

Contents

PLENARY PAPER

Drift Waves and Zonal Flows	BALESCU Radu	3
-----------------------------------	--------------	---

INVITED PAPERS

On the Nature of ETG Turbulence and Cross-Scale Coupling	JENKO Frank	11
Gyrokinetic Simulations of Tokamak Micro-Turbulence Including Kinetic Electron Effects	IDOMURA Yasuhiro, TOKUDA Shinji, KISHIMOTO Yasuaki	17
Plasma Turbulent Transport and Fine-Scale Structures of Phase Space Distribution Function	WATANABE Tomo-Hiko, SUGAMA Hideo	23
Generation of Mesoscale Magnetic Fields and the Dynamics of Cosmic Ray Acceleration	DIAMOND Patrick H., MALKOV Mikhail A.	28
Relaxation Oscillations and Transport Barrier Dynamics in Tokamak Edge Plasmas	BENKADDA Sadruddin, BEYER Peter, FUHR-CHAUDIER Guillaume, GARBET Xavier, GHENDRIH Philippe, SARAZIN Yanick	35
Quantum Chaos Theory and the Spectrum of Ideal-MHD Instabilities in Toroidal Plasmas	DEWAR Robert L., NÜHRENBERG Carolin, TATSUNO Tomoya	40
Growth Rates and Structures of MHD Modes in Stellarator/Heliotron	NAKAJIMA Noriyoshi, NÜHRENBERG Carolin, NÜHRENBERG Jürgen	45
Recent Results from LHD Experiment with Emphasis on Relation to Theory from Experimentalist's View	YAMADA Hiroshi, IDA Katsumi, WATANABE Kiyomasa, SAKAKIBARA Satoru, INAGAKI Shigeru, MURAKAMI Sadayoshi, NARUSHIMA Yoshiro, OHYABU Nobuyoshi, YOKOYAMA Masayuki, YOSHINUMA Mikiro, COOPER W.A., KOBUCHI Takashi, OSAKABE Masaki, TOI Kazuo, SUZUKI Yasuhiro, AKIYAMA Takeshi, ASAKURA Nobuyuki, ASHIKAWA Naoko, EMOTO Masahiko, FUJITA Takaaki, FUJIWARA Masami, FUNABA Hisamitsu, GONCHAROV Pavel, GOTO Motoshi, HAMADA Yasuji, HIGASHIJIMA Satoru, HINO Tomoaki, HOSHINO Mitsuyasu, ICHIMURA Makoto, IDEI Hiroshi, IDO Takeshi, IKEDA Kaçsunori, ISAYAMA Akihiko, ISOBE Mitsutaka, ITOH Takafumi, ITOH Kimitaka, KADO Shinichiro, KALININA Diana, KANEBA Takahiro, KANEKO Osamu, KAWAHATA Kazuo, KAWAZOME Hayato, KONDO Katsumi, LYON J.F., MASE Atsushi, MASUZAKI Suguru, MATSUOKA Keisuke, MIURA Yukitoshi, MIYAZAWA Junichi, MORISAKI Tomohiro, MORITA Shigeru, MUTO Sadatsugu, MUTOH Takashi, NAGAOKA Kenichi, NAGASAKI Kazunobu, NAGAYAMA Yoshio, NAKAMURA Yukio, NAKANISHI Hideya, NARIHARA Kazumichi, NISHIMURA Kiyohiko, NISHIURA Masaki, NISHIZAWA Akimitsu, NODA Nobuaki, NOTAKE Takashi, NOZATO Hideaki, OHDACHI Satoshi, OHKUBO Kunizo, OYAMA Naoyuki, OKA Yoshihide, OKADA Hiroyuki, OZAKI Tetsuo, PETERSON Byron J., SAGARA Akio, SAIDA Tomoya, SAITO Kenji, SAKAMOTO Mizuki, SAKAMOTO Ryuichi, SASAO Mamiko, SATO Kuninori, SEKI Tetsuo, SHIMOZUMA Takashi, SHOJI Mamoru, SUDO Shigeru, TAKAGI Shoji, TAKAHASHI Yoshiyuki, TAKASE Yuichi, TAKEIRI Yasuhiko, TAKENAGA Hidenobu, TAKEUCHI Norio, TAMURA Naoki, TANAKA Kenji, TANAKA Masayoshi, TOKUZAWA Tokihiko, TORII Yuki, TSUMORI Katsuyoshi, WATANABE Fumitake, WATANABE Tsuguhiko, WATARI Tetsuo, YAMADA Ichihiko, YAMAGUCHI Taiki, YAMAMOTO Satoshi, YAMAZAKI Kozo, YOSHIDA Naoaki, YOSHIMURA Shinji, YOSHIMURA Yasuo, KOMORI Akio, MOTOJIMA Osamu	51
Particle Acceleration Mechanisms in Magnetosonic Shock Waves	OHSAWA Yukiharu	60
Relativistic Laser Plasma Research for Fast Ignition Laser Fusion	MIMA Kunioki, TANAKA Kazuo A., KODAMA Ryosuke, JOHZAKI Tomohiro, NAGATOMO Hideo, SHIRAGA Hiroyuki, MIYANAGA Noriaki, AZECHI Hiroshi, NAKAI Mitsuo, NORIMATSU Takayoshi, NAGAI Keiji, SUNAHARA Atsushi, NISHIHARA Katsunobu, TAGUCHI Toshihiro, SAKAGAMI Hitoshi, SENTOKU Yasuhiko, RUHL Hartmut	64
Energetic Ion Transport due to Alfvén Eigenmode Bursts	TODO Yasushi, BERK Herbert L., BREIZMAN Boris	69
Excitation of Zonal Flows and Fluid Closure	WEILAND Jan, DASTGEER Sheikh, MOESTAM Robert, HOLOD Igor, GUPTA Sangeeta	74
On Interatomic Potential Functions for Molecular Dynamic (MD) Simulations of Plasma-Wall Interactions ~	HAMAGUCHI Satoshi, OHTA Hiroaki, YAMADA Hideaki	80
A Roadmap to Recent Developments in the Theory of Turbulent Generation of Long-Wavelength Flows	KROMMES John A.	84
Stationary Vortical Structures in Electrostatic Drift Wave Turbulence	SPINEANU Florin, VLAD Madalina, ITOH Kimitaka, ITOH Sanae -I.	89

WAKATANI MEMORIAL PAPERS

Reminiscences of Prof. Masahiro Wakatani	IIYOSHI Atsuo	97
The Legacy of Masahiro Wakatani	VAN DAM James W., HORTON C. Wendell, Jr.	100
Contributions of Masahiro Wakatani to the Study of MHD Properties of Magnetically Confined Plasmas and to the Understanding of Helical Systems	CARRERAS Benjamin A.	107

CONTRIBUTED PAPERS

Study of Magnetic Helicity and Magnetohydrodynamic Relaxation in Solar Flare Processes KUSANO Kanya, MAESHIRO Tomohiro, MIIKE Haruka, YOKOYAMA Takaaki, SAKURAI Takashi	115
Double Internal Transport Barrier Triggering Mechanism in Tokamak Plasmas DONG Jiaqi, MOU Zongze, LONG Yongxing, MAHAJAN Swadesh M.	119
Critical Contribution of Low-Density Background Particles in the Formation of Ordered Structures in Pure Electron Plasma KIWAMOTO Yasuhito, SANPEI Akio, SOGA Yukihiko, AOKI Jun, YATSUYANAGI Yuichi, OZAWA Tatsuma	125
Two-Fluid Nonlinear Simulation of Self-Organization of Plasmas with Flows NUMATA Ryusuke, YOSHIDA Zensho, HAYASHI Takaya	130
Study of Electron Heat Pulse Propagation induced by ECRH/on-off on T-10 and LHD NEUDATCHIN Sergey, INAGAKI Shigeru, ITOH Kimitaka, KISLOV Alexandr, KISLOV Dmitrii, KRUPIN Vadim, KUBO Shin, LYSENKO Sergei, OHKUBO Kunizo, PAVLOV Yurii, POZNYAK Valerii, SHIMOZUMA Takashi, SUSHKOV Alexei, YAKOVLEV Mikhail, IDA Katsumi	134
Large Plasma Pressure Perturbations and Radial Convective Transport in a Tokamak KRASHENINNIKOV Sergei, RYUTOV Dmitri, YU Guanghui	139
Study of Finite-Orbit-Width Effect on Neoclassical Transport in Tokamak Core Region SATAKE Shinsuke, OKAMOTO Masao	144
Relation between the Radial Electric Field and the Flow in a Tokamak Plasma with $\nabla T = 0$ OKAMOTO Masao, SATAKE Shinsuke, NAKAJIMA Noriyoshi	148
Analysis of the MHD Instability Driving Mechanism in 3D Heliotron and Quasi-axisymmetric Systems COOPER W. Anthony, NARUSHIMA Yoshiro, WATANABE Kiyomasa, YAMAZAKI Kozo, SUZUKI Chihiro, OKAMURA Shoichi	152
Physical Properties of Plasma Ion Dynamics in Various Equilibria of Field-Reversed Configuration TAKAHASHI Toshiki, UBUKATA Mieko, IWASAWA Naotaka, KONDOH Yoshiomi	156
Transport Simulation of Internal Transport Barrier Formation Using Various Neoclassical Transport Models HONDA Mitsuru, FUKUYAMA Atsushi, YAGI Masatoshi	160
Full Wave Analysis of MHD Modes Using Multi-Fluid Dielectric Tensor in an Inhomogeneous Plasma AKUTSU Taku, FUKUYAMA Atsushi	164
Relaxation with High-Speed Plasma Flows and Singularity Analysis in MHD Equilibrium SHIRAIISHI Junya, OHSAKI Shuichi, YOSHIDA Zensho	169
Algebraic Behavior of Fluctuations Attributed to Non-Hermitian Property of the Linearized MHD Equation HIROTA Makoto, YOSHIDA Zensho	173
Spectroscopic Measurement to Study Two-Fluid Relaxation in an Internal Coil Device Mini-RT YAMAKOSHI Shigeo, OGAWA Yuichi, MORIKAWA Junji, OHKUNI Kotaro, KADO Shinichiro	176
Formation of Toroidal Plasma Flow in an Internal Conductor Trap SAITOH Haruhiko, YOSHIDA Zensho, HIMURA Haruhiko, MORIKAWA Junji, FUKAO Masayuki, WAKABAYASHI Hidenori	179
Characteristics of Electron Cyclotron Resonance Heating Plasmas and Experimental Plans for Formation of Radial Electric Field in an Internal Coil Device Mini-RT OHKUNI Kotaro, OGAWA Yuichi, MORIKAWA Junji, HORI Dan, YAMAKOSHI Shigeo, GOTO Takuya, YANAGI Nagato	183
Excitation of Convective Cell Mode by Universal Drift Wave Turbulence SAITO Tsyuyoshi., ITOH Sanae -I., YAGI Masatoshi, HAHM Taik Soo, CHENG Chio Z.	187
Effect of Ion Viscosity on Neoclassical Tearing Mode YOSHIDA Shigeki, ITOH Sanae-I., YAGI Masatoshi, AZUMI Masafumi	192
Current Profile Behavior during Ramping-up Phase in High Bootstrap Current Tokamak Plasmas..... NAKAMURA Yukiharu, TSUTUI Hirokaki, TAKEI Nahoko, SHIRAI Hiroshi, SUGIHARA Masayoshi, GRIBOV Yuri, OZEKI Takahisa, TOBITA Kenji, TSUJI-IIO Shunji, JARDIN Stephen C.	196
The Effect of Reduced Pfirsch-Schlüter Current on the Ideal MHD Stability and Alpha Particle Confinement in 2-period Compact Configurations..... COOPER W. Anthony, ISAEV Maxim Yu., OKAMURA Shoichi	199
Development of a Neoclassical Transport Database by Neural Network Fitting in LHD WAKASA Arimitsu, MURAKAMI Sadayoshi, YAMADA Hiroshi, YOKOYAMA Masayuki, MAASSBERG Hening, BEIDLER Craig D., WATANABE Kiyomasa, OIKAWA Shun-ichi, LHD Experimental Group	203
Theory of the Newcomb Equation and Applications to MHD Stability Analysis of a Tokamak TOKUDA Shinji, AIBA Nobuyuki	207
A Model Equation for Ballooning Modes in Toroidally Rotating Tokamaks FURUKAWA Masaru, TOKUDA Shinji	210
MHD Stability of Low- n Ideal External Mode in Large-Helical-Device Plasma..... NARUSHIMA Yoshiro, WATANABE Kiyomasa, SAKAKIBARA Satoru, NAKAJIMA Noriyoshi, NISHIMURA Kiyohiko, YAMADA Hiroshi, YAMAZAKI Kozo, LHD experimental group, COOPER Wilfred A.	214
The Effect of Non-Axisymmetry of Magnetic Configurations on Radial Electric Field Transition Properties in the LHD YOKOYAMA Masayuki, IDA Katsumi, YOSHINUMA Mikio, SHIMOZUMA Takashi, WATANABE Kiyomasa, MURAKAMI Sadayoshi, WAKASA Arimitsu, KUBO Shin, TAKEIRI Yasuhiko, NARIHARA Kazumichi, MORITA Shigeru, TANAKA Kenji, YOSHIMURA Yasuo, NOTAKE Takashi, OSAKABE Masaki, ITOH Kimitaka, KOMORI Akio, MOTOJIMA Osamu, LHD experimental G.	218

Linear Local Stability of Electrostatic Drift Modes in Helical Systems	YAMAGISHI Osamu, NAKAJIMA Noriyoshi, SUGAMA Hideo, NAKAMURA Yuji	222
HINT Computation of LHD Equilibrium with Zero Rotational Transform Surface	KANNO Ryutaro, TOI Kazuo, WATANABE Kiyomasa, HAYASHI Takaya, MIURA Hideaki, NAKAJIMA Noriyoshi, OKAMOTO Masao	227
A New Method Constructing Magnetic Flux Coordinate	TODOROKI Jiro, SANUKI Heiji, YOKOYAMA Masayuki	230
Effect of Magnetic Axis Shift on Neoclassical Transport in Helical Torus	SANUKI Heiji, TODOROKI Jiro	233
Interaction Between the Trapped Electrons and Magnetic Field Gradient and Curvature-Driven Drift Waves in the Toroidal Plasmas	WANG Aike, SANUKI Heiji, DONG Jiaqi, ZONCA Fulvio, ITOH Kimitaka	237
The Effect of the Aspect Ratio on the External Kink-Ballooning Instability in High- β Tokamaks	AIBA Nobuyuki, TOKUDA Shinji, ISHIZAWA Tomoko, OKAMOTO Masao	241
New Possibilities of Mathematical Modeling of Turbulent Transport Processes in Plasma.....	SKVORTSOVA Nina, BATANOV German, PETROV Alexander, PSHENICHNIKOV Anton, SARKSIAN Karen, KHARCHEV Nikolai, BENING Vladimir, KOROLEV Victor, MARAVINA Tatiana, NASYROV Farit, SANCHEZ Joaquin, OHKUBO Kunizo, SHIMOZUMA Takashi, IDEI Hiroshi, YOSHIMURA Yasuo, KUBO Shin	245
Turbulence Spectrum and Transport Scaling	VLAD Madalina, SPINEANU Florin, MISGUICH Jacques, REUSS Jean-Daniel, BALESU Radu, ITOH Kimitaka, ITOH Sanae	249
Cross-Field Electron Transport and Dynamo Effect Induced by Unstable Localized Electrostatic Waves in a Magnetized Plasma	SUGAYA Reiji, MAEHARA Tsunehiro, SUGAWA Masao	253
Chaotic Oscillations via Quasi-Periodicity Caused by Applying External Modulation in Ionization Waves	FUKUYAMA Takao, KOZAKOV Ruslan, TESTRICH Holger, WILKE Christian, KAWAI Yoshinobu	256
Two-Dimensional Filamentary Magnetohydrodynamics, Current-Vortex Method	YATSUYANAGI Yuichi, HATORI Tadatsugu, KATO Tomokazu, EBISUZAKI Toshikazu	260
Control of Chaos by Linear and Nonlinear Feedback Methods	SAITO Takanori, ITOH Sanae-I., YAGI Masatoshi	263
Effect of Feedback Coil and Plasma Rotation on Nonlinear Resistive Wall Mode in a Cylindrical Tokamak	SATO Masahiko, NAKAJIMA Noriyoshi	267
Spectrum of the Velocity Distribution Function in the Slab Ion Temperature Gradient Driven Turbulence	SUGAMA Hideo, WATANABE Tomohiko	271
Stimulated Raman Scattering, Cascade-into-Condensate and Acceleration of Large Relativistic Electromagnetic Solitons in Intense Laser Interaction with an Underdense Plasma	LI Baiwen, ISHIGURO Seiji, ŠKORIĆ Miloš M., TAKAMARU Hisanori	275
Intense Reflection of a Relativistic Laser Pulse in Subcritical Plasmas	ISHIGURO Seiji, NIKOLIĆ Ljubomir, ŠKORIĆ Milos M., LI Baiwen	279
Radial and Poloidal Structure Coupled with Shear Viscosity under the Existence of a Large Flow Shear in Tokamaks	KASUYA Naohiro, ITOH Kimitaka, TAKASE Yuichi	283
Mass Ratio Dependence of Current Layer Structure in Collisionless Driven Reconnection	ISHIZAWA Akihiro, HORIUCHI Ritoku, OHTANI Hiroaki	287
Avalanches Properties in a Self-Organized Critical Transport Model	GARCIA Luis, CARRERAS Benjamin A.	291
On Potentiality of Ion Temperature and Fuel Density Ratio Measurements in D-T Plasma Using ${}^6\text{Li}+\text{D}$ and ${}^6\text{Li}+\text{T}$ Nuclear Reactions.....	NAKAMURA Makoto, VORONCHEV Victor T., NAKAO Yasuyuki	295
Formation of the X-Point in Helical Plasmas upon Injection of High Energy Particles	YAKOVLEV Mikhail, MOTOJIMA Osamu, INAGAKI Shigeru, SHISHKIN Alexander, KOMORI Akio	299
Parameter Requirements for D- ${}^3\text{He}$ Helical Reactors	MITARAI Osamu, SAGARA Akio, IMAGAWA Shinsaku, TOMITA Yukihiro, WATANABE Kiyomasa, WATANABE Tsuguhiro	303
Reduction in 14MeV Neutron Generation Rate by ICRF Injection in D- ${}^3\text{He}$ Burning Plasmas	MATSUURA Hideaki, NAKAO Yasuyuki	306
Temperature, Density, Magnetic Field and Pitch Angle Dependence of Neutral Particle Spectrum in Large Helical Device	OZAKI Tetsuo, GONCHAROV Pavel, MURAKAMI Sadayoshi, SANUKI Heiji, OKAMURA Shoichi, SUDO Shigeru, KUBO Shin, SHIMOZUMA Takashi, OHKUBO Kunizo, NOTAKE Takashi, IDA Katsumi, TANAKA Kenji, OKA Yoshihide, OSAKABE Masaki, TAKEIRI Yasuhiko, TSUMORI Katsuyoshi, IKEDA Katsunori, KANeko Osamu, NARIHARA Kazumichi, NAGAYAMA Yoshio, SAKAKIBARA Satoru, SHOJI Mamoru, NAKANISHI Hideya, KOJIMA Mamoru, YAMAUCHI Kenji, KAWAHATA Kazuo, KOMORI Akio, MOTOJIMA Osamu, LHD Experimental Group	310
A Numerical Approach to the Localization of Passive Line Integrated Neutral Particle Measurements on LHD	GONCHAROV Pavel R., LYON James F., OZAKI Tetsuo, SUDO Shigeru	314
Theoretical Modeling and Application of Microwave Reflectometry to Plasma Turbulence Study	BRUSKIN Leonid G., OYAMA Naoyuki, MASE Atsushi, SHINOHARA Kouji, MIURA Yukitoshi	318
Two-Dimensional Kinetic Model for Fast Electron Transport in Compressed Core Plasmas	YOKOTA Tomohiro, NAKAO Yasuyuki, JOHZAKI Tomoyuki, MIMA Kunioki	322
Self-Reversal and Sustainment of Magnetic Fields in Helicity-driven Toroidal Plasmas	NAGATA Masayoshi, TAKAMIYA Tetsuhiro, HASEGAWA Hiroyuki, KAWAMI Kazuhiro, FUKUMOTO Naoyuki, UYAMA Tadao, MASAMUNE Sadao, KATSURAI Makoto	326

Kinetic Theory for Spontaneous Magnetic Field in Laser Plasma Interaction	ZHU Shao-ping, CAI Hong Bo, QIAO Bin	329
Spontaneous Magnetic Field and High Harmonics in Laser-Dense Plasma Interaction	ZHENG Chunyang, LIU Zhanjun, ZHU Shao-ping, HE Xiantu	333
X-Ray Spectroscopic Measurements of Energy Transport in Ultra-Intense Laser Produced Plasma	INUBUSHI Yuichi, NISHIMURA Hiroaki, MATSUI Ryoji, OCHIAI Masayuki, KAWAMURA Tohru, KODAMA Ryosuke, TANAKA Kazuo A., MIMA Kunioki, NAGATOMO Hideo, JOHZAKI Tomoyuki, KITAGAWA Yoneyoshi, FUJITA Hisanori, JITSUNO Takahisa, MIYANAGA Noriaki, NORIMATSU Tkakayoshi, NAGAI Keiji, IZAWA Yasukazu	337
Integrated Simulations for Fast Ignition Targets	JOHZAKI Tomoyuki, NAGATOMO Hideo, MIMA Kunioki, SAKAGAMI Hitoshi, NAKAO Yasuyuki	341
On MHD Oscillations in High Beta H-Mode Tokamak Plasma in JFT-2M	HOSHINO Katsumichi, NAGASHIMA Yoshihiko, IDO Takeshi, TSUZUKI Kazuhiro, KAWASHIMA Hisato, OGAWA Hiroaki, BAKHTIARI Mohammad, SHINOHARA Kouji, UEHARA Kazuya, OASA Kazumi, KASAI Satoshi, KUSAMA Yoshinori	345
Low m/n Mode Behavior of MHD Plasma in LHD	MIURA Hideaki, HAYASHI Takaya	349
Analysis of Pellet Ablation with Atomic Processes	ISHIZAKI Ryuichi, NAKAJIMA Noriyoshi, PARKS Paul B.	353
Neoclassical and Anomalous Transport Analysis of Helical Reactor Plasmas	YAMAZAKI Kozo, MIKHAILOV Mihail, SAKAKIBARA Satoru, OKAMURA Shoichi, GARCIA Jeronimo, DIES Javier, FUNABA Hisamichi, AMANO Tsuneo	357
MHD Equilibrium and Stability of Spherical Tokamak Plasma with Current Hole.....	MIZUGUCHI Naoki, HAYASHI Takaya	362
Configuration Effect on LH Transition in Tohoku University Heliac	TAKAHASHI Hiromi, KITAJIMA Sumio, YOKOYAMA Masayuki, TANAKA Yutaka, UTOH Hiroyasu, HASHIZUME Hidetoshi, SASAO Mamiko, TAKAYAMA Masakazu	366
Study of Impurity Influx of H-mode Plasma in Hot-Cathode-Biasing Experiment in the Tohoku University Heliac	TANAKA Yutaka, KITAJIMA Sumio, TAKAHASHI Hiromi, UTOH Hiroyasu, SASAO Mamiko, TAKAYAMA Masakazu	371
Effects of Plasma Foil Target Geometry on Achievable Energy of Fast Ions Generated by an Intense Ultra-Short Laser Pulse	OKADA Toshio, KITADA Tsuneyuki, OKUBO Kouta, SUGIE Michio, ANDREEV Alexander A.	376
A Model for ^3He Rich Events in Solar Flares.....	TOIDA Mieko, OKUMURA Hayato	379
Numerical Studies of Magnetosonic Waves in Thermal-Equilibrium, Multi-Ion-Species Plasmas	YOSHIYA Takashi, TOIDA Mieko, OHSAWA Yukiharu	383
Incessant Shock Acceleration of Fast Ions Enhanced by Relativistic Effects.....	USAMI Shunsuke, OHSAWA Yukiharu	387
Production of Ultrarelativistic Positrons by an Oblique Magnetosonic Shock Wave in an Electron-Positron-Ion Plasma	HASEGAWA Hiroki, OHSAWA Yukiharu	391
Development of the Robust MHD Code Using CIP Scheme.....	NISHINO Nobuhiro	395
Effects of Van der Waals Interactions on SiO_2 Etching by CF_x Plasmas	OHTA Hiroaki, HAMAGUCHI Satoshi	399
Plasma Beam Irradiation into Organic Polymer Surfaces	YAMADA Hideaki, HAMAGUCHI Satoshi	402
Improvement with High Frequency Field of Discharge Plasma by an Electron Beam	SUGAWA Masao, UTSUNOMIYA Shohei, MAEHARA Tsunehiro, SUGAYA Reiji	406
Frequency Broadening of High Harmonic Fast Wave in Plasmas	TANIGUCHI Tomokazu, TAKASE Yuichi, EJIRI Akira, SHIRAIWA Syun'ichi, NAGASHIMA Yoshihiko, KASAHARA Hiroshi, YAMADA Takuma, ARAMASU Masaru, OHARA Shinya, YAMAGISHI Kenichi	410
Experimental Observation of Radiation from the Interaction of Ultra-High Intense Laser Pulse with Weakly Magnetized Plasma.....	PARCHAMY Homaira A., YUGAMI Noboru, AOYAGI Masanori, DORRANIAN Davoud, ITO Hiroaki, NISHIDA Yasushi	413
Application of Ultrashort-Pulse Reflectometer to a HYPER-I Device Plasma	KANEBA Takahiro, TOKUZAWA Tokihiko, OKAMOTO Atsushi, YOSHIMURA Shinji, TANAKA Masayoshi Y., KAWAHATA Kazuo	417
Dust Acoustic and Dust Ion Acoustic Nonlinear Structures: Theory and Experiments.....	POPEL Sergey I.	421
Soft X-ray Emission Spectra of Capillary Plasma	VRBA Pavel, JANCÁREK Alexander, VRBOVÁ Miroslava, SCHOLZOVÁ Lenka, FOJTÍK Anton, TAMÁŠ Martin, HAVLÍKOVÁ Radka	425
Reduction of Sheath Potential and Dust Ion-Acoustic Wave by Negatively Charged Dust Particles	TOMITA Yukihiko, SMIRNOV Roman, CHUTOV Yuriy, TAKAYAMA Arimichi, TAKIZUKA Tomonori	429
Effect of Plasma Flow on the Gas Conductance in a Simulated Closed-Divertor	MATSUBARA Akihiro, WATANABE Tsuguhiro, SUGIMOTO Tatsunori, SUDO Shigeru, SATO Kuninori	433
Bootstrap Current Coefficients in Stellarators.....	NISHIMURA Shin, SUGAMA Hideo	437
Classical Trajectory Monte Carlo Simulations for Charge Transfer Processes	YAMADA Ichihiko	442
Cyclotron-Resonance Accelerations by a Generalized EM Wave.....	AKIMOTO Kazuhiro, HOJO Hitoshi	446
Edge Transport Barrier in CHS Measured Using Beam Emission Spectroscopy	OISHI Tetsutarou, KADO Shinichiro, YOSHINUMA Mikirou, IDA Katsumi, TANAKA Satoru, OKAMURA Shoichi	449
Spatial Profiles of Molecular Assisted Recombination for the Formation of the Detached Plasma	OGAWA Hironori, KUMITA Kentaro, ONO Masataka, TONEGAWA Akira, SHIBUYA Takehisa, KAWAMURA Kazutaka	453

Control of H ⁺ Ion Density in the Sheet Plasma by an Electron Emitter ONO Masataka, KUMITA Kentaro, TONEGAWA Akira, SHIBUYA Takehisa, KAWAMURA Kazutaka	457
Ion Radial Transport due to a Non-Uniform Electrostatic Potential in a Magnetic Mirror KATANUMA Isao, SAIMARU Hiroshi, TATEMATSU Yoshinori, SAITO Teruo, ISHII Kameo, CHO Teruji	461
Exact Periodic Solutions of the Stationary Hasegawa-Mima Equation SPINEANU Florin, VLAD Madalina, ITOH Kimitaka, ITOH Sanae -I.	465
Electron Cyclotron Radiation Studies Using the ASTRA Transport Code Coupled with the CYTRAN Routine DIES Javier, GARCÍA Jerónimo, ALBAJAR Ferran, FONTDECABA Josep Maria, CORTÉS Guillem, IZQUIERDO Jesús	469
Magnetic Structures inside the Separatrix on Field-Reversed Configuration Plasmas GOTA Hiroshi, TAKAHASHI Tsutomu, NOGI Yasuyuki	473
Passive Control of $n = 1$ Mode Motion on Field-Reversed Configuration Plasmas OKADA Masanori, FUJIMOTO Kayoko, GOTA Hiroshi, TAKAHASHI Tsutomu, NOGI Yasuyuki	477
Neoclassical Transport Studies in Stellarators Using PRETOR Code GARCÍA Jerónimo, YAMAZAKI Kozo, DIES Javier, CASTEJÓN Francisco, FUNABA Hisamichi, AMANO Tsuneo, FONTDECABA Josep Maria, FONTANET Joan, ALBAJAR Ferran, IZQUIERDO Jesús	481
Kinetic Simulation for Infinitely Long Cylindrical High-Beta Plasma with Field-Null Surface TAKAHASHI Toshiki, MOROHASHI Keisuke, IWASAWA Naotaka, KONDOH Yoshiomi	485
Comparison of Empirical Transport Models with Transient Transport Experiments in LHD YAKOVLEV Mikhail, INAGAKI Shigeru, IDA Katsumi, TAMURA Naoki, SHIMOZUMA Takashi, KUBO Shin, NAGAYAMA Yoshio, KAWAHATA Kazuo, SUDO Shigeru, KOMORI Akio, LHD Experimental Group	489
Compact Torus Plasma Injector in High Repetition Rate Operation SHIMAMURA Shin, NITOU Junsuke, HAYAKAWA Masahide, OOTA Fuminori	492
MHD Equilibrium of Heliotron J Plasmas SUZUKI Yasuhiro, NAKAMURA Yuji, KONDO Katsumi, NAKAJIMA Noriyoshi, HAYASHI Takaya	496
About the Possibility of Impurity Ion Accumulation in the Island Region in Helical Plasma SHISHKIN Alexander	500
Conceptual Approach to Steady State Reversed Field Pinch Reactor with Low Aspect Ratio SHIINA Shoichi, NAGAMINE Yasuo, OSANAI Yukio, SAITO Katsunori, SAITO Katsuhiko, AIZAWA Masamitsu, WATANABE Masayuki, TAGUCHI Masayoshi, KONDOH Yosiumi	504
The Effect of Coil Misalignment on Particle Transport in Quasi-Axisymmetric Systems SHIMIZU Akihiro, OKAMURA Shoichi, ISOBE Mitsutaka, SUZUKI Chihiro, NISHIMURA Shin, AKIYAMA Tsuyoshi, MATSUOKA Keisuke, NEMOV Victor V.	508
Fully Three-Dimensional Simulation of Neutral Particle Transport in the Plasma Periphery on the Large Helical Device SHOJI Mamoru, MORISAKI Tomohiro, MASUZAKI Suguru, GOTO Motoshi, LHD Experimental Groups	512
Experimental Simulation of High Temperature Plasma Transport Using Almost Dimensionally Similar Cold Plasmas in the Compact Helical System TOI Kazuo, IKEDA Ryousuke, TAKEUCHI Masaki, ITO Takafumi, SUZUKI Chihiro, MATSUNAGA Go, SHOJI Tatsuo, OKAMURA Shoichi, CHS Experimental Group	516
Effects of Current Profile on Global Ideal MHD Stability in a Compact Quasi-Axisymmetric Stellarator SUZUKI Chihiro, OKAMURA Shoichi, ISOBE Mitsutaka, NISHIMURA Shin, SHIMIZU Akihiro, AKIYAMA Tsuyoshi, MATSUOKA Keisuke, NAKAJIMA Noriyoshi, COOPER Wilfred A., NÜHRENBERG Carolin	519
Relationships between the Prediction of Linear MHD Stability Criteria and the Experiment in LHD WATANABE Kiyomasa Y., NARUSHIMA Yoshiro, SAKAKIBARA Satoru, OHDACHI Satoshi, TOI Kazuo, COOPER Antony W., NAKAJIMA Noriyoshi, NARIHARA Kazumichi, TANAKA Kenji, LHD experimental group	523
Monte Carlo Simulation of Particle Transport in the LID Configuration KANNO Ryutaro, JIMBO Shigeaki, TAKAMARU Hisanori, OKAMOTO Masao	527
Improved Formalism for Flowing Two-Fluid Equilibrium and Its Application to ST ISHIDA Akio, HARAHA Caesar O, STEINHAEUER Loren C., PENG Martin Y-K.	531
Quasi-isodynamic Configuration with Small Number of Periods SAMITOV Marat, COOPER Wilfred, ISAEV Maxim, MIKHAILOV Mikhail, NÜHRENBERG Jürgen, SHAFRANOV Vitaliy, SUBBOTIN Alexey, YAMAZAKI Kozo, ZILLE Regine	534
Particle Orbits and Radial Loss in the GAMMA10 Tandem Mirror ITO Toru, KATANUMA Isao	538
Radial Electric Field Control for Retardation of Radial Transport of Bounce Ions in the Tandem Mirror ISHII Kameo, TAKEMURA Yuichiro, KOJIMA Atsushi, HAGISAWA Kazuhisa, MIYATA Yoshiaki, KATANUMA Isao, CHO Teruji	542
Neutral Transport Analysis in Non-axisymmetric Anchor Region of the GAMMA 10 Tandem Mirror Using a Monte-Carlo Simulation NAKASHIMA Yousuke, HIGASHIZONO Yuta, OHKI Toshikazu, SHOJI Mamoru, KOBAYASHI Shinji, KUBOTA Yuusuke, YOSHIKAWA Masayuki, ISLAM Md. Khairul, FUKASAWA Takahiro, ISHIMOTO Yuki, WATANABE Kazuhiro, OGITA Takeshi, YAMADA Masaki, MURAKAMI Ryouhei, CHO Teruji	546
Global Plasma Equilibrium in a Helical System with Ideally Conducting Wall PUSTOVITOV Vladimir D.	550
Axisymmetric MHD Simulation of ITB Crash and Following Disruption Dynamics of Tokamak Plasmas with High Bootstrap Current TAKEI Nahoko, NAKAMURA Yukiharu, KAWANO Yasunori, TSUTSUI Hiroaki, OZEKI Takahisa, TOBITA Kenji, SUGIHARA Masayoshi, TSUJI-IIO Shunji, SHIMADA Ryuichi, JARDIN Stephen C.	554

Study of Particle Diffusion in a Stochastic Magnetic Field: DIA and beyond	TAGUCHI Masayoshi	558
Electron Acceleration due to Electric Field Bursts Close to the Lower Hybrid Frequency in a High-Voltage Linear Plasma Discharge	TAKEDA Yasumasa, INUZUKA Hiroshi	562
Particle-Trapping Effects in Electron-Beam-Plasma	TAKEDA Tsuyoshi, YAMAGIWA Keiichiro	566
Study of Transport Regimes in Ion Temperature Gradient Driven Turbulence	TAKEDA Kazuo, BENKADDA Sadruddin, HAMAGUCHI Satoshi, WAKATANI Masahiro	570
Magnetic Field Perturbations Correlated with Large Amplitude Lower-Hybrid Waves in a High-Voltage Linear Plasma Discharge.....	POPEL Sergey, TAKEDA Yasumasa, INUZUKA Hiroshi, ELSÄSSER Klaus	573
Interaction of Two Electrons by Interchanging the Phonon Occured in the Beam-Plasma System	MORI Ichiro, MORIMOTO Tosifumi	577
Electromagnetic Effect on Turbulent Transport in Tokamak Based on Landau Fluid Global Simulation	MIYATO Naoaki, LI Jiquan, KISHIMOTO Yasuaki	581
Saturation of Zonal Flow in Gyrofluid Simulations of Electron temperature Gradient Driven Turbulence	LI Jiquan, KISHIMOTO Yasuaki, IDOMURA Yasuhiro, MIYATO Naoaki, MATSUMOTO Taro	585
Effects of Self-Consistent Flow on Island Generation in Interchange Mode	ICHIGUCHI Katsuji, CARRERAS Benjamin A.	589
Fluid Simulation on Subcycle Wave Generation in Relativistic Laser-Plasma Interactions	HOJO Hitoshi, AKIMOTO Kazuhiro, WATANABE Tsuguhiro	593
Statistical Characteristics from Gyro-fluid Transport Simulation	MATSUMOTO Taro, KISHIMOTO Yasuaki, LI Jiquan	597
Non-Invariance of Both Magnetic Fluxes within Flux Tubes and Global Helicities in an Ideal Plasma and Numerical Demonstrations of a Generalized Self-Organization Theory	KONDOH Yoshiomi, SERIZAWA Shunsuke, TAKAHASHI Toshiki, VAN DAM James W.	601
Measurement of Supersonic Rotation Accompanied with a Plasma Hole	OKAMOTO Atsushi, YOSHIMURA Shinji, TANAKA Masayoshi Y.	606
Observation of Plasma Hole in an ECR Ar Plasma	YOSHIMURA Shinji, OKAMOTO Atsushi, TANAKA Masayoshi Y.	610
Dynamical Evolution of Thin Current Sheets in a Three-Dimensional Open System	HORIUCHI Ritoku, OHTANI Hiroaki, ISHIZAWA Akihiro	614
Computer Simulation of Fishbone Oscillation	SHIOZAKI Yutaka, TODO Yasushi	618
Orbit Topology and Confinement of Energetic Ions in the CHS-qa Quasi-Axisymmetric Stellarator	ISOBE Mitsutaka, NAKAJIMA Noriyoshi, SHIMIZU Akihiro, SUZUKI Chihiro, AKIYAMA Tsuyoshi, NISHIMURA Shin, OKAMURA Shoichi, MATSUOKA Keisuke, SPONG Donald A.	622
Distribution Function of Higher Harmonic ICRF Heated Plasma Calculated with Bounce-averaged Fokker-Planck Equation on LHD.....	SAITO Kenji, KUMAZAWA Ryuhei, MUTOH Takashi, SEKI Tetsuo, WATARI Tetsuo, TORII Yuki, TAKEUCHI Norio, SHIMPO Fujio, NOMURA Goro, YOKOTA Mitsuihiro, KATO Akemi, WATANABE Tsuguhiro, ZHAO Yangping, LHD Experimental Group	626
Ignition Condition for p- ¹¹ B Reactor with LHD type Magnetic Field Configuration	WATANABE Tsuguhiro, MATSUMOTO Yutaka, HISHIKI Masahito, OIKAWA Shun-ichi, HOJO Hitoshi	630
Applicability of the TESPEL Charge-Exchange Recombination Spectroscopy Diagnostics for Impurity Transport Study on LHD	KALININA Diana, SUDO Shigeru, TAMURA Naoki, SERGEEV Vladimir Yu., LHD Experimental group	634
The Study of Fluctuations at the Edge of CT-6B Tokamak	KHORSHID Pejman, WANG Long, GHORANNEVISS Mahmoud, AGHAMIR Farzin M., YANG Xuanzong, FENG Chunhua	638
Variation of N_{H1} and its Effect on Fast Wave Electron Heating on LHD	TAKEUCHI Norio, SEKI Tetsuo, TORII Yuki, SAITO Kenji, WATARI Tetsuo, TAKASE Yuichi, KUMAZAWA Ryuhei, MUTOH Takashi, WATANABE Tsuguhiro, ZHAO Yanping	642
Mechanisms of Plasma Production Using Folded Waveguide Antenna.....	TORII Yuki, KUMAZAWA Ryuhei, WATARI Tetsuo, MUTOH Takashi, SEKI Tetsuo, SAITO Kenji, TAKEUCHI Norio, WATANABE Tsuguhiro, SHIMPO Fujio, NOMURA Goro, KATOH Akemi, ZHAO Yangping, LHD Experimental Group	647
Variation of Heating Efficiency of Magnetically Sheared CHS Plasmas by Polarization Control of 106GHz EC-Wave	YOSHIMURA Yasuo, AKIYAMA Tsuyoshi, ISOBE Mitsutaka, SHIMIZU Akihiro, SUZUKI Chihiro, TAKAHASHI Chihiro, NAGAOKA Kenichi, NISHIMURA Shin, MINAMI Takashi, OKAMURA Shoichi, MATSUOKA Keisuke, KUBO Shin, SHIMOZUMA Takashi, NOTAKE Takashi, OHKUBO Kunizo	651
Three-Dimensional Calculation Analysis of ICRF Heating in LHD	SEKI Tetsuo, KUMAZAWA Ryuhei, MUTOH Takashi, FUKUYAMA Atsushi, SAITO Kenji, TORII Yuuki, TAKEUCHI Norio, WATARI Tetsuo, ZHAO Yanping, LHD Experimental Group	655
Generation of Quasistatic Magnetic Field in the Relativistic Laser-Plasma Interactions.....	KATO Susumu, NAKAMURA Tatsufumi, MIMA Kunioki, SENTOKU Yasuhiko, NAGATOMO Hideo, OWADANO Yoshiro	658
Relationship between Magnetic Field Structure and Plasma Density Profile in LHD Edge Region	MATSUURA Hiroto, IGUCHI Satoshi, MORISAKI Tomohiro, TANAKA Kenji, KOMORI Akio, MOTOJIMA Osamu, LHD Experimental Group	662
High Harmonic Fast Wave Propagation in the GAMMA 10 Tandem Mirror.....	YAMAGUCHI Yuusuke, ICHIMURA Makoto, HIGAKI Hiroyuki, KAKIMOTO Shingo, HORINOUCHEI Kentarou, IDE Kouhei, INOUE Daisuke, NAKAGOME Kenichirou, NAGAI Hirohisa, FUKUYAMA Atsushi, CHO Teruji	665

Effects of Magnetic Field Distribution on Power Absorption through Second Harmonic Electron Cyclotron Resonance Heating in Mirror Machines	TATEMATSU Yoshinori, SAITO Teruo, KATANUMA Isao, CHO Teruji	669
Temporal Behavior of Electron and Neutral Hydrogen Density Profiles during NBI in the GAMMA 10 Tandem Mirror	KUBOTA Yuusuke, YOSHIKAWA Masayuki, NAKASHIMA Yousuke, KOBAYASHI Takayuki, SAITO Masashi, OHKI Toshikazu, HIGASHIZONO Yuta, ITAKURA Akiyosi, TSUNODA Satonobu, CHO Teruji	673
Simulation of Path Integral Effects for the Magnetic Field Fluctuation Measurement by a Gold Neutral Beam Probe in the Tandem Mirror GAMMA 10	KOJIMA Atsushi, ISHII Kameo, TAKEMURA Yuichiro, HAGISAWA Kazuhisa, MIYATA Yoshiaki, ITAKURA Akiyosi, ICHIMURA Makoto, CHO Teruji	677
Observation of Mirror Trapped Ions and Development of a High Energy Neutral Particle Analyzer in GAMMA 10	HAGISAWA Kazuhisa, ISHII Kameo, TAKEMURA Yuichiro, KOJIMA Atsushi, MIYATA Yoshiaki, CHO Teruji	681
Study of Impurity Ion Radiation Intensities using Collisional-Radiative Model in the GAMMA 10 Plasma	YOSHIKAWA Masayuki, SEDO Keiichiro, KUBOTA Yuusuke, KOBAYASHI Takayuki, ITAKURA Akiyosi, KOHAGURA Junko, MURAKAMI Izumi, KATO Takako, CHO Teruji	685
Particle Acceleration during Counter-Streaming Instability in Magnetized Pair Plasmas.....	SAITO Shinji, SAKAI Jun-Ichi	689
Proton Acceleration in a Single Loop Disrupted During Collision of Two Moving Solitary Magnetic Kinks	SAKAI Jun-Ichi, KAKIMOTO Atunari, SOKOLOV Igor	692
Methanol Production in AC Dielectric Barrier Discharge	AGHAMIR Farzin M., MATIN Nasser S., JALILI Amir-hossein, ESFARAYENI Mohammad-Ali	696
Fluctuation Measurement in Electron Penetration Experiment on Helical Magnetic Configuration	WAKABAYASHI Hidenori, HIMURA Haruhiko, FUKAO Masayuki, ISOBE Mitsutaka, YOSHIDA Zensho, the CHS group	699
Study on Oscillation Starting Condition of K-Band Oversized Backward Wave Oscillator Driven by a Weakly Relativistic Electron Beam.....	OGURA Kazuo, YOSHIDA Ryo, YAMASHITA Yuichiro, YAMAZAKI Hoshiyuki, KOMIYAMA Kiyofumi, SAKAI Masakazu	703
Three-Dimensional Electrostatic Particle Simulation of Parallel-Flow-Shear Driven Low-Frequency Plasma Instabilities	MATSUMOTO Noriaki, KANEKO Toshiro, ISHIGURO Seiji, HATAKEYAMA Rikizo	707
Construction of High-Aperture Optical System for Imaging Diagnostics of Pure Electron Plasma in Tesla-Range of Magnetic Field and Its Application	AOKI Jun, KIWAMOTO Yasuhito, SANPEI Akio, SOGA Yukihiro	711
Radial Compression of Density Profile of a Pure Electron Plasma by Application of External Torque	SOGA Yukihiro, KIWAMOTO Yasuhito, SANPEI Akio, AOKI Jun	715
Numerical Examination of Electromagnetic Field Properties in a Cylindrical Periodic Slow Wave Structure	YAMAZAKI Hoshiyuki, OGURA Kazuo, WATANABE Tsuguhiro	719
Study of Impurity Transport Parallel to the Magnetic Field Lines with the Use of TPD-II	SUGIMOTO Tatsunori, MATSUBARA Akihiro, SATO Kuninori, SUDO Shigeru	723
Dust-Lower-Hybrid Drift Instabilities with Dust Charge Fluctuations in Inhomogeneous Dusty Magnetoplasmas	SALIMULLAH Mohammad, RIZWAN Abu M., NAMBU Mitsuhiro, SHUKLA Padma K.	727
Dependence of Neutron/Proton Production Rate on Discharged Current in Spherical Inertial Electrostatic Confinement Plasmas	MATSUO Takashi, MATSUURA Hideaki, NAKAO Yasuyuki, KUDO Kazuhiko	731
Fabrication of a 50 keV Cold Cathode Electron Gun	SARI Amir H., GHORANNEVISS Mahmood, HORA Henrich, OSMAN Frederic, HÖPFL Reinhard, HANTEHZADEH Mohammad R., BOLOUKI Nima	735
Theoretical Investigation of Langmuir Wave Instability in Irradiated Dusty Plasmas	ISLAM Khairul Md., NAKASHIMA Yousuke	738
Excitation of the Alfvén Ion Cyclotron Mode due to Anisotropic Heating	KAKIMOTO Shingo, INOUE Daisuke, ICHIMURA Makoto, HIGAKI Hiroyuki, HORINOUCI Kentarou, IDE Kouhei, YAMAGUCHI Yuusuke, NAGAI Hirohisa, NAKAGOME Kenichirou, WATANABE Tsuguhiro, CHO Teruji	741
Computer Simulation of Ultrashort-Pulse Reflectometry in Helical Plasmas	FUKUCHI Atsushi, HOJO Hitoshi, ITAKURA Akiyoshi, MASE Atsushi	745
Plasma Diagnostics for Ly α and Satellite Lines from Laser-Produced Plasma	YAMAMOTO Norimasa, KATO Takako, ROSMEJ Frank B.	748
Dynamics of Dust Particles Coming off a Wall in Sheath and Presheath	SMIRNOV Roman, TOMITA Yukihiro, TAKIZUKA Tomonori, TAKAYAMA Arimichi, CHUTOV Yuriy	752
Production of Helical Non-Neutral Plasmas by Collisionless Electron Penetration.....	HIMURA Haruhiko, WAKABAYASHI Hidenori, FUKAO Masayuki, ISOBE Mitsutaka, OKAMURA Shoichi, YAMADA Hiroshi	756
Characteristics of Methane Destruction Using a Pulsed Corona Discharge at Atmospheric Pressure	MISHRA Lekha Nath, SHIBATA Kanetoshi, ITO Hiroaki, YUGAMI Noboru, NISHIDA Yashushi	760