R. E. Waltz, G. W. Hammett, M. A. Beer, and W. Dorland
- 2C49.** Numerical Lundquist number scaling of magnetohydrodynamic turbulence in reversed-field pinches
C. R. Sovinec and S. C. Prager
- 2C50.** Perturbations to SOC models as a mechanism for transport control
H. Chen, D. E. Newman, and B. A. Carreras
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Tuesday Afternoon

Free afternoon: no formal conference agenda

ITER session

Ormandy Ballroom — lobby level

2:30 p.m.–5:30 p.m

Several invited talks on scientific areas of interest to ITER, and also a panel session from members of the community.

Tuesday Evening

Beverages: 8:00 p.m. — Preassembly Area

- 2D Oral Presentations** Ormandy Ballroom — lobby level
Tuesday, 7:30 p.m.–9:30 p.m.
Janardhan Manickam and Hank Strauss, *presiding*
- 2D01.** Resistive instabilities in negative central shear tokamaks with peaked pressure profiles
M. S. Chu, J. M. Greene, L. L. Lao, R. L. Miller, A. Bondeson, A. Pletzer, O. Sauter, B. W. Rice, E. J. Strait, T. S. Taylor, and A. D. Turnbull
- 2D02.** Neoclassical tearing modes in TFTR reversed shear experiments
Z. Chang, E. D. Fredrickson, S. Batha, M. Bell, R. Bell, R. V. Budny, C. Bush, A. Janos, F. Levinton, K. M. McGuire, G. Schmidt, E. Synakowski, G. Taylor, and M. C. Zarnstorff
- 2D03.** Recent progress in TAE stability analysis in tokamak plasmas
G. Y. Fu, C. Z. Cheng, R. V. Budny, Z. Chang, D. S. Darrow, E. D. Fredrickson, E. Mazzucato, R. Nazikian, K. L. Wong, S. Zweben, H. Kimura, T. Ozeki, M. Saigusa, M. S. Chu, W. W. Heidbrink, and E. J. Strait
- 2D04.** Profile dependent signature of the linear MHD spectrum
H. A. Holties, J. P. Goedbloed, G. T. A. Huysmans, W. Kerner, and A. Fasoli

Wednesday Morning

3A Review Talk Ormandy Ballroom — lobby level
Wednesday, 8:30 a.m.–9:20 a.m.
Rick Nebel, *presiding*

3A01. Stewart Prager, *Alternative Concepts: Physics Advances and Prospects*

Coffee: 9:15 a.m. — Preassembly Area

3B Oral Presentations Ormandy Ballroom — lobby level
Wednesday 9:30 a.m.–10:30 a.m.
Dan D'Ippolito, *presiding*

3B01. Ideal MHD stability limits of ultra-low aspect ratio tokamaks
J. Menard, S. C. Jardin, S. Kaye, C. Kessel, J. Manickam, and M. Ono

3B02. Rotational stabilization of $q < 1$ modes
F. L. Waelbroeck and A. Y. Aydemir

3C Poster Presentations Symphony Ballroom — third floor
Wednesday, 10:30 a.m.–12:30 p.m.

3C01. Influence of beam orbit loss on radial electric field in NBI heated Heliotron/Torsatrons
S. Murakami, N. Nakajima, and M. Okamoto

3C02. Dynamo beyond the regime of MHD theory
I. Raskolnikov and N. N. Mattor

3C03. MHD simulations on an unstructured mesh
H. R. Strauss and W. Park

3C04. Simulation of current generation in a 3-D plasma model
F. S. Tsung and J. M. Dawson

3C05. Two-dimensional divertor simulation scaling laws
P. J. Catto, D. A. Knoll, and S. I. Krasheninnikov

3C06. Runaway electron distributions obtained with the CQL3D Fokker-Planck code under tokamak disruption conditions
R. W. Harvey and V. S. Chan

3C07. Monte Carlo simulation of superthermal alpha particles in rippled field of tokamak
A. Punjabi, M. Lam, and A. H. Boozer

3C08. Microinstability properties of negative magnetic shear discharges in TFTR and DIII-D
G. Rewoldt, W. M. Tang, M. Artun, and L. L. Lao

3C09. Cross correlations in the general theory of electromagnetic plasma fluctuations
M. O. Vakulenko

3C10. Self-organization and transport in electrostatic turbulence of tokamak scrape-off-layer
S. Benkadda, P. Gabbai, and A. D. Verga

Posters: Wednesday, 10:30 a.m.–12:30 p.m.

- 3C11.** Alfvén stability properties of reversed shear regimes in DT tokamaks
D. A. Spong
- 3C12.** Non-modal analysis in plasmas
S. M. Mahajan, A. D. Rogava, and V. Berezhiani
- 3C13.** Toroidicity stabilization of low- n ion temperature gradient-driven modes
M. Fivaz, R. D. Sydora, K. Appert, J. Václavík, and V. K. Decyk
- 3C14.** Stability studies of tokamak discharges with negative central shear
J.-N. Leboeuf, V. E. Lynch, and B. A. Carreras
- 3C15.** Semiconductor plasmas
V. Berezhiani and S. M. Mahajan
- 3C16.** Atomic and surface physics data in DEGAS 2
D. P. Stotler, C. F. F. Karney, A. Yu. Pigarov, and R. J. Kanzleiter
- 3C17.** Development of parallel Fokker-Planck code ALLAp
A. A. Batishcheva, O. V. Batishchev, S. I. Krasheninnikov, A. E. Koniges, G. G. Craddock, D. J. Sigmar, and M. M. Shoucri
- 3C18.** The dynamics of internal transport barrier formation in reverse shear and weak shear discharges
D. E. Newman, B. A. Carreras, P. H. Diamond, and V. B. Lebedev
- 3C19.** MHD waves, reconnection, and plasma transport at the dayside magnetopause
J. R. Johnson and C. Z. Cheng
- 3C20.** Self-consistent 2D model for L - H transitions in tokamaks
P. N. Guzdar and A. B. Hassam
- 3C21.** Magnetic field generation and “Weibel Resonance” in inhomogeneous plasmas
S. V. Bulanov, F. Califano, and F. Pegoraro
- 3C22.** The PIES code and its applications
J. L. Johnson, D. A. Monticello, and A. H. Reiman
- 3C23.** Particle orbits in an RF combined trap
J. M. Finn, R. A. Nebel, A. H. Glasser, and H. R. Lewis
- 3C24.** Nonlinear gyrofluid simulations of improved confinement with reversed magnetic shear
M. A. Beer
- 3C25.** Stationary shear flows in CGL anisotropic toroidal plasmas
V. P. Pastukhov and V. I. Ilgisonis
- 3C26.** Non-standard stellarator configurations
P. Moroz
- 3C27.** An investigation of thermal transport during tokamak sawtooth events
Y. Nishimura, J. D. Callen, and C. C. Hegna
- 3C28.** Implicit low-noise particle simulation methods
B. I. Cohen and A. M. Dimits
- 3C29.** Gyrokinetic-magnetohydrodynamic simulation of MHD instabilities in tokamak plasmas with reversed shear
R. A. Santoro and L. Chen
- 3C30.** Synergism between profile and cross section shape optimization for negative central shear advanced tokamaks
A. D. Turnbull, T. S. Taylor, B. J. Lee, L. L. Lao, M. S. Chu, and R. L. Miller

Posters: Wednesday, 10:30 a.m.–12:30 p.m.

- 3C31.** Finite element modelling of transport and drift effects in tokamak divertor and SOL
M. Simard, R. Marchand, C. Boucher, J. P. Gunn, J. Mailloux, and B. L. Stansfield
- 3C32.** Ideal stability limits of reverse shear equilibria
M. W. Phillips and M. H. Hughes
- 3C33.** Progress on CORSICA 3: coupling 3D turbulence to 1D transport in tokamaks
L. L. LoDestro, R. H. Cohen, J. A. Crotinger, A. M. Dimits, G. R. Smith, and X.Q. Xu
- 3C34.** Nonlinear theory of ballooning modes with electron compressibility
A. S. Ware, J. D. Callen, C. C. Hegna, and P. W. Terry
- 3C35.** Enhancement of particle-wave energy exchange by resonance sweeping
H. L. Berk, B. N. Breizman, and M. S. Pekker
- 3C36.** Kinetic modeling of electron transport in C-Mod and DIII-D tokamaks
D. J. Sigmar, A. A. Batishcheva, O. V. Batishchev, S. I. Krashennnikov, B. LaBombard, B. Lipschultz, and G. D. Porter
- 3C37.** Nonlinear TAE instability driven by trapped particles
H. V. Wong, H. L. Berk, and B. N. Breizman
- 3C38.** Geometrical approach to Hamiltonian fluids
B. N. Kuvshinov and T. J. Schep
- 3C39.** Fractional kinetics and accelerator modes
G. M. Zaslavsky and B. A. Niyazov
- 3C40.** Stability of the $n = 1$ internal kink mode in equilibria with flows
A. Y. Aydemir and F. L. Waelbroeck
- 3C41.** Classical convective energy transport in large gradient regions
F. L. Hinton
- 3C42.** Simulation of the xerographic recharge process
C. Feng, S. E. Parker, and M. H. Lean
- 3C43.** Relabeling symmetries in MHD
N. S. Padhye and P. J. Morrison
- 3C44.** Deducing noninductive current profile from surface voltage evolution
C. Litwin, S. Wukitch, and N. Hershkowitz
- 3C45.** Explanation for MARFE formation and subsequent evolution into a detached symmetric plasma edge
W. M. Stacey
- 3C46.** Magnetic reconnection in collisionless regimes with reversed shear
B. Coppi and L. E. Sugiyama
- 3C47.** Reversed shear operation for high field ignition
L. E. Sugiyama
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