

## Subject index for PSI-12

### Active Pumping

Helium transport and exhaust experiments in tokamaks, J. Hogan  
241–243 (1997) 68

Particle exhaust in radiative divertor experiments, H.-S. Bosch, D.  
Coster, R. Dux, C. Fuchs, G. Haas, A. Herrmann, S. Hirsch,  
A. Kallenbach, J. Neuhauser, R. Schneider, J. Schweinzer and  
M. Weinlich  
241–243 (1997) 82

Influence of active pumping on density and confinement behaviour  
of JET plasmas, G. Saibene, D. Campbell, L.D. Horton,  
A. Loarte, R.D. Monk, E. Righi and D. Stork  
241–243 (1997) 476

Throat and vented pump limiters particle collection experiments  
with auxiliary heating in Tore Supra, B. Pégourié, T. Loarer,  
E. Tsitrone and G. Granata  
241–243 (1997) 494

Particle balance modelling in ergodic divertor experiments on Tore  
Supra, T. Loarer, B. Meslin, Ph. Ghendrih, C. Grisolia and A.  
Grosman  
241–243 (1997) 505

Core/divertor/wall particle dynamics in the DIII-D tokamak, J.T.  
Hogan, R. Maingi, P.K. Mioduszewski, Th. Hutter, C.C. Klepper  
and M.R. Wade  
241–243 (1997) 612

Local island divertor experiments on CHS, A. Komori, N. Ohyabu,  
S. Masuzaki, T. Morisaki, H. Suzuki, C. Takahashi, S. Sakakibara,  
K. Watanabe, T. Watanabe, T. Minami, S. Morita,  
K. Tanaka, S. Ohdachi, S. Kubo, N. Inoue, H. Yamada,  
K. Nishimura, S. Okamura, K. Matsuoka, O. Motojima,  
M. Fujiwara, A. Iiyoshi, C.C. Klepper, J.F. Lyon, A.C. England,  
D.E. Greenwood, D.K. Lee, D.R. Overby, J.A. Rome,  
D.E. Schechter and C.T. Wilson  
241–243 (1997) 967

Applications of superpermeable membranes in fusion: The  
flux density problem and experimental progress, A. Livshits,  
N. Ohyabu, M. Notkin, V. Alimov, H. Suzuki, A. Samartsev,  
M. Solovyov, I. Grigoriadi, A. Glebovsky, A. Busnyuk,  
A. Doroshin and K. Komatsu  
241–243 (1997) 1203

### Analytic 1D Model

Temperature profiles in stochastic boundaries, S. Féron and Ph.  
Ghendrih  
241–243 (1997) 328

### Analytical Model

Classical drifts in the tokamak sol and divertor: Models and  
experiment, A.V. Chankin  
241–243 (1997) 199

Wall effects on electron dynamics in the SOL, P. Helander, S.I.  
Krasheninnikov, N. Kuzmicheva and A.P. Smirnov  
241–243 (1997) 278

Modelling of transition from attached to detached state and self-consistent calculations of He levels in ITER, M. Sugihara, T. Amano, D. Boucher, Y. Igitkhanov, G. Janeschitz, H.D. Pacher, D. Post and P. Yushmanov  
241–243 (1997) 299

Stability of a radiative mantle in ITER, M.A. Mahdavi, G.M. Staebler, R.D. Wood, D.G. Whyte and W.P. West  
241–243 (1997) 305

Self-organized criticality in particle transport governed by ionization, Y. Sarazin and Ph. Ghendrih  
241–243 (1997) 322

Particle balance modelling in ergodic divertor experiments on Tore Supra, T. Loarer, B. Meslin, Ph. Ghendrih, C. Grisolia and A. Grosman  
241–243 (1997) 505

Routes to divertor detachment in ASDEX Upgrade, C.S. Pitcher,  
A.W. Carlson, C. Fuchs, A. Herrmann, W. Suttorp, J. Schweinzer  
and M. Weinlich  
241–243 (1997) 696

Spatial distributions of neutral atoms in the near-target plasma:  
Theory and experiment, D. Naujoks, J. Steinbrink and U. Wenzel  
241–243 (1997) 707

Time resolved observation of the erosion of boron containing protective coatings on wall elements of TEXTOR-94 by means of colorimetry, P. Wienhold, F. Weschenfelder, J. von Seggern, B. Emmoth, H.G. Esser, P. Karduck and J. Winter  
241–243 (1997) 804

### Atomic Physics

Non-linear effects on neutral gas transport in divertors, D. Reiter,  
Chr. May, M. Baelmans and P. Börner  
241–243 (1997) 342

Divertor scaling laws for tokamaks, P.J. Catto, D.A. Knoll, S.I.  
Krasheninnikov and J.W. Connor  
241–243 (1997) 369

Parallel electron temperature and density gradients measured in the  
JET MkI divertor using thermal helium beams, S.J. Davies, P.D.  
Morgan, Y. Ul'Haq, C.F. Maggi, S.K. Erents, W. Fundamenski,  
L.D. Horton, A. Loarte, G.F. Matthews, R.D. Monk and P.C.  
Stangeby  
241–243 (1997) 426

Controlled detachment and particle transport in the divertor plasma  
in TdeV, B.L. Stansfield, F. Meo, G. Abel, C. Boucher, J.-L.  
Gauvreau, J.P. Gunn, E. Haddad, J.-L. Lachambre, J. Mailloux,  
R. Marchand, G. Ratel, N. Richard, M.M. Shoucri, B. Terreault,  
S. Beaudry, R. Décoste, G.W. Pacher, W. Zuzak, J.D. Elder and  
P.C. Stangeby  
241–243 (1997) 739

Low-energetic He-atom beam as a diagnostic probe for electric  
field measurement in the plasma edges, K. Takiyama, T. Katsuta,  
H. Toyota, M. Watanabe, K. Mizuno, T. Ogawa and T. Oda  
241–243 (1997) 1222

**Atomic Physics (continued)**

- A double electron capture by alpha particles in collisions with hydrogen molecules in low temperature plasma, T. Oda, K. Sato, S. Namba, S. Kusakabe, K. Takahara, H. Tawara, T. Katsuta, K. Takiyama and U. Furukane 241-243 (1997) 1238

**B<sub>4</sub>C**

- Thermal response for divertor mock-up using surface-modified CFC tile, L. Fujita, Y. Hirohata, T. Hino, T. Yamashina, Y. Kubota, N. Noda, O. Motojima, T. Sogabe, T. Matsudas and K. Kurodas 241-243 (1997) 1185

**Beryllium**

- Release of hydrogen from co-existing layers of carbon and beryllium with vacuum heating, K. Ashida, K. Watanabe and T. Okabe 241-243 (1997) 1060

- Erosion behavior and surface characterization of beryllium under high-flux deuterium plasma bombardment, J. Won, F.E. Spada, R. Boivin, R. Doerner, S. Luckhardt, F.C. Sze and R.W. Conn 241-243 (1997) 1110

- Measurements and modeling of the angular-resolved sputtering yield of D-soaked Be by 100, 300, 500 and 700 eV D<sup>+</sup>, D.N. Ruzic, P.C. Smith and R.B. Turkot, Jr. 241-243 (1997) 1170

**Biasing**

- Scrape-off layer broadening by the  $E \times B$  convective cell induced by non-axisymmetric divertor biasing, J. Hara, Y. Uesugi, Y. Miura and H. Kawashima 241-243 (1997) 338

- Radiative plasmas in TdEV, B. Terreault, N. Richard, J. Mailloux, G. Abel, C. Côté, E. Haddad, W. Zhang, C. Boucher, S. Chiu, J. Gunn, H.H. Mai, F. Meo, B.L. Stansfield and W.W. Zuzak 241-243 (1997) 755

- Retention of Ne and N<sub>2</sub> in the closed and pumped TdEV divertor with attached and detached plasmas, N. Richard, B. Terreault, E. Haddad, J. Gunn, G. Abel, S. Chiu, J.-L. Gauvreau, H.H. Mai and W.W. Zuzak 241-243 (1997) 760

- Effects of high Z probe on plasma behavior in HT-6M tokamak, J. Li, X. Gong, L. Luo, F.X. Yin, N. Noda, B. Wan, W. Xu, X. Gao, F. Yin, J.G. Jiang, Z. Wu, J.Y. Zhao, M. Wu, S. Liu and Y. Han 241-243 (1997) 878

- On the use of biased movable B<sub>4</sub>C-limiter for pumping O<sub>2</sub> and H<sub>2</sub>O during discharge cleaning, G.P. Glazunov, E.D. Volkov, V.G. Kotenko, A.V. Shtan', Yu.K. Mironov, N.I. Nasarov, A. Sagara, N. Ohyabu and O. Motojima 241-243 (1997) 1052

**Bifurcation and Multistate Solutions**

- Study of hot tungsten emissive plate in high heat flux plasma on NAGDIS-I, M.Y. Ye, S. Takamura and N. Ohno 241-243 (1997) 1243

**Boronization**

- Real time boronization experiments in CHS and scaling for LHD, A. Sagara, Y. Hasegawa, K. Tsuzuki, N. Inoue, H. Suzuki, T. Morisaki, N. Noda, O. Motojima, S. Okamura, K. Matsuoka, R. Akiyama, K. Ida, H. Idei, K. Iwasaki, S. Kubo, T. Minami, S.

- Morita, K. Narihara, T. Ozaki, K. Sato, C. Takahashi, K. Tanaka, K. Toi and I. Yamada 241-243 (1997) 972

**Boundary MHD**

- ELM structure in the boundary plasma on COMPASS-D, S.J. Fielding, K.B. Axon, M.G. Booth, R.J. Buttery, J. Dowling, D. Gates, C. Hunt, C. Silva and M. Valovic 241-243 (1997) 902

- Boundary modelling of the stellarator Wendelstein 7-X, H. Renner, E. Strumberger, J. Kisslinger, J. Nührenberg and H. Wobig 241-243 (1997) 946

**Boundary Plasma**

- Radiative edge layers in limiter tokamaks, P. Monier-Garbet 241-243 (1997) 92

- Understanding the edge physics of divertor experiments by comparison of 2D edge code calculations and experimental measurements, A. Loarte 241-243 (1997) 118

- Stability of a radiative mantle in ITER, M.A. Mahdavi, G.M. Staebler, R.D. Wood, D.G. Whyte and W.P. West 241-243 (1997) 305

- Self-organized criticality in particle transport governed by ionization, Y. Sarazin and Ph. Ghendrih 241-243 (1997) 322

- Edge density profiles in high-performance JET plasmas, D.R.R. Summers, P. Breger, K. Erents, Z.A. Pietrzyk, B. Viacozz and J. Vince 241-243 (1997) 391

- Runaway electron damage to the Tore Supra Phase III outboard pump limiter, R. Nygren, T. Lutz, D. Walsh, G. Martin, M. Chatelier, T. Loarer and D. Guilhem 241-243 (1997) 522

- Long pulse operation with actively cooled limiters, D. Guilhem, J. Hogan, D. Van Houtte, M. Lipa, T. Loarer, P. Chappuis, T. Hoang, J. Schlosser and R. Mitteau 241-243 (1997) 542

- Characteristics of the scrape-off layer in DIII-D high-performance negative central magnetic shear discharges, C.J. Lasnier, R. Maingi, A.W. Leonard, S.L. Allen, D.A. Buchenauer, K.H. Burrell, T.A. Casper, J.W. Cuthbertson, M.E. Fenstermacher, D.N. Hill, R.A. Jong, L.L. Lao, E.A. Lazarus, R.A. Moyer, T.W. Petrie, G.D. Porter, B.W. Rice, B.W. Stallard, T.S. Taylor and J.G. Watkins 241-243 (1997) 623

- Experimental study on neoclassical properties of the ions in the edge plasma of the tokamak TEXTOR, K. Höthker, W. Bieger, M. Brix, A. Pospieszczyk, R.P. Schorn, B. Schweer, G. Van Oost and R. Weynants 241-243 (1997) 839

- Radial profiles of atomic deuterium measured in the boundary of TEXTOR 94 with laser-induced fluorescence, Ph. Mertens and M. Silz 241-243 (1997) 842

- Study of helium transport in HL-1M edge plasma region, L.L. Peng, B.Q. Deng, J.L. Luo, S.K. Yang, M. Wang, E.Y. Wang and S.J. Qian 241-243 (1997) 883

- ELM structure in the boundary plasma on COMPASS-D, S.J. Fielding, K.B. Axon, M.G. Booth, R.J. Buttery, J. Dowling, D. Gates, C. Hunt, C. Silva and M. Valovic 241-243 (1997) 902

- Monte Carlo modelling of the transport in the stellarator periphery with magnetic islands, D. Naujoks, P. Bachmann, A. Runov and D. Sünder 241-243 (1997) 925

- Plasma response on impurity injection in W7-AS, D. Hildebrandt, R. Brakel, A. Elsner, P. Grigull, H. Hacker, R. Burhenn,

**Boundary Plasma (continued)**

- S. Fiedler, L. Giannone, C. Görner, H.J. Hartfuß, G. Herre, A. Herrmann, J.V. Hofmann, G. Kühner, D. Naujoks, F. Sardei, A. Weller and R. Wolf 241–243 (1997) 950
- Experimental study of edge plasma structure in various discharges on compact helical system, T. Morisaki, A. Komori, R. Akiyama, H. Idei, H. Iguchi, N. Inoue, Y. Kawai, S. Kubo, S. Masuzaki, K. Matsuoka, T. Minami, S. Morita, N. Noda, N. Ohyabu, S. Okamura, M. Osakabe, H. Suzuki, K. Tanaka, C. Takahashi, H. Yamada, I. Yamada and O. Motojima 241–243 (1997) 977
- Wall conditioning and particle control in extrap T2, H. Bergsåker, D. Larsson, P. Brunsell, A. Möller and L. Tramontin 241–243 (1997) 993
- Behavior of edge plasma in STP-3M reversed field pinch, A. Matsuoka, H. Kajikawa, Y. Suzuki, H. Arimoto, A. Nagata, K. Aoto, M. Sugawara and K.I. Sato 241–243 (1997) 998
- Low-energetic He-atom beam as a diagnostic probe for electric field measurement in the plasma edges, K. Takiyama, T. Katsuta, H. Toyota, M. Watanabe, K. Mizuno, T. Ogawa and T. Oda 241–243 (1997) 1222
- Testing of a pulsed He supersonic beam for plasma edge diagnostic in the TJ-IU torsatron, F.L. Tabarés, D. Tafalla, V. Herrero and I. Tanarro 241–243 (1997) 1228
- Plasma-surface interactions with ICRF antennas and lower hybrid grills in Tore Supra, J.H. Harris, T. Hutter, J.T. Hogan, V. Basiuk, B. Beaumont, A. Becoulet, S. Bremond, M.D. Carter, M. Goniche, R.H. Goulding, D. Guilhem, G.R. Haste, D.J. Hoffman, X. Litaudon and F. Nguyen 241–243 (1997) 511

**Carbon**

- Energy distributions and yields of sputtered C<sub>2</sub> and C<sub>3</sub> clusters, E. Vietzke, A. Refke, V. Philipps and M. Hennes 241–243 (1997) 810
- Release of hydrogen from co-existing layers of carbon and beryllium with vacuum heating, K. Ashida, K. Watanabe and T. Okabe 241–243 (1997) 1060

**Carbon Fibre Composites**

- Exposure of CFC-materials to high transient heat loads in the TEXTOR tokamak, T. Scholz, J. Boedo, H. Bolt, R. Duwe, K.H. Finken, D. Gray and A. Hassanein 241–243 (1997) 848

**Chemical Erosion**

- Impurity release from low-Z materials under light particle bombardment, J.W. Davis and A.A. Haasz 241–243 (1997) 37
- Impurity release and deposition processes close to limiter surfaces in TEXTOR-94, V. Philipps, A. Pospieszczyk, H.G. Esser, U. Kögl, G. Mank, U. Samm, B. Schweer, J. von Seggern, B. Unterberg, E. Vietzke, F. Weschenfelder, P. Wienhold and T. Winter 241–243 (1997) 105
- A review on impurity transport in divertors, K. Shimizu, T. Takizuka and A. Sakasai 241–243 (1997) 167
- Erosion lifetime of iter divertor plates, H.D. Pacher, I. Smid, G. Federici, Yu. Igitkhanov, G. Janeschitz, R. Raffray and G. Vieider 241–243 (1997) 255
- Erosion/redeposition at the JET MkI divertor, H.Y. Guo, J.P. Coad, S.J. Davies, J.D. Elder, L.D. Horton, X.L. Li, J. Lingertat, A. Loarte, G.F. Matthews, R.D. Monk, R. Simonini, M.F. Stamp, P.C. Stangeby and A. Tabasso 241–243 (1997) 385
- Study of carbon impurity generation by chemical sputtering in JT-60U, S. Higashijima, H. Kubo, T. Sugie, K. Shimizu, N. Asakura, K. Itami, N. Hosogane, A. Sakasai, S. Konoshima, S. Sakurai and H. Takenaga 241–243 (1997) 574
- Time resolved observation of the erosion of boron containing protective coatings on wall elements of TEXTOR-94 by means of colorimetry, P. Wienhold, F. Weschenfelder, J. von Seggern, B. Emmoth, H.G. Esser, P. Karduck and J. Winter 241–243 (1997) 804
- Chemical erosion measurements from various carbon based limiters and coatings in TEXTOR-94, A. Pospieszczyk, V. Philipps, E. Casarotto, U. Kögl, B. Schweer, B. Unterberg and F. Weschenfelder 241–243 (1997) 833
- Retention and erosion behavior of oxygen implanted in different Si/C-materials, A. Refke, V. Philipps and E. Vietzke 241–243 (1997) 1103
- Interaction of energetic oxygen ions with lithium-containing amorphous hydrogenated carbon films: A mass spectrometry study, J.-U. Thiele, E. Vietzke and P. Oelhafen 241–243 (1997) 1127
- Erosion and thermal desorption characteristics of 1D-CF/B<sub>4</sub>C composite, T. Yamaki, Y. Suzuki, Y. Chiba, M. Nakagawa, Y. Gotoh, R. Jimbou and M. Saidoh 241–243 (1997) 1132
- Chemical erosion of pyrolytic graphite by low-energy H<sup>+</sup> and D<sup>+</sup> impact, B.V. Mech, A.A. Haasz and J.W. Davis 241–243 (1997) 1147
- Comparison of chemical sputtering yields for different graphites at high ion flux densities, H. Grote, W. Bohmeyer, H.-D. Reiner, T. Fuchs, P. Kornejew and J. Steinbrink 241–243 (1997) 1152
- Reduction of the chemical erosion of doped graphite due to surface modification during low energy D<sup>+</sup> bombardment, R. Schwörer, H. Plank and J. Roth 241–243 (1997) 1156
- Effect of ion-beam irradiation on power reflectivity of boron-doped CFC materials, M. Nagatsu, N. Takada, I. Tsuchikura, S. Sasaki, M. Akiba and K. Nakamura 241–243 (1997) 1180

**Density Limit**

- Divertor configuration studies on JET, C.G. Lowry, D.J. Campbell, S. Davies, H. Guo, P.J. Harbour, M. von Hellermann, L.D. Horton, A. Loarte, C. Maggi, G. Matthews, R. Mohanti, R. Monk, G.J. Radford, R. Reichle, G. Saibene, J. Spence, M. Stamp, A. Taroni and G.C. Vlases 241–243 (1997) 438
- Scaling radiative plasmas to ITER, G.F. Matthews, S. Allen, N. Asakura, J. Goetz, H. Guo, A. Kallenbach, B. Lipschultz, K. McCormick, M. Stamp, U. Samm, P.C. Stangeby, K.-H. Steuer, A. Taroni, B. Unterberg and P. West 241–243 (1997) 450
- Influence of active pumping on density and confinement behaviour of JET plasmas, G. Saibene, D. Campbell, L.D. Horton,

**Density Limit (continued)**

A. Loarte, R.D. Monk, E. Righi and D. Stork  
241–243 (1997) 476

**Desorption**

Properties of thin boron coatings formed during deuterated-boronization in JT-60, J. Yagyu, N. Ogiwara, M. Saidoh, J. von Seggern, T. Okabe, Y. Miyo, H. Hiratsuka, S. Yamamoto, P. Goppelt-Langer, Y. Aoki, H. Takeshita and H. Naramoto  
241–243 (1997) 579

Energy distributions and yields of sputtered C<sub>2</sub> and C<sub>3</sub> clusters, E. Vietzke, A. Refke, V. Philipps and M. Hennes  
241–243 (1997) 810

ICRF wall conditioning at TEXTOR-94 in the presence of a 2.25 T magnetic field, H.G. Esser, A. Lyssoivan, M. Freisinger, R. Koch, G. Van Oost, F. Weschenfelder and J. Winter  
241–243 (1997) 861

Effects of lithium-implantation on the hydrogen retention in both a-C:H and a-SiC:H materials submitted to deuterium bombardment, G. Barbier, G.G. Ross, M.A. El Khakani, N. Chevarier and A. Chevarier  
241–243 (1997) 1036

Hydrogen absorption behavior into boron films by glow discharges in hydrogen and helium, K. Tsuzuki, M. Natsir, N. Inoue, A. Sagara, N. Noda, O. Motojima, T. Mochizuki, T. Hino and T. Yamashina  
241–243 (1997) 1055

Deuterium retention in beryllium, molybdenum and tungsten at high fluences, A.A. Haasz and J.W. Davis  
241–243 (1997) 1076

Interaction of a high density neon plasma with graphite, C. Brosset, J. Bardon and E. Gauthier  
241–243 (1997) 1093

Retention and erosion behavior of oxygen implanted in different Si/C-materials, A. Refke, V. Philipps and E. Vietzke  
241–243 (1997) 1103

Erosion and thermal desorption characteristics of 1D-CF/B<sub>4</sub>C composite, T. Yamaki, Y. Suzuki, Y. Chiba, M. Nakagawa, Y. Gotoh, R. Jimbou and M. Saidoh  
241–243 (1997) 1132

In-situ ion beam analysis and dynamic studies of deuterium retention in graphite exposed to a high flux magnetron plasma, B. Emmoth, H. Bergsåker and L. Ilyinsky  
241–243 (1997) 1022

**Detached Plasma**

Study of recombining gas targets, K. Borrass, D. Coster, D. Reiter and R. Schneider  
241–243 (1997) 250

Simulation of plasma flux detachment in Alcator C-Mod and ITER, F. Wising, S.I. Krasheninnikov, D.J. Sigmar, D.A. Knoll, T.D. Rognlien, B. LaBombard, B. Lipschultz and G. McCracken  
241–243 (1997) 273

Plasma-neutral gas interaction in a tokamak divertor: Effects of hydrogen molecules and plasma recombination, S.I. Krasheninnikov, A.Yu. Pigarov, T.K. Soboleva and D.J. Sigmar  
241–243 (1997) 283

Modelling of transition from attached to detached state and self-consistent calculations of He levels in ITER, M. Sugihara, T. Amano, D. Boucher, Y. Igitkhanov, G. Janeschitz, H.D. Pacher, D. Post and P. Yushmanov  
241–243 (1997) 299

Density threshold for plasma detachment in gas target, N. Ezumi, S. Mori, N. Ohno, M. Takagi, S. Takamura, H. Suzuki and J. Park  
241–243 (1997) 349

Modelling of plasma momentum transference to side-walls by neutral particles, G.P. Maddison, D. Reiter and J. Hugill  
241–243 (1997) 353

Divertor scaling laws for tokamaks, P.J. Catto, D.A. Knoll, S.I. Krasheninnikov and J.W. Connor  
241–243 (1997) 369

Interpretation of ion flux and electron temperature profiles at the JET divertor target during high recycling and detached discharges, R.D. Monk, A. Loarte, A. Chankin, S. Clement, S.J. Davies, J.K. Ehrenberg, H.Y. Guo, J. Lingertat, O.F. Matthews, M.F. Stamp and P.C. Stangeby  
241–243 (1997) 396

Parallel electron temperature and density gradients measured in the JET MkI divertor using thermal helium beams, S.J. Davies, P.D. Morgan, Y. Ul'Haq, C.F. Maggi, S.K. Erents, W. Fundamenski, L.D. Horton, A. Loarte, G.F. Matthews, R.D. Monk and P.C. Stangeby  
241–243 (1997) 426

Divertor configuration studies on JET, C.G. Lowry, D.J. Campbell, S. Davies, H. Guo, P.J. Harbour, M. von Hellermann, L.D. Horton, A. Loarte, C. Maggi, G. Matthews, R. Mohanti, R. Monk, G.J. Radford, R. Reichle, G. Saibene, J. Spence, M. Stamp, A. Taroni and G.C. Vlases  
241–243 (1997) 438

Scaling radiative plasmas to ITER, G.F. Matthews, S. Allen, N. Asakura, J. Goetz, H. Guo, A. Kallenbach, B. Lipschultz, K. McCormick, M. Stamp, U. Samm, P.C. Stangeby, K.-H. Steuer, A. Taroni, B. Unterberg and P. West  
241–243 (1997) 450

Influence of active pumping on density and confinement behaviour of JET plasmas, G. Saibene, D. Campbell, L.D. Horton, A. Loarte, R.D. Monk, E. Righi and D. Stork  
241–243 (1997) 476

Plasma-neutral interaction in thermally collapsed plasma, J. Park, T.K. Bennett, M.J. Goeckner and S.A. Cohen  
241–243 (1997) 489

SOL plasma profiles under radiative and detached divertor conditions in JT-60U, N. Asakura, Y. Koide, K. Itami, N. Hosogane, K. Shimizu, S. Tsuji-Iio, S. Sakurai and A. Sakasai  
241–243 (1997) 559

First measurements of electron temperature and density with divertor Thomson scattering in radiative divertor discharges on DIII-D, S.L. Allen, D.N. Hill, T.N. Carlstrom, D.G. Nilson, R. Stockdale, C.L. Hsieh, T.W. Petrie, A.W. Leonard, D. Ryutov, G.D. Porter, R. Maingi, M.R. Wade, R. Cohen, W. Nevins, M.E. Fenstermacher, R.D. Wood, C.J. Lasnier, W.P. West and M.D. Brown  
241–243 (1997) 595

The role of turbulent transport in DIII-D edge and divertor plasmas, R.A. Moyer, J.W. Cuthbertson, T.E. Evans, G.D. Porter and J.G. Watkins  
241–243 (1997) 633

Investigation of electron parallel pressure balance in the scrape-off layer of deuterium-based radiative divertor discharges in DIII-D, T.W. Petrie, S.L. Allen, T.N. Carlstrom, D.N. Hill, R. Maingi, D. Nilson, M. Brown, D.A. Buchenauer, T.E. Evans, M.E. Fenstermacher, R.A. Jong, C.J. Lasnier, A.W. Leonard, M.A. Mahdavi, G.D. Porter, M.R. Wade and W.P. West  
241–243 (1997) 639

**Detached Plasma (continued)**

Controlled detachment and particle transport in the divertor plasma in TdeV, B.L. Stansfield, F. Meo, G. Abel, C. Boucher, J.-L. Gauvreau, J.P. Gunn, E. Haddad, J.-L. Lachambre, J. Mailloux, R. Marchand, G. Ratel, N. Richard, M.M. Shoucri, B. Terreault, S. Beaudry, R. Décoste, G.W. Pacher, W. Zuzak, J.D. Elder and P.C. Stangeby 241–243 (1997) 739

Retention of Ne and N<sub>2</sub> in the closed and pumped TdeV divertor with attached and detached plasmas, N. Richard, B. Terreault, E. Haddad, J. Gunn, G. Abel, S. Chiu, J.-L. Gauvreau, H.H. Mai and W.W. Zuzak 241–243 (1997) 760

Modification and control of divertor detachment in alcator C-Mod, B. Lipschultz, J.A. Goetz, B. LaBombard, G.M. McCracken, H. Ohkawa, Y. Takase and J.L. Terry 241–243 (1997) 771

**1D Model**

Plasma-neutral gas interaction in a tokamak divertor: Effects of hydrogen molecules and plasma recombination, S.I. Krasheninnikov, A.Yu. Pigarov, T.K. Soboleva and D.J. Sigmar 241–243 (1997) 283

Self-organized criticality in particle transport governed by ionization, Y. Sarazin and Ph. Ghendrih 241–243 (1997) 322

Code-code comparisons of DIVIMP's 'onion-skin model' and the EDGE2D fluid code, P.C. Stangeby, J.D. Elder, W. Fundamenski, A. Loarte, L.D. Horton, R. Simonini, A. Taroni, O.F. Matthews and R.D. Monk 241–243 (1997) 358

Studies of giant ELM interaction with the divertor target in JET, J. Lingertat, A. Tabasso, S. Ali-Arshad, B. Alper, P. van Belle, K. Borras, S. Clement, J.P. Coad and R. Monk 241–243 (1997) 402

Effect of magnetic field stochasticization on impurity behavior in a tokamak, M.Z. Tokar', H. Lasaar, W. Mandl, W.R. Hess, C. De Michelis, A. Grosman and U. Samm 241–243 (1997) 528

Routes to divertor detachment in ASDEX Upgrade, C.S. Pitcher, A.W. Carlson, C. Fuchs, A. Herrmann, W. Suttrop, J. Schweinzer and M. Weinlich 241–243 (1997) 696

**2D Model**

Understanding the edge physics of divertor experiments by comparison of 2D edge code calculations and experimental measurements, A. Loarte 241–243 (1997) 118

2D modelling of radiating divertor regime for ITER, A. Kukushkin, H.D. Pacher, M. Baelsmans, D. Coster, G. Janeschitz, D. Reiter and R. Schneider 241–243 (1997) 268

Lightly- or non-seeded, partially detached ITER divertor operation, G. Vlases, G. Corrigan and A. Taroni 241–243 (1997) 310  
Impurity fueling to terminate Tokamak discharges, S. Putvinski, N. Fujisawa, D. Post, N. Putvinskaya, M.N. Rosenbluth and J. Wesley 241–243 (1997) 316

Code-code comparisons of DIVIMP's 'onion-skin model' and the EDGE2D fluid code, P.C. Stangeby, J.D. Elder, W. Fundamenski, A. Loarte, L.D. Horton, R. Simonini, A. Taroni, O.F. Matthews and R.D. Monk 241–243 (1997) 358

Assessment of the DIVIMP 'onion-skin' model in the JET Mark I divertor, S.K. Erents, P. Breger, S.J. Davies, J.D. Elder, H.Y.

Guo, L.D. Horton, G.F. Matthews, R.D. Monk, P.C. Stangeby and D.D.R. Summers 241–243 (1997) 433

Derivation of SOL transport coefficients using 2D modelling for hot-ion ELM-free H-modes in JET, G.K. McCormick, A. Chankin, S. Clement, S. Davies, J. Ehrenberg, A. Loarte, R. Monk, R. Simonini, J. Spence, M. Stamp, A. Taroni and G. Vlases 241–243 (1997) 444

Comprehensive 2D measurements of radiative divertor plasmas in DIII-D, M.E. Fenstermacher, R.D. Wood, S.L. Allen, N.H. Brooks, D.A. Buchenauer, T.N. Carlstrom, J.W. Cuthbertson, E.J. Doyle, T.E. Evans, P.-M. Garbet, R.W. Harvey, D.N. Hill, A.W. Hyatt, R.C. Isler, G. Jackson, R.A. James, R. Jong, C.C. Klepper, C.J. Lasnier, A.W. Leonard, M.A. Mahdavi, R. Maingi, W.H. Meyer, R.A. Moyer, D.U. Nilson, T.W. Petrie, G.D. Porter, T.L. Rhodes, M.J. Schaffer, R.D. Stambaugh, D.M. Thomas, S. Tugarjnov, M.R. Wade, J.G. Watkins, W.P. West and D.G. Whyte 241–243 (1997) 666

Divertor geometry optimization for ASDEX Upgrade, R. Schneider, H.S. Bosch, J. Neuhauser, D. Coster, K. Lackner and M. Kaufmann 241–243 (1997) 701

A 2D approach to island divertor modelling for Wendelstein 7-AS, G. Herre, R. Schneider, D. Coster, F. Sardei, D. Reiter, P. Grigull and J. Kisslinger 241–243 (1997) 941

Boundary modelling of the stellarator Wendelstein 7-X, H. Renner, E. Strumberger, J. Kisslinger, J. Nührenberg and H. Wobig 241–243 (1997) 946

**3D Model**

Island divertor studies on W7-AS, F. Sardei, Y. Feng, P. Grigull, G. Herre, D. Hildebrandt, J.V. Hofmann, J. Kisslinger, R. Brakel, J. Das, J. Geiger, O. Heinrich, G. Kühner, H. Niedermeyer, D. Reiter, M. Richter-Glötzl, A. Runov, R. Schneider, U. Stroth, H. Verbeek, F. Wagner and R. Wolf 241–243 (1997) 135

Modeling of neutral pressure and pumping in the Tore Supra ergodic divertor and outboard pump limiter, L.W. Owen, T. Loarer, A. Grosman, B. Meslin, C.C. Klepper, P.K. Mioduszewski and T. Uckan 241–243 (1997) 499

Calculation of power deposition patterns on the ergodic divertor, Ph. Ghendrih and A. Grosman 241–243 (1997) 517

Studies on plasma edge transport and layer deposition by local injection of reactive gases during TEXTOR-94 discharges, U. Kögl, F. Weschenfelder, J. Winter, H.G. Esser, V. Philippss, A. Pospieszczyk, B. Schweer, J. von Seggern, M.Z. Tokar' and P. Wienhold 241–243 (1997) 816

A 3D Monte Carlo code for plasma transport in island divertors, Y. Feng, F. Sardei, J. Kisslinger and P. Grigull 241–243 (1997) 930

**Director Detachment**

Spatial radiation profiles in the ASDEX Upgrade divertor for detached plasmas, U. Wenzel, A. Thoma, R. Dux, Ch. Fuchs, A. Herrmann, St. Hirsch, A. Kallenbach, H. Kastelewicz, M. Laux, F. Mast and B. Napiontek 241–243 (1997) 728

**Disruptions**

- Side radiation damage from ablated vapor following an ITER-scale disruption, A.E. Koniges, D.C. Eder, H.A. Scott, H. Würz and F. Kappler 241–243 (1997) 244  
 Impurity fueling to terminate Tokamak discharges, S. Putvinski, N. Fujisawa, D. Post, N. Putvinskaya, M.N. Rosenbluth and J. Wesley 241–243 (1997) 316  
 Runaway electron damage to the Tore Supra Phase III outboard pump limiter, R. Nygren, T. Lutz, D. Walsh, G. Martin, M. Chatelier, T. Loarer and D. Guilhem 241–243 (1997) 522  
 Edge MHD activity in the ergodic divertor configuration of Tore Supra, S. Turlur, E. Joffrin, M. Zabiégo, Ph. Ghendrih and A. Grosman 241–243 (1997) 548  
 Simulation of the scrape-off layer plasma during a disruption, T.D. Rognlien, J.A. Crottinger, G.D. Porter, G.R. Smith, A.G. Kellman and P.L. Taylor 241–243 (1997) 590  
 Measurements of non-axisymmetric halo currents with and without 'killer' pellets during disruptions in the DIII-D tokamak, T.E. Evans, A.G. Kellman, D.A. Humphreys, M.J. Schaffer, P.L. Taylor, D.G. Whyte, T.C. Jernigan, A.W. Hyatt and R.L. Lee 241–243 (1997) 606

- Characterization of energetic deuterium striking the divertor of the DIII-D tokamak, R. Bastasz, W.R. Wampler, J.A. Whaley, D.G. Whyte, P.B. Parks, N.H. Brooks, W.P. West and C.P.C. Wong 241–243 (1997) 650

- Radiative plasmas in TdeV, B. Terreault, N. Richard, J. Mailloux, G. Abel, C. Côté, E. Haddad, W. Zhang, C. Boucher, S. Chiu, J. Gunn, H.H. Mai, F. Meo, B.L. Stansfield and W.W. Zuzak 241–243 (1997) 755

- Exposure of CFC-materials to high transient heat loads in the TEXTOR tokamak, T. Scholz, J. Boedo, H. Bolt, R. Duwe, K.H. Finken, D. Gray and A. Hassanein 241–243 (1997) 848  
 Performance of beryllium, carbon, and tungsten under intense thermal fluxes, J. Linke, M. Akiba, H. Bolt, G. Breitbach, R. Duwe, A. Makhankov, I. Ovchinnikov, M. Rödig and E. Wallura 241–243 (1997) 1210

**Divertor Exhaust**

- Direct measurement of divertor exhaust neon enrichment in DIII-D, M.J. Schaffer, M.R. Wade, R. Maingi, P. Monier-Garbet, W.P. West, D.G. Whyte, R.D. Wood and M.A. Mahdavi 241–243 (1997) 585

**Divertor Modelling**

- Plasma-wall interactions in ITER, R. Parker, G. Janeschitz, H.D. Pacher, D. Post, S. Chiocchio, G. Federici and P. Ladd 241–243 (1997) 1

**Divertor Plasma**

- Island divertor studies on W7-AS, F. Sardei, Y. Feng, P. Grigull, G. Herre, D. Hildebrandt, J.V. Hofmann, J. Kisslinger, R. Brakel, J. Das, J. Geiger, O. Heinrich, G. Kühner, H. Niedermeyer, D. Reiter, M. Richter-Glötzl, A. Runov, R. Schneider, U. Stroth, H. Verbeek, F. Wagner and R. Wolf 241–243 (1997) 135  
 A review of ELMs in divertor tokamaks, D.N. Hill 241–243 (1997) 182

- Classical drifts in the tokamak sol and divertor: Models and experiment, A.V. Chankin 241–243 (1997) 199

- Side radiation damage from ablated vapor following an ITER-scale disruption, A.E. Koniges, D.C. Eder, H.A. Scott, H. Würz and F. Kappler 241–243 (1997) 244

- 2D modelling of radiating divertor regime for ITER, A. Kukushkin, H.D. Pacher, M. Baelmans, D. Coster, G. Janeschitz, D. Reiter and R. Schneider 241–243 (1997) 268

- Simulation of plasma flux detachment in Alcator C-Mod and ITER, F. Wising, S.I. Krasheninnikov, D.J. Sigmar, D.A. Knoll, T.D. Rognlien, B. LaBombard, B. Lipschultz and G. McCracken 241–243 (1997) 273

- Plasma-neutral gas interaction in a tokamak divertor: Effects of hydrogen molecules and plasma recombination, S.I. Krasheninnikov, A.Yu. Pigarov, T.K. Soboleva and D.J. Sigmar 241–243 (1997) 283

- Lightly- or non-seeded, partially detached ITER divertor operation, G. Vlases, G. Corrigan and A. Taroni 241–243 (1997) 310

- Kinetic analysis on impurity control and reduction of power transmission of a divertor plasma, K. Sato and S. Kameda 241–243 (1997) 333

- Scrape-off layer broadening by the  $E \times B$  convective cell induced by non-axisymmetric divertor biasing, J. Hara, Y. Uesugi, Y. Miura and H. Kawashima 241–243 (1997) 338

- Modelling of plasma momentum transference to side-walls by neutral particles, G.P. Maddison, D. Reiter and J. Hugill 241–243 (1997) 353

- Code-code comparisons of DIVIMP's 'onion-skin model' and the EDGE2D fluid code, P.C. Stangeby, J.D. Elder, W. Fundamenski, A. Loarte, L.D. Horton, R. Simonini, A. Taroni, O.F. Matthews and R.D. Monk 241–243 (1997) 358

- Divertor scaling laws for tokamaks, P.J. Catto, D.A. Knoll, S.I. Krasheninnikov and J.W. Connor 241–243 (1997) 369

- Interpretation of ion flux and electron temperature profiles at the JET divertor target during high recycling and detached discharges, R.D. Monk, A. Loarte, A. Chankin, S. Clement, S.J. Davies, J.K. Ehrenberg, H.Y. Guo, J. Lingertat, O.F. Matthews, M.F. Stamp and P.C. Stangeby 241–243 (1997) 396

- Studies of giant ELM interaction with the divertor target in JET, J. Lingertat, A. Tabasso, S. Ali-Arshad, B. Alper, P. van Belle, K. Borras, S. Clement, J.P. Coad and R. Monk 241–243 (1997) 402

- Measurement and analysis of radiated power components in the JET MkI divertor using VUV spectroscopy, C.F. Maggi, J.D. Elder, W. Fundamenski, R. Giannella, L.D. Horton, K.D. Lawson, A. Loarte, A. Maas, R. Reichle, M. Stamp, P.C. Stangeby and H.P. Summers 241–243 (1997) 414

- Neutral particle retention in the JET MK I divertor, J.K. Ehrenberg, D.J. Campbell, P.J. Harbour, L.D. Horton, A. Loarte, G.K. McCormick, R.D. Monk, G.R. Saibene, R. Simonini, A. Taroni and M.F. Stamp 241–243 (1997) 420

- Parallel electron temperature and density gradients measured in the JET MkI divertor using thermal helium beams, S.J. Davies, P.D. Morgan, Y. Ul'Haq, C.F. Maggi, S.K. Erents, W. Fundamenski,

*Divertor Plasma (continued)*

- L.D. Horton, A. Loarte, G.F. Matthews, R.D. Monk and P.C. Stangeby 241–243 (1997) 426
- Assessment of the DIVIMP ‘onion-skin’ model in the JET Mark I divertor, S.K. Erents, P. Breger, S.J. Davies, J.D. Elder, H.Y. Guo, L.D. Horton, G.F. Matthews, R.D. Monk, P.C. Stangeby and D.D.R. Summers 241–243 (1997) 433
- Divertor configuration studies on JET, C.G. Lowry, D.J. Campbell, S. Davies, H. Guo, P.J. Harbour, M. von Hellermann, L.D. Horton, A. Loarte, C. Maggi, G. Matthews, R. Mohanti, R. Monk, G.J. Radford, R. Reichle, G. Saibene, J. Spence, M. Stamp, A. Taroni and G.C. Vlases 241–243 (1997) 438
- Low energy neutral particle fluxes in the JET divertor, R. Reichle, J.K. Ehrenberg, N.A.C. Gottardi, L.D. Horton, L.C. Ingesson, H.J. Jäckel, G.K. McCormick, A. Loarte, R. Simonini and M.F. Stamp 241–243 (1997) 456
- Arc jets for divertor component testing, J. Balboni, S.A. Cohen and T. Munsat 241–243 (1997) 483
- Simulation of the scrape-off layer plasma during a disruption, T.D. Rognlien, J.A. Crottinger, G.D. Porter, G.R. Smith, A.G. Kellman and P.L. Taylor 241–243 (1997) 590
- First measurements of electron temperature and density with divertor Thomson scattering in radiative divertor discharges on DIII-D, S.L. Allen, D.N. Hill, T.N. Carlstrom, D.G. Nilson, R. Stockdale, C.L. Hsieh, T.W. Petrie, A.W. Leonard, D. Ryutov, G.D. Porter, R. Maingi, M.R. Wade, R. Cohen, W. Nevins, M.E. Fenstermacher, R.D. Wood, C.J. Lasnier, W.P. West and M.D. Brown 241–243 (1997) 595
- Investigation of electron parallel pressure balance in the scrape-off layer of deuterium-based radiative divertor discharges in DIII-D, T.W. Petrie, S.L. Allen, T.N. Carlstrom, D.N. Hill, R. Maingi, D. Nilson, M. Brown, D.A. Buchenauer, T.E. Evans, M.E. Fenstermacher, R.A. Jong, C.J. Lasnier, A.W. Leonard, M.A. Mahdavi, G.D. Porter, M.R. Wade and W.P. West 241–243 (1997) 639
- Reciprocating and fixed probe measurements of  $n_e$  and  $T_e$  in the DIII-D divertor, J.G. Watkins, R.A. Moyer, J.W. Cuthbertson, D.A. Buchenauer, T.N. Carlstrom, D.N. Hill and M. Ulrickson 241–243 (1997) 645
- Characterization of energetic deuterium striking the divertor of the DIII-D tokamak, R. Bastasz, W.R. Wampler, J.A. Whaley, D.G. Whyte, P.B. Parks, N.H. Brooks, W.P. West and C.P.C. Wong 241–243 (1997) 650
- DiMES divertor erosion experiments on DIII-D, D.G. Whyte, J.N. Brooks, C.P.C. Wong, W.P. West, R. Bastasz, W.R. Wampler and J. Rubenstein 241–243 (1997) 660
- Comprehensive 2D measurements of radiative divertor plasmas in DIII-D, M.E. Fenstermacher, R.D. Wood, S.L. Allen, N.H. Brooks, D.A. Buchenauer, T.N. Carlstrom, J.W. Cuthbertson, E.J. Doyle, T.E. Evans, P.-M. Garbet, R.W. Harvey, D.N. Hill, A.W. Hyatt, R.C. Isler, G. Jackson, R.A. James, R. Jong, C.C. Klepper, C.J. Lasnier, A.W. Leonard, M.A. Mahdavi, R. Maingi, W.H. Meyer, R.A. Moyer, D.U. Nilson, T.W. Petrie, G.D. Porter, T.L. Rhodes, M.J. Schaffer, R.D. Stambaugh, D.M. Thomas, S. Tugarjnov, M.R. Wade, J.G. Watkins, W.P. West and D.G. Whyte 241–243 (1997) 666
- Routes to divertor detachment in ASDEX Upgrade, C.S. Pitcher, A.W. Carlson, C. Fuchs, A. Herrmann, W. Suttrop, J. Schweinzer and M. Weinlich 241–243 (1997) 696
- Controlled detachment and particle transport in the divertor plasma in TdeV, B.L. Stansfield, F. Meo, G. Abel, C. Boucher, J.-L. Gauvreau, J.P. Gunn, E. Haddad, J.-L. Lachambre, J. Mailloux, R. Marchand, G. Ratel, N. Richard, M.M. Shoucri, B. Terreault, S. Beaudry, R. Décoste, G.W. Pacher, W. Zuzak, J.D. Elder and P.C. Stangeby 241–243 (1997) 739
- Modification and control of divertor detachment in alcator C-Mod, B. Lipschultz, J.A. Goetz, B. LaBombard, G.M. McCracken, H. Ohkawa, Y. Takase and J.L. Terry 241–243 (1997) 771
- Divertor target profiles and recycling studies in TCV single null lower standard discharges, R.A. Pitts, Ch. Nieswand, H. Weisen, M. Anton, R. Behn, R.F. Chavan, M.J. Dutch, B.P. Duval, S. Franke, F. Hofmann, B. Joye, J.B. Lister, X. Llobet, Y. Martin, J.-M. Moret, J. Petrzilka, Z.A. Pietrzyk, V. Piffi, P. Reinke, M.E. Rensink, G.R. Smith and W. van Toledo 241–243 (1997) 867
- A 3D Monte Carlo code for plasma transport in island divertors, Y. Feng, F. Sardei, J. Kisslinger and P. Grigull 241–243 (1997) 930
- Local island divertor experiments on CHS, A. Komori, N. Ohyabu, S. Masuzaki, T. Morisaki, H. Suzuki, C. Takahashi, S. Sakakibara, K. Watanabe, T. Watanabe, T. Minami, S. Morita, K. Tanaka, S. Ohdachi, S. Kubo, N. Inoue, H. Yamada, K. Nishimura, S. Okamura, K. Matsuoka, O. Motojima, M. Fujiwara, A. Iiyoshi, C.C. Klepper, J.F. Lyon, A.C. England, D.E. Greenwood, D.K. Lee, D.R. Overbey, J.A. Rome, D.E. Schechter and C.T. Wilson 241–243 (1997) 967
- A double electron capture by alpha particles in collisions with hydrogen molecules in low temperature plasma, T. Oda, K. Sato, S. Namba, S. Kusakabe, K. Takahara, H. Tawara, T. Katsuta, K. Takiyama and U. Furukane 241–243 (1997) 1238

*Divertor Plate*

- Thermal response for divertor mock-up using surface-modified CFC tile, L. Fujita, Y. Hirohata, T. Hino, T. Yamashina, Y. Kubota, N. Noda, O. Motojima, T. Sogabe, T. Matsudas and K. Kurodas 241–243 (1997) 1185

*Divertor Simulator*

- Density threshold for plasma detachment in gas target, N. Ezumi, S. Mori, N. Ohno, M. Takagi, S. Takamura, H. Suzuki and J. Park 241–243 (1997) 349

- Arc jets for divertor component testing, J. Balboni, S.A. Cohen and T. Munsat 241–243 (1997) 483

- Plasma-neutral interaction in thermally collapsed plasma, J. Park, T.K. Bennett, M.J. Goeckner and S.A. Cohen 241–243 (1997) 489

- Study of hot tungsten emissive plate in high heat flux plasma on NAGDIS-I, M.Y. Ye, S. Takamura and N. Ohno 241–243 (1997) 1243

- Impurity generation for low energy range of ion bombardment and its transport in a plasma, M. Kojima and S. Takamura 241–243 (1997) 1248

**Edge Localised Modes (ELM)**

Studies of giant ELM interaction with the divertor target in JET, J. Lingertat, A. Tabasso, S. Ali-Arshad, B. Alper, P. van Belle, K. Borrass, S. Clement, J.P. Coad and R. Monk  
241–243 (1997) 402

Divertor heat and particle flux due to ELMs in DIII-D and ASDEX-upgrade, A.W. Leonard, W. Suttrop, T.H. Osborne, T.E. Evans, D.N. Hill, A. Herrmann, C.J. Lasnier, D.N. Thomas, J.G. Watkins, W.P. West, M. Weinlich and H. Zohm  
241–243 (1997) 628

Reciprocating and fixed probe measurements of  $n_e$  and  $T_e$  in the DIII-D divertor, J.G. Watkins, R.A. Moyer, J.W. Cuthbertson, D.A. Buchenauer, T.N. Carlstrom, D.N. Hill and M. Ulrickson  
241–243 (1997) 645

B2-Eirene modelling of ASDEX Upgrade, D.P. Coster, R. Schneider, J. Neuhauser, H.-S. Bosch, R. Wunderlich, C. Fuchs, F. Mast, A. Kallenbach, R. Dux, G. Becker, B.J. Braams and D. Reiter  
241–243 (1997) 690

**Electric Potential**

Behavior of edge plasma in STP-3M reversed field pinch, A. Matsouka, H. Kajikawa, Y. Suzuki, H. Arimoto, A. Nagata, K. Aoto, M. Sugawara and K.I. Sato  
241–243 (1997) 998

**Electric Potential and Current**

Kinetic analysis on impurity control and reduction of power transmission of a divertor plasma, K. Sato and S. Kameda  
241–243 (1997) 333

Scrape-off layer broadening by the  $E \times B$  convective cell induced by non-axisymmetric divertor biasing, J. Hara, Y. Uesugi, Y. Miura and H. Kawashima  
241–243 (1997) 338

Measurements of non-axisymmetric halo currents with and without 'killer' pellets during disruptions in the DIII-D tokamak, T.E. Evans, A.G. Kellman, D.A. Humphreys, M.J. Schaffer, P.L. Taylor, D.G. Whyte, T.C. Jernigan, A.W. Hyatt and R.L. Lee  
241–243 (1997) 606

The separation of angle and size effects on Langmuir characteristics, A. Carlson, V. Rohde and M. Weinlich  
241–243 (1997) 722

**Electric Potential and Current Radial Electric Field**

Direct measurement of the plasma potential in the edge of ASDEX Upgrade using a self emitting probe, V. Rohde, M. Laux, P. Bachmann, A. Herrmann and M. Weinlich  
241–243 (1997) 712

**Energy Balance**

Stability of a radiative mantle in ITER, M.A. Mahdavi, G.M. Staebler, R.D. Wood, D.G. Whyte and W.P. West  
241–243 (1997) 305

Temperature profiles in stochastic boundaries, S. Féron and Ph. Ghendrih  
241–243 (1997) 328

Low energy neutral particle fluxes in the JET divertor, R. Reichle, J.K. Ehrenberg, N.A.C. Gottardi, L.D. Horton, L.C. Ingesson, H.J. Jäckel, G.K. McCormick, A. Loarte, R. Simonini and M.F. Stamp  
241–243 (1997) 456

Characteristics of the scrape-off layer in DIII-D high-performance negative central magnetic shear discharges, C.J. Lasnier, R. Maingi, A.W. Leonard, S.L. Allen, D.A. Buchenauer, K.H. Burrell, T.A. Casper, J.W. Cuthbertson, M.E. Fenstermacher, D.N. Hill, R.A. Jong, L.L. Lao, E.A. Lazarus, R.A. Moyer, T.W. Petrie, G.D. Porter, B.W. Rice, B.W. Stallard, T.S. Taylor and J.G. Watkins  
241–243 (1997) 623

Performance of the Ti doped graphite RG-Ti-91 at the divertor of the Tokamak ASDEX Upgrade, T. Burtseva, V. Barabash, I. Mazul, C. García-Rosales, S. Deschka, R. Behrisch and A. Herrmann  
241–243 (1997) 716

Locked modes induced plasma-wall interactions in RFX, M. Valisa, T. Bolzonella, L. Carraro, E. Casarotto, S. Costa, L. Garzotti, P. Innocente, S. Martini, R. Pasqualotto, M.E. Puiatti, R. Pugno and P. Scarin  
241–243 (1997) 988

Effect of ion-beam irradiation on power reflectivity of boron-doped CFC materials, M. Nagatsu, N. Takada, I. Tsuchikura, S. Sasaki, M. Akiba and K. Nakamura  
241–243 (1997) 1180

**Energy Deposition**

Heat exhaust control with active cooling in Tore-Supra: towards steady state operation, Ph. Chappuis  
241–243 (1997) 27

A review of ELMs in divertor tokamaks, D.N. Hill  
241–243 (1997) 182

Modeling and simulation of melt-layer erosion during a plasma disruption, A. Hassanein, V. Belan, I. Konkashbaev, L. Nikandrov, V. Safronov, A. Zhitlukhin and V. Litunovsky  
241–243 (1997) 288

Kinetic analysis on impurity control and reduction of power transmission of a divertor plasma, K. Sato and S. Kameda  
241–243 (1997) 333

Experimental comparison of carbon and beryllium as divertor target materials in JET, D.J. Campbell  
241–243 (1997) 379

Calculation of power deposition patterns on the ergodic divertor, Ph. Ghendrih and A. Grosman  
241–243 (1997) 517

Runaway electron damage to the Tore Supra Phase III outboard pump limiter, R. Nygren, T. Lutz, D. Walsh, G. Martin, M. Chatelier, T. Loarer and D. Guilhem  
241–243 (1997) 522

Power and particle flux to the neutraliser plates of the Tore Supra ergodic divertor modules, A. Grosman, Ph. Ghendrih, B. Meslin and D. Guilhem  
241–243 (1997) 532

Long pulse operation with actively cooled limiters, D. Guilhem, J. Hogan, D. Van Houtte, M. Lipa, T. Loarer, P. Chappuis, T. Hoang, J. Schlosser and R. Mitteau  
241–243 (1997) 542

Divertor heat and particle flux due to ELMs in DIII-D and ASDEX-upgrade, A.W. Leonard, W. Suttrop, T.H. Osborne, T.E. Evans, D.N. Hill, A. Herrmann, C.J. Lasnier, D.N. Thomas, J.G. Watkins, W.P. West, M. Weinlich and H. Zohm  
241–243 (1997) 628

Characterization of energetic deuterium striking the divertor of the DIII-D tokamak, R. Bastasz, W.R. Wampler, J.A. Whaley, D.G. Whyte, P.B. Parks, N.H. Brooks, W.P. West and C.P.C. Wong  
241–243 (1997) 650

Strong toroidal asymmetries in power deposition on divertor and first wall components during LHCD on TdeV and Tore Supra, J. Mailloux, Y. Demers, V. Fuchs, P. Jaquet, C. Boucher, A. Côté,

**Energy Deposition (continued)**

C. Côté, J. Gunn, B. Terreault, M. Goniche, P. Bibet, P. Froissard, D. Guilhem, J.H. Harris, G. Rey and M. Tareb  
241–243 (1997) 745

Radiative plasmas in TdeV, B. Terreault, N. Richard, J. Mailloux, G. Abel, C. Côté, E. Haddad, W. Zhang, C. Boucher, S. Chiu, J. Gunn, H.H. Mai, F. Meo, B.L. Stansfield and W.W. Zuzak  
241–243 (1997) 755

ELM structure in the boundary plasma on COMPASS-D, S.J. Fielding, K.B. Axon, M.G. Booth, R.J. Buttery, J. Dowling, D. Gates, C. Hunt, C. Silva and M. Valovic  
241–243 (1997) 902

Examination of material performance of W exposed to high heat load: Postmortem analysis of W exposed to TEXTOR plasma and E-beam test stand, T. Tanabe, V. Philipps, K. Nakamura, M. Fujine, Y. Ueda, M. Wada, B. Schweer, A. Pospieszczyk and B. Uterberg  
241–243 (1997) 1164

Experimental and calculated basis of the lithium capillary system as divertor material, N.V. Antonov, V.G. Belan, V.A. Evtihins, L.G. Golubekhikov, V.I. Khripunov, V.M. Koravin, I.E. Lyublinski, V.S. Maynashev, V.B. Petrov, V.I. Pistunovich, V.A. Pozharov, V.I. Podkovirnov, V.V. Shapkin and A.V. Vertkov  
241–243 (1997) 1190

Performance of beryllium, carbon, and tungsten under intense thermal fluxes, J. Linke, M. Akiba, H. Bolt, G. Breitbach, R. Duwe, A. Makankov, I. Ovchinnikov, M. Rödig and E. Wallura  
241–243 (1997) 1210

**Ergodic Divertor**

Temperature profiles in stochastic boundaries, S. Féron and Ph. Ghendrih  
241–243 (1997) 328

Modeling of neutral pressure and pumping in the Tore Supra ergodic divertor and outboard pump limiter, L.W. Owen, T. Loarer, A. Grosman, B. Meslin, C.C. Klepper, P.K. Mioduszewski and T. Uckan  
241–243 (1997) 499

Particle balance modelling in ergodic divertor experiments on Tore Supra, T. Loarer, B. Meslin, Ph. Ghendrih, C. Grisolia and A. Grosman  
241–243 (1997) 505

Calculation of power deposition patterns on the ergodic divertor, Ph. Ghendrih and A. Grosman  
241–243 (1997) 517

Effect of magnetic field stochasticization on impurity behavior in a tokamak, M.Z. Tokar', H. Lasaar, W. Mandl, W.R. Hess, C. De Michelis, A. Grosman and U. Samm  
241–243 (1997) 528

Power and particle flux to the neutraliser plates of the Tore Supra ergodic divertor modules, A. Grosman, Ph. Ghendrih, B. Meslin and D. Guilhem  
241–243 (1997) 532

Edge MHD activity in the ergodic divertor configuration of Tore Supra, S. Turlur, E. Joffrin, M. Zabiégo, Ph. Ghendrih and A. Grosman  
241–243 (1997) 548

**Erosion**

Thermal response for divertor mock-up using surface-modified CFC tile, L. Fujita, Y. Hirohata, T. Hino, T. Yamashina, Y. Kubota, N. Noda, O. Motojima, T. Sogabe, T. Matsudas and K. Kurodas  
241–243 (1997) 1185

**Erosion and Particle Deposition**

Impurity release and deposition processes close to limiter surfaces in TEXTOR-94, V. Philipps, A. Pospieszczyk, H.G. Esser, U. Kögl, G. Mank, U. Samm, B. Schwer, J. von Seggern, B. Unterberg, E. Vietzke, F. Weschenfelder, P. Wienhold and J. Winter  
241–243 (1997) 105

A review of recent experiments on W and high Z materials as plasma-facing components in magnetic fusion devices, N. Noda, V. Philipps and R. Neu  
241–243 (1997) 227

Erosion lifetime of iter divertor plates, H.D. Pacher, I. Smid, G. Federici, Yu. Igkitkhanov, G. Janeschitz, R. Raffray and G. Vieider  
241–243 (1997) 255

Modeling and simulation of melt-layer erosion during a plasma disruption, A. Hassanein, V. Belan, I. Konkashbaev, L. Nikandrov, V. Safronov, A. Zhitlukhin and V. Litunovsky  
241–243 (1997) 288

Assessment of erosion and surface tritium inventory issues for the ITER divertor, J.N. Brooks, R. Causey, G. Federici and D.N. Ruzic  
241–243 (1997) 294

Erosion/redeposition at the JET MkI divertor, H.Y. Guo, J.P. Coad, S.J. Davies, J.D. Elder, L.D. Horton, X.L. Li, J. Lingertat, A. Loarte, G.F. Matthews, R.D. Monk, R. Simonini, M.F. Stamp, P.C. Stangeby and A. Tabasso  
241–243 (1997) 385

Erosion at the vessel walls of JET, M. Mayer, R. Behrisch, P. Andrew and A.T. Peacock  
241–243 (1997) 469

DiMES divertor erosion experiments on DIII-D, D.G. Whyte, J.N. Brooks, C.P.C. Wong, W.P. West, R. Bastasz, W.R. Wampler and J. Rubenstein  
241–243 (1997) 660

The tungsten experiment in ASDEX Upgrade, R. Neu, K. Asmussen, S. Deschka, A. Thoma, M. Bessenrodt-Weberpals, R. Dux, W. Engelhardt, J.C. Fuchs, J. Gaffert, C. García-Rosales, A. Herrmann, K. Krieger, F. Mast, J. Roth, V. Rohde, M. Weinlich and U. Wenzel  
241–243 (1997) 678

Migration of tungsten eroded from divertor tiles in ASDEX Upgrade, K. Krieger, V. Rohde, R. Schwörer, K. Asmussen, C. García-Rosales, A. Herrmann, R. Neu, J. Roth, A. Thoma and M. Weinlich  
241–243 (1997) 734

Time resolved observation of the erosion of boron containing protective coatings on wall elements of TEXTOR-94 by means of colorimetry, P. Wienhold, F. Weschenfelder, J. von Seggern, B. Emmoth, H.G. Esser, P. Karduck and J. Winter  
241–243 (1997) 804

Studies on plasma edge transport and layer deposition by local injection of reactive gases during TEXTOR-94 discharges, U. Kögl, F. Weschenfelder, J. Winter, H.G. Esser, V. Philipps, A. Pospieszczyk, B. Schwer, J. von Seggern, M.Z. Tokar' and P. Wienhold  
241–243 (1997) 816

In-situ deposition of silicon on the leading edge of the ALT-II limiter in TEXTOR-94, G. Mank, J.A. Boedo, P. Wienhold, H.G. Esser, K.H. Finken, L. Könen, A. Pospieszczyk, J. Rapp, J. Schwelberger, F. Weschenfelder and J. Winter  
241–243 (1997) 821

Effects of high Z probe on plasma behavior in HT-6M tokamak, J. Li, X. Gong, L. Luo, F.X. Yin, N. Noda, B. Wan, W. Xu, X. Gao, F. Yin, J.G. Jiang, Z. Wu, J.Y. Zhao, M. Wu, S. Liu and Y. Han  
241–243 (1997) 878

**Erosion and Particle Deposition (continued)**

- Tritium removal from TFTR, D. Mueller, W. Blanchard, J. Collins, J. Hosea, J. Kamperschroer, P.H. LaMarche, A. Nagy, D.K. Owens and C.H. Skinner 241–243 (1997) 897  
 Investigation of plasma facing components and vacuum vessel in RFX, P. Sonato, V. Antoni, M. Bagatin, W.R. Baker, S. Peruzzo, L. Tramontin, P. Zaccaria and G. Zollino 241–243 (1997) 982  
 Ion-induced release of deuterium from co-deposits by high energy helium bombardment, M. Rubel, H. Bergsäker and P. Wienhold 241–243 (1997) 1026  
 On the use of biased movable B<sub>4</sub>C-limiter for pumping O<sub>2</sub> and H<sub>2</sub>O during discharge cleaning, G.P. Glazunov, E.D. Volkov, V.G. Kotenko, A.V. Shtan', Yu.K. Mironov, N.I. Nasarov, A. Sagara, N. Ohyabu and O. Motojima 241–243 (1997) 1052  
 Performance of beryllium, carbon, and tungsten under intense thermal fluxes, J. Linke, M. Akiba, H. Bolt, G. Breitbach, R. Duwe, A. Makhankov, I. Ovchinnikov, M. Rödig and E. Wallura 241–243 (1997) 1210

**Erosion and Particle Deposition Diagnostic**

- Erosion at the vessel walls of JET, M. Mayer, R. Behrisch, P. Andrew and A.T. Peacock 241–243 (1997) 469  
 Study of gross and net erosion in the ASDEX Upgrade divertor, K. Krieger, J. Roth, A. Annen, W. Jacob, C.S. Pitcher, W. Schneider, A. Thoma and M. Weinlich 241–243 (1997) 684  
 Use of a quartz microbalance for plasma-wall interaction studies, D. Bourgoin, G.G. Ross, S. Savoie, Y. Drolet and E. Haddad 241–243 (1997) 765

**Fast Particle Losses**

- Investigation of interaction between MeV-ions and first wall from neutron and γ-ray measurements in JT-60U, T. Kondoh, Y. Kusama, H. Kimura, M. Saigusa, T. Fujii, S. Moriyama, M. Nemoto, K. Tobita, A. Morioka, K. Nagashima and T. Nishitani 241–243 (1997) 564

- Role of energetic particles in heat and particle exhaust in a poloidal divertor RFP, S. Masamune, M. Iida, N. Oda, M. Awazu, K. Fujitsuka, K. Ohta and H. Oshiyama 241–243 (1997) 1002

**Fluid Simulation**

- Understanding the edge physics of divertor experiments by comparison of 2D edge code calculations and experimental measurements, A. Loarte 241–243 (1997) 118

- A review on impurity transport in divertors, K. Shimizu, T. Takizuka and A. Sakurai 241–243 (1997) 167

- Study of recombining gas targets, K. Borrass, D. Coster, D. Reiter and R. Schneider 241–243 (1997) 250

- Simulation of plasma flux detachment in Alcator C-Mod and ITER, F. Wising, S.I. Krasheninnikov, D.J. Sigmar, D.A. Knoll, T.D. Rognlien, B. LaBombard, B. Lipschultz and G. McCracken 241–243 (1997) 273

- Code-code comparisons of DIVIMP's 'onion-skin model' and the EDGE2D fluid code, P.C. Stangeby, J.D. Elder, W. Fundamenski, A. Loarte, L.D. Horton, R. Simonini, A. Taroni, O.F. Matthews and R.D. Monk 241–243 (1997) 358

Simulation of the scrape-off layer plasma during a disruption, T.D.

Rognlien, J.A. Crottinger, G.D. Porter, G.R. Smith, A.G. Kellman and P.L. Taylor 241–243 (1997) 590

B2-Eirene modelling of ASDEX Upgrade, D.P. Coster, R. Schneider, J. Neuhauser, H.-S. Bosch, R. Wunderlich, C. Fuchs, F. Mast, A. Kallenbach, R. Dux, G. Becker, B.J. Braams and D. Reiter 241–243 (1997) 690

Divertor geometry optimization for ASDEX Upgrade, R. Schneider, H.S. Bosch, J. Neuhauser, D. Coster, K. Lackner and M. Kaufmann 241–243 (1997) 701

A 3D Monte Carlo code for plasma transport in island divertors, Y. Feng, F. Sardei, J. Kisslinger and P. Grigull 241–243 (1997) 930

Boundary modelling of the stellarator Wendelstein 7-X, H. Renner, E. Strumberger, J. Kisslinger, J. Nührenberg and H. Wobig 241–243 (1997) 946

**Fuel Recycling and Inventory**

Release of hydrogen from co-existing layers of carbon and beryllium with vacuum heating, K. Ashida, K. Watanabe and T. Okabe 241–243 (1997) 1060

**Fusion**

Tritium removal from TFTR, D. Mueller, W. Blanchard, J. Collins, J. Hosea, J. Kamperschroer, P.H. LaMarche, A. Nagy, D.K. Owens and C.H. Skinner 241–243 (1997) 897

**Fusion Technology**

Heat exhaust control with active cooling in Tore-Supra: towards steady state operation, Ph. Chappuis 241–243 (1997) 27

Erosion lifetime of iter divertor plates, H.D. Pacher, I. Smid, G. Federici, Yu. Igkitkhanov, G. Janeschitz, R. Raffray and G. Vieider 241–243 (1997) 255

The influence of key operation parameters and material properties on the quantification of tritium inventory and permeation in the plasma facing components of ITER, G. Federici, D. Holland, G. Janeschitz and C.H. Wu 241–243 (1997) 260

Arc jets for divertor component testing, J. Balboni, S.A. Cohen and T. Munsat 241–243 (1997) 483

Investigation of beryllium self-sputtering, M.I. Guseva, S.N. Korshunov, V.M. Gureev, Yu.V. Martinenko, V.E. Netnnoi and V.G. Stoljarova 241–243 (1997) 1117

Experimental and calculated basis of the lithium capillary system as divertor material, N.V. Antonov, V.G. Belan, V.A. Evtihins, L.G. Golubehikov, V.I. Khrapunov, V.M. Korjavin, I.E. Lyublinski, V.S. Maynashev, V.B. Petrov, V.I. Pistunovich, V.A. Pozharov, V.I. Podkovirnov, V.V. Shapkin and A.V. Vertkov 241–243 (1997) 1190

Applications of superpermeable membranes in fusion: The flux density problem and experimental progress, A. Livshits, N. Ohyabu, M. Notkin, V. Alimov, H. Suzuki, A. Samartsev, M. Solovyov, I. Grigoriadi, A. Glebovsky, A. Busnyuk, A. Doroshin and K. Komatsu 241–243 (1997) 1203

**Gas Puffing**

Real time boronization experiments in CHS and scaling for LHD, A. Sagara, Y. Hasegawa, K. Tsuzuki, N. Inoue, H. Suzuki, T. Morisaki, N. Noda, O. Motojima, S. Okamura, K. Matsuoka, R. Akiyama, K. Ida, H. Idei, K. Iwasaki, S. Kubo, T. Minami, S. Morita, K. Narihara, T. Ozaki, K. Sato, C. Takahashi, K. Tanaka, K. Toi and I. Yamada 241–243 (1997) 972

**Graphite**

Chemical erosion of pyrolytic graphite by low-energy H<sup>+</sup> and D<sup>+</sup> impact, B.V. Mech, A.A. Haasz and J.W. Davis 241–243 (1997) 1147

**H-Alpha Line Emission**

Behavior of neutral-hydrogen and particle confinement on GAMMA 10 tandem mirror plasmas, Y. Nakashima, M. Shoji, K. Yatsu, S. Kobayashi, K. Tsuchiya, N. Yamaguchi, M. Yoshikawa, T. Aota, T. Ishijima, M. Ichimura, M. Inutake, A. Mase and T. Tamano 241–243 (1997) 1011

**He-Exhaust**

On the relation between radiation level, central impurity concentration and helium exhaust in a burning fusion plasma, U. Samm, M.Z. Tokar' and B. Unterberg 241–243 (1997) 827

**Helical Divertor**

Experimental study on highly collisional edge plasmas in W7-AS island divertor configurations, P. Grigull, D. Hildebrandt, F. Sardei, Y. Feng, G. Herre, A. Herrmann, J.V. Hofmann, J. Kisslinger, G. Kuehner, H. Niedermeyer, R. Schneider, H. Verbeek, F. Wagner, R. Wolf and X.D. Zhang 241–243 (1997) 935

A 2D approach to island divertor modelling for Wendelstein 7-AS, G. Herre, R. Schneider, D. Coster, F. Sardei, D. Reiter, P. Grigull and J. Kißlinger 241–243 (1997) 941

Boundary modelling of the stellarator Wendelstein 7-X, H. Renner, E. Strumberger, J. Kisslinger, J. Nührenberg and H. Wobig 241–243 (1997) 946

Field line measurements in the divertor of Heliotron-E under boronized conditions, F. Sano, T. Mizuchi, T. Hamada, H. Funaba, M. Nakasuga, K. Kondo, H. Zushi, S. Besshou, H. Okada, K. Hanatani, K. Nagasaki and T. Obiki 241–243 (1997) 961

**Helium Exhaust and Control**

Helium transport and exhaust experiments in tokamaks, J. Hogan 241–243 (1997) 68

Particle exhaust in radiative divertor experiments, H.-S. Bosch, D. Coster, R. Dux, C. Fuchs, G. Haas, A. Herrmann, S. Hirsch, A. Kallenbach, J. Neuhauser, R. Schneider, J. Schweinzer and M. Weinlich 241–243 (1997) 82

Plasma wall interaction and tritium retention in TFTR, C.H. Skinner, E. Amerescu, G. Ascione, W. Blanchard, C.W. Barnes, S.H. Batha, M. Beer, M.G. Bell, R. Bell, M. Bitter, N.L. Bretz, R. Budny, C.E. Bush, R. Camp, M. Casey, J. Collins, M. Cropper, Z. Chang, D.S. Darrow, H.H. Duong, R. Durst, P.C. Efthimion,

D. Ernst, N. Fisch, R.J. Fonck, E. Fredrickson, G.Y. Fu, H.P. Furth, C.A. Gentile, M. Gibson, J. Gilbert, B. Grek, L.R. Grisham, G. Hammert, R.J. Hawryluk, H.W. Herrmann, K.W. Hill, J. Hosea, A. Janos, D.L. Jassby, F.C. Jobes, D.W. Johnson, L.C. Johnson, J. Kamperschroer, M. Kalish, H. Kugel, J. Langford, S. Langish, P.H. LaMarche, B. LeBlanc, F.M. Levinton, J. Machuzak, R. Majeski, J. Manikam, D.K. Mansfield, E. Mazzucato, K.M. McGuire, R. Mika, G. McKee, D.M. Meade, S.S. Medley, D.R. Mikkelsen, H.E. Mynick, D. Mueller, A. Nagy, R. Nazikian, M. Ono, D.K. Owens, H. Park, S.F. Paul, G. Pearson, M. Petrov, C.K. Phillips, S. Raftopoulos, A. Ramsey, R. Rucci, M.H. Redi, G. Rewoldt, J. Rogers, A.L. Roquemore, E. Ruskov, S.A. Sabbagh, G. Schilling, J.F. Schivell, G.L. Schmidt, S.D. Scott, S. Sesnic, B.C. Stratton, J.D. Strachan, T. Stevenson, D.P. Stotler, E. Synakowski, H. Takahashi, W. Tang, G. Taylor, W. Tighe, J.R. Timberlake, A. von Halle, S. von Goeler, R.T. Walters, R.B. White, J.R. Wilson, J. Winston, K.L. Wong, K.M. Young, M.C. Zarnstorff and S.J. Zweben 241–243 (1997) 214

Modelling of transition from attached to detached state and self-consistent calculations of He levels in ITER, M. Sugihara, T. Amano, D. Boucher, Y. Igikhanov, G. Janeschitz, H.D. Pacher, D. Post and P. Yushmanov 241–243 (1997) 299

B2-Eirene modelling of ASDEX Upgrade, D.P. Coster, R. Schneider, J. Neuhauser, H.-S. Bosch, R. Wunderlich, C. Fuchs, F. Mast, A. Kallenbach, R. Dux, G. Becker, B.J. Braams and D. Reiter 241–243 (1997) 690

Study of helium transport in HL-1M edge plasma region, L.L. Peng, B.Q. Deng, J.L. Luo, S.K. Yang, M. Wang, E.Y. Wang and S.J. Qian 241–243 (1997) 883

**High Heat Load**

Thermal response for divertor mock-up using surface-modified CFC tile, L. Fujita, Y. Hirohata, T. Hino, T. Yamashina, Y. Kubota, N. Noda, O. Motojima, T. Sogabe, T. Matsudas and K. Kurodas 241–243 (1997) 1185

**High-Z Wall Material**

Hydrogen retention in plasma-facing materials and its consequences on tokamak operation, A.P. Zakharov, A.E. Gorodetsky, V.Kh. Alimov, S.L. Kanashenko and A.V. Markin 241–243 (1997) 52

A review of recent experiments on W and high Z materials as plasma-facing components in magnetic fusion devices, N. Noda, V. Philipps and R. Neu 241–243 (1997) 227

Assessment of erosion and surface tritium inventory issues for the ITER divertor, J.N. Brooks, R. Causey, G. Federici and D.N. Ruzic 241–243 (1997) 294

The tungsten experiment in ASDEX Upgrade, R. Neu, K. Asmussen, S. Deschka, A. Thoma, M. Bessenrodt-Weberpals, R. Dux, W. Engelhardt, J.C. Fuchs, J. Gaffert, C. Garcia-Rosales, A. Herrmann, K. Krieger, F. Mast, J. Roth, V. Rohde, M. Weinlich and U. Wenzel 241–243 (1997) 678

Study of gross and net erosion in the ASDEX Upgrade divertor, K. Krieger, J. Roth, A. Annen, W. Jacob, C.S. Pitcher, W. Schneider, A. Thoma and M. Weinlich 241–243 (1997) 684

**High-Z Wall Material (continued)**

Migration of tungsten eroded from divertor tiles in ASDEX Upgrade, K. Krieger, V. Rohde, R. Schwörer, K. Asmussen, C. García-Rosales, A. Herrmann, R. Neu, J. Roth, A. Thoma and M. Weinlich 241–243 (1997) 734

High heat load testing of plasma sprayed W coatings, M. Urquiaga Valdes, R.O. Saint-Jacques, J.-F. Côté and C. Moreau 241–243 (1997) 750

Impurity release from high Z test limiters immersed in TEXTOR-94 edge plasmas, M. Wada, V. Philipps, A. Pospieszczyk, B. Unterberg, B. Schweer, L. Koenen, U. Koegler, M. Tokar, J. Winter, K. Ohya, Y. Ueda, T. Tanabe and D. Larsson 241–243 (1997) 799

Effects of high Z probe on plasma behavior in HT-6M tokamak, J. Li, X. Gong, L. Luo, F.X. Yin, N. Noda, B. Wan, W. Xu, X. Gao, F. Yin, J.G. Jiang, Z. Wu, J.Y. Zhao, M. Wu, S. Liu and Y. Han 241–243 (1997) 878

Behaviour of a tungsten coated molybdenum poloidal limiter in FTU tokamak, G. Maddaluno, F. Pierdomini and M. Vittori 241–243 (1997) 908

Hydrogen retention properties of low Z and high Z plasma facing materials, Y. Yamauchi, T. Hino, K. Koyama, Y. Hirohata and T. Yamashina 241–243 (1997) 1016

Reflection, re-emission and permeation of deuterium implanted in Ti–6Al–4V alloy, V. Bandourko, K. Ohkoshi, K. Yamaguchi and M. Yamawaki 241–243 (1997) 1071

Deuterium retention in beryllium, molybdenum and tungsten at high fluences, A.A. Haasz and J.W. Davis 241–243 (1997) 1076

Hydrogen trapping in and release from tungsten: Modeling and comparison with graphite with regard to its use as fusion reactor material, P. Franzen, C. Garcia-Rosales, H. Plank and V.Kh. Alimov 241–243 (1997) 1082

Deuterium trapping in and release from tungsten carbide, W. Wang, V.Kh. Alimov, B.M.U. Scherzer and J. Roth 241–243 (1997) 1087

Helium retention properties of plasma facing materials, H. Yanagihara, Y. Yamauchi, T. Hino, Y. Hirohata and T. Yamashina 241–243 (1997) 1098

Examination of material performance of W exposed to high heat load: Postmortem analysis of W exposed to TEXTOR plasma and E-beam test stand, T. Tanabe, V. Philipps, K. Nakamura, M. Fujine, Y. Ueda, M. Wada, B. Schweer, A. Pospieszczyk and B. Unterberg 241–243 (1997) 1164

High heat load properties of TiC dispersed Mo alloys, K. Tokunaga, Y. Miura, N. Yoshida, T. Muroga, H. Kurishita, Y. Kitsunai and H. Kayano 241–243 (1997) 1197

Performance of beryllium, carbon, and tungsten under intense thermal fluxes, J. Linke, M. Akiba, H. Bolt, G. Breitbach, R. Duwe, A. Makhankov, I. Ovchinnikov, M. Rödig and E. Wallura 241–243 (1997) 1210

Study of hot tungsten emissive plate in high heat flux plasma on NAGDIS-I, M.Y. Ye, S. Takamura and N. Ohno 241–243 (1997) 1243

**Hydrocarbons**

Chemical erosion measurements from various carbon based limiters and coatings in TEXTOR-94, A. Pospieszczyk, V. Philipps, E. Casarotto, U. Kögler, B. Schweer, B. Unterberg and F. Weschenfelder 241–243 (1997) 833

**Hydrogen**

Radial profiles of atomic deuterium measured in the boundary of TEXTOR 94 with laser-induced fluorescence, Ph. Mertens and M. Silz 241–243 (1997) 842

**Improved Confinement Mode**

Particle exhaust in radiative divertor experiments, H.-S. Bosch, D. Coster, R. Dux, C. Fuchs, G. Haas, A. Herrmann, S. Hirsch, A. Kallenbach, J. Neuhauser, R. Schneider, J. Schweinzer and M. Weinlich 241–243 (1997) 82

Influence of active pumping on density and confinement behaviour of JET plasmas, G. Saibene, D. Campbell, L.D. Horton, A. Loarte, R.D. Monk, E. Righi and D. Stork 241–243 (1997) 476

Modification and control of divertor detachment in alcator C-Mod, B. Lipschultz, J.A. Goetz, B. LaBombard, G.M. McCracken, H. Ohkawa, Y. Takase and J.L. Terry 241–243 (1997) 771

Scaling of radiated power to plasma contamination for neon seeded discharges on boronized TEXTOR-94, G. Telesca, H.A. Claassen, P. Franz, A.M. Messiaen, J. Ongena, J. Rapp, U. Samm, N. Schoon, B. Schweer, M.Z. Tokar', B. Unterberg and G. Van Oost 241–243 (1997) 853

Effects of high Z probe on plasma behavior in HT-6M tokamak, J. Li, X. Gong, L. Luo, F.X. Yin, N. Noda, B. Wan, W. Xu, X. Gao, F. Yin, J.G. Jiang, Z. Wu, J.Y. Zhao, M. Wu, S. Liu and Y. Han 241–243 (1997) 878

Core  $V_\phi$  and  $T_e$  profiles and transport in TFTR DD and DT plasmas with lithium conditioning, C.E. Bush, R.E. Bell, B. LeBlanc, D.K. Mansfield, E.J. Synakowski, R.V. Budny, K.W. Hill, W. Houlberg, E. Mazzucato, P. Mioduszewski, H. Park, C.H. Skinner and M.C. Zarnstorff 241–243 (1997) 892

ELM structure in the boundary plasma on COMPASS-D, S.J. Fielding, K.B. Axon, M.G. Booth, R.J. Buttery, J. Dowling, D. Gates, C. Hunt, C. Silva and M. Valovic 241–243 (1997) 902

Local island divertor experiments on CHS, A. Komori, N. Ohya, S. Masuzaki, T. Morisaki, H. Suzuki, C. Takahashi, S. Sakakibara, K. Watanabe, T. Watanabe, T. Minami, S. Morita, K. Tanaka, S. Ohdachi, S. Kubo, N. Inoue, H. Yamada, K. Nishimura, S. Okamura, K. Matsuoka, O. Motojima, M. Fujiwara, A. Iiyoshi, C.C. Klepper, J.F. Lyon, A.C. England, D.E. Greenwood, D.K. Lee, D.R. Overbey, J.A. Rome, D.E. Schechter and C.T. Wilson 241–243 (1997) 967

The first results of siliconization on SWIP-RFP device, Z. Peng, L. Qiang, L. Cuiwen, L. Jieping, Q. Shangjie, F. Shuiquan, Y. Ping, X. Jun, L. Kehua, L. Junlin, H. Wenyu, C. Zeng, Z. Nianman, W. Quanming, L. Jie, H. Ming, Z. Yunze, Z. Qingchun and L. Cuixian 241–243 (1997) 1008

**Impurity**

Monte Carlo modelling of the transport in the stellarator periphery with magnetic islands, D. Naujoks, P. Bachmann, A. Runov and D. Sünder 241–243 (1997) 925

**Impurity Radiation**

Effect of magnetic field stochastization on impurity behavior in a tokamak, M.Z. Tokar', H. Lasaar, W. Mandl, W.R. Hess, C. De Michelis, A. Grosman and U. Samm 241–243 (1997) 528

**Impurity Seeding**

On the relation between radiation level, central impurity concentration and helium exhaust in a burning fusion plasma, U. Samm, M.Z. Tokar' and B. Unterberg 241–243 (1997) 827

**Impurity Source**

Impurity release from low-Z materials under light particle bombardment, J.W. Davis and A.A. Haasz 241–243 (1997) 37

A review on impurity transport in divertors, K. Shimizu, T. Takizuka and A. Sakasai 241–243 (1997) 167

A review of recent experiments on W and high Z materials as plasma-facing components in magnetic fusion devices, N. Noda, V. Philipps and R. Neu 241–243 (1997) 227

Erosion lifetime of iter divertor plates, H.D. Pacher, I. Smid, G. Federici, Yu. Igitkhanov, G. Janeschitz, R. Raffray and G. Vieider 241–243 (1997) 255

Impurity fueling to terminate Tokamak discharges, S. Putvinski, N. Fujisawa, D. Post, N. Putvinskaya, M.N. Rosenbluth and J. Wesley 241–243 (1997) 316

Erosion/redeposition at the JET MkI divertor, H.Y. Guo, J.P. Coad, S.J. Davies, J.D. Elder, L.D. Horton, X.L. Li, J. Lingertat, A. Loarte, G.F. Matthews, R.D. Monk, R. Simonini, M.F. Stamp, P.C. Stangeby and A. Tabasso 241–243 (1997) 385

Behaviour of hydrogen in JET deuterium plasmas, K. Günther, G. Bracco, R. König, M.F. Stamp and K.-D. Zastraw 241–243 (1997) 462

Erosion at the vessel walls of JET, M. Mayer, R. Behrisch, P. Andrew and A.T. Peacock 241–243 (1997) 469

Study of carbon impurity generation by chemical sputtering in JT-60U, S. Higashijima, H. Kubo, T. Sugie, K. Shimizu, N. Asakura, K. Itami, N. Hosogane, A. Sakasai, S. Konoshima, S. Sakurai and H. Takenaga 241–243 (1997) 574

Experimental studies of the link between production and penetration of impurity atoms into the plasma edge and the central impurity content in TEXTOR-94, B. Unterberg, H. Knauf, P. Lindner, V. Philipps, A. Pospieszczyk, D. Pusbüldt, U. Samm, B. Schweer, M. Rubel, T. Tanabe, Y. Ueda and M. Wada 241–243 (1997) 793

Impurity release from high Z test limiters immersed in TEXTOR-94 edge plasmas, M. Wada, V. Philipps, A. Pospieszczyk, B. Unterberg, B. Schweer, L. Koenen, U. Koegler, M. Tokar, J. Winter, K. Ohya, Y. Ueda, T. Tanabe and D. Larsson 241–243 (1997) 799

Effects of high Z probe on plasma behavior in HT-6M tokamak, J. Li, X. Gong, L. Luo, F.X. Yin, N. Noda, B. Wan, W. Xu,

X. Gao, F. Yin, J.G. Jiang, Z. Wu, J.Y. Zhao, M. Wu, S. Liu and Y. Han 241–243 (1997) 878

Mass spectroscopic measurements in the plasma edge of the W7-AS stellarator and their statistical analysis, P. Zebisch, P. Grigull, V. Dose and E. Taglauer 241–243 (1997) 919

Locked modes induced plasma-wall interactions in RFX, M. Valisa, T. Bolzonella, L. Carraro, E. Casarotto, S. Costa, L. Garzotti, P. Innocente, S. Martini, R. Pasqualotto, M.E. Puiatti, R. Pugno and P. Scarin 241–243 (1997) 988

Angle resolved velocity distributions of sputtered medium Z atoms, A. Goehlich, N. Niemöller and H.F. Döbele 241–243 (1997) 1160

High heat load properties of TiC dispersed Mo alloys, K. Tokunaga, Y. Miura, N. Yoshida, T. Muroga, H. Kurishita, Y. Kitsunai and H. Kayano 241–243 (1997) 1197

**Impurity Transport**

Particle exhaust in radiative divertor experiments, H.-S. Bosch, D. Coster, R. Dux, C. Fuchs, G. Haas, A. Herrmann, S. Hirsch, A. Kallenbach, J. Neuhauser, R. Schneider, J. Schweinzer and M. Weinlich 241–243 (1997) 82

Radiative edge layers in limiter tokamaks, P. Monier-Garbet 241–243 (1997) 92

A review on impurity transport in divertors, K. Shimizu, T. Takizuka and A. Sakasai 241–243 (1997) 167

A review of recent experiments on W and high Z materials as plasma-facing components in magnetic fusion devices, N. Noda, V. Philipps and R. Neu 241–243 (1997) 227

Theory of ion transport in the tokamak SOL, P. Helander, R.D. Hazeltine and P.J. Catto 241–243 (1997) 363

Measurement and analysis of radiated power components in the JET MkI divertor using VUV spectroscopy, C.F. Maggi, J.D. Elder, W. Fundamenki, R. Giannella, L.D. Horton, K.D. Lawson, A. Loarte, A. Maas, R. Reichle, M. Stamp, P.C. Stangeby and H.P. Summers 241–243 (1997) 414

Neutral particle retention in the JET MK I divertor, J.K. Ehrenberg, D.J. Campbell, P.J. Harbour, L.D. Horton, A. Loarte, G.K. McCormick, R.D. Monk, G.R. Saibene, R. Simonini, A. Taroni and M.F. Stamp 241–243 (1997) 420

Scaling radiative plasmas to ITER, G.F. Matthews, S. Allen, N. Asakura, J. Goetz, H. Guo, A. Kallenbach, B. Lipschultz, K. McCormick, M. Stamp, U. Samm, P.C. Stangeby, K.-H. Steuer, A. Taroni, B. Unterberg and P. West 241–243 (1997) 450

Effect of magnetic field stochastization on impurity behavior in a tokamak, M.Z. Tokar', H. Lasaar, W. Mandl, W.R. Hess, C. De Michelis, A. Grosman and U. Samm 241–243 (1997) 528

Direct measurement of divertor exhaust neon enrichment in DIII-D, M.J. Schaffer, M.R. Wade, R. Maingi, P. Monier-Garbet, W.P. West, D.G. Whyte, R.D. Wood and M.A. Mahdavi 241–243 (1997) 585

Comprehensive 2D measurements of radiative divertor plasmas in DIII-D, M.E. Fenstermacher, R.D. Wood, S.L. Allen, N.H. Brooks, D.A. Buchenauer, T.N. Carlstrom, J.W. Cuthbertson, E.J. Doyle, T.E. Evans, P.-M. Garbet, R.W. Harvey, D.N. Hill, A.W. Hyatt, R.C. Isler, G. Jackson, R.A. James,

*Impurity Transport (continued)*

- R. Jong, C.C. Klepper, C.J. Lasnier, A.W. Leonard, M.A. Mahdavi, R. Maingi, W.H. Meyer, R.A. Moyer, D.U. Nilson, T.W. Petrie, G.D. Porter, T.L. Rhodes, M.J. Schaffer, R.D. Stambaugh, D.M. Thomas, S. Tugarjnov, M.R. Wade, J.G. Watkins, W.P. West and D.G. Whyte 241–243 (1997) 666
- The tungsten experiment in ASDEX Upgrade, R. Neu, K. Asmussen, S. Deschka, A. Thoma, M. Bessenrodt-Weberpals, R. Dux, W. Engelhardt, J.C. Fuchs, J. Gaffert, C. García-Rosales, A. Herrmann, K. Krieger, F. Mast, J. Roth, V. Rohde, M. Weinlich and U. Wenzel 241–243 (1997) 678
- Migration of tungsten eroded from divertor tiles in ASDEX Upgrade, K. Krieger, V. Rohde, R. Schwörer, K. Asmussen, C. García-Rosales, A. Herrmann, R. Neu, J. Roth, A. Thoma and M. Weinlich 241–243 (1997) 734
- Modification and control of divertor detachment in alcator C-Mod, B. Lipschultz, J.A. Goetz, B. LaBombard, G.M. McCracken, H. Ohkawa, Y. Takase and J.L. Terry 241–243 (1997) 771
- Screening of recycling and non-recycling impurities in the Alcator C-Mod tokamak, G.M. McCracken, R.S. Granetz, B. Lipschultz, B. LaBombard, F. Bombarda, J.A. Goetz, S. Lisgo, D. Jablonski, H. Ohkawa, J.E. Rice, P.C. Stangeby, J.L. Terry and Y. Wang 241–243 (1997) 777
- Local impurity puffing as a scrape-off layer diagnostic on the Alcator C-Mod tokamak, D. Jablonski, B. LaBombard, G.M. McCracken, S. Lisgo, B. Lipschultz, I.H. Hutchinson, J. Terry and P.C. Stangeby 241–243 (1997) 782
- A comparison of impurity screening between limiter and divertor plasmas in the Alcator C-Mod tokamak, R.S. Granetz, G.M. McCracken, F. Bombarda, J.A. Goetz, D. Jablonski, B. LaBombard, B. Lipschultz, H. Ohkawa, J.E. Rice, J.L. Terry and Y. Wang 241–243 (1997) 788
- Studies on plasma edge transport and layer deposition by local injection of reactive gases during TEXTOR-94 discharges, U. Kögl, F. Weschenfelder, J. Winter, H.G. Esser, V. Philipps, A. Pospieszczyk, B. Schweer, J. von Seggern, M.Z. Tokar' and P. Wienhold 241–243 (1997) 816
- Scaling of radiated power to plasma contamination for neon seeded discharges on boronized TEXTOR-94, G. Telesca, H.A. Claassen, P. Franz, A.M. Messiaen, J. Ongena, J. Rapp, U. Samm, N. Schoon, B. Schweer, M.Z. Tokar', B. Unterberg and G. Van Oost 241–243 (1997) 853
- Behavior of pellet injected Li into heliotron E plasmas, K. Kondo, K. Ida, C. Christou, V.Yu. Sergeev, K.V. Khlopov, S. Sudo, F. Sano, H. Zushi, T. Mizuchi, S. Besshou, H. Okada, K. Nagasaki, K. Sakamoto, Y. Kurimoto, H. Funaba, T. Hamada, T. Kinoshita, S. Kado, Y. Kanda, T. Okamoto, M. Wakatani and T. Obiki 241–243 (1997) 956
- Impurity generation for low energy range of ion bombardment and its transport in a plasma, M. Kojima and S. Takamura 241–243 (1997) 1248

*Island Divertor*

- Local island divertor experiments on CHS, A. Komori, N. Ohyabu, S. Masuzaki, T. Morisaki, H. Suzuki, C. Takahashi, S. Sakakibara, K. Watanabe, T. Watanabe, T. Minami, S. Morita,

- K. Tanaka, S. Ohdachi, S. Kubo, N. Inoue, H. Yamada, K. Nishimura, S. Okamura, K. Matsuoka, O. Motojima, M. Fujiwara, A. Iiyoshi, C.C. Klepper, J.F. Lyon, A.C. England, D.E. Greenwood, D.K. Lee, D.R. Overbey, J.A. Rome, D.E. Schechter and C.T. Wilson 241–243 (1997) 967

**Kinetic Analysis**

- Wall effects on electron dynamics in the SOL, P. Helander, S.I. Krasheninnikov, N. Kuzmicheva and A.P. Smirnov 241–243 (1997) 278

- Kinetic analysis on impurity control and reduction of power transmission of a divertor plasma, K. Sato and S. Kameda 241–243 (1997) 333

- Theory of ion transport in the tokamak SOL, P. Helander, R.D. Hazeltine and P.J. Catto 241–243 (1997) 363

- Kinetic simulation of parallel transport and ELM propagation in the Alcator C-Mod tokamak, O.V. Batishchev, A.A. Batishcheva, P.J. Catto, S.I. Krasheninnikov, B. LaBombard, B. Lipschultz and D.J. Sigmar 241–243 (1997) 374

**Langmuir Probe**

- Interpretation of ion flux and electron temperature profiles at the JET divertor target during high recycling and detached discharges, R.D. Monk, A. Loarte, A. Chankin, S. Clement, S.J. Davies, J.K. Ehrenberg, H.Y. Guo, J. Lingertat, O.F. Matthews, M.F. Stamp and P.C. Stangeby 241–243 (1997) 396

- SOL plasma profiles under radiative and detached divertor conditions in JT-60U, N. Asakura, Y. Koide, K. Itami, N. Hosogane, K. Shimizu, S. Tsuji-Iio, S. Sakurai and A. Sakasai 241–243 (1997) 559

- Reciprocating and fixed probe measurements of  $n_e$  and  $T_e$  in the DIII-D divertor, J.G. Watkins, R.A. Moyer, J.W. Cuthbertson, D.A. Buchenauer, T.N. Carlstrom, D.N. Hill and M. Ulrickson 241–243 (1997) 645

- Direct measurement of the plasma potential in the edge of ASDEX Upgrade using a self emitting probe, V. Rohde, M. Lax, P. Bachmann, A. Herrmann and M. Weinlich 241–243 (1997) 712

- The separation of angle and size effects on Langmuir characteristics, A. Carlson, V. Rohde and M. Weinlich 241–243 (1997) 722

- Divertor target profiles and recycling studies in TCV single null lower standard discharges, R.A. Pitts, Ch. Nieswand, H. Weisen, M. Anton, R. Behn, R.F. Chavan, M.J. Dutch, B.P. Duval, S. Franke, F. Hofmann, B. Joye, J.B. Lister, X. Llobet, Y. Martin, J.-M. Moret, J. Petrzilka, Z.A. Pietrzky, V. Piffi, P. Reinke, M.E. Rensink, G.R. Smith and W. van Toledo 241–243 (1997) 867

- Radial distributions and poloidal asymmetries of T-10 sol parameters and turbulence, V.A. Vershkov, S.A. Grashin, V.V. Dreval, V.V. Piterskii, S.V. Soldatov and A.N. Jakovets 241–243 (1997) 873

- SOL parameters and local transport in the FTU tokamak, M. Leigheb, V. Pericoli Ridolfini and R. Zagórski 241–243 (1997) 914

**Langmuir Probe (continued)**

Behavior of edge plasma in STP-3M reversed field pinch, A. Matsuoka, H. Kajikawa, Y. Suzuki, H. Arimoto, A. Nagata, K. Aoto, M. Sugawara and K.I. Sato 241–243 (1997) 998

**Laser-induced Fluorescence**

Radial profiles of atomic deuterium measured in the boundary of TEXTOR 94 with laser-induced fluorescence, Ph. Mertens and M. Silz 241–243 (1997) 842

**Limiter**

Throat and vented pump limiters particle collection experiments with auxiliary heating in Tore Supra, B. Pégourié, T. Loarer, E. Tsitrone and G. Granata 241–243 (1997) 494

Runaway electron damage to the Tore Supra Phase III outboard pump limiter, R. Nygren, T. Lutz, D. Walsh, G. Martin, M. Chatelier, T. Loarer and D. Guilhem 241–243 (1997) 522

Long pulse operation with actively cooled limiters, D. Guilhem, J. Hogan, D. Van Houtte, M. Lipa, T. Loarer, P. Chappuis, T. Hoang, J. Schlosser and R. Mitteau 241–243 (1997) 542

A comparison of impurity screening between limiter and divertor plasmas in the Alcator C-Mod tokamak, R.S. Granetz, G.M. McCracken, F. Bombarda, J.A. Goetz, D. Jablonski, B. Labombard, B. Lipschultz, H. Ohkawa, J.E. Rice, J.L. Terry and Y. Wang 241–243 (1997) 788

Experimental studies of the link between production and penetration of impurity atoms into the plasma edge and the central impurity content in TEXTOR-94, B. Unterberg, H. Knauf, P. Lindner, V. Philipps, A. Pospieszczyk, D. Pusbüldt, U. Samm, B. Schweer, M. Rubel, T. Tanabe, Y. Ueda and M. Wada 241–243 (1997) 793

Impurity release from high Z test limiters immersed in TEXTOR-94 edge plasmas, M. Wada, V. Philipps, A. Pospieszczyk, B. Unterberg, B. Schweer, L. Koenen, U. Koegler, M. Tokar, J. Winter, K. Ohya, Y. Ueda, T. Tanabe and D. Larsson 241–243 (1997) 799

Studies on plasma edge transport and layer deposition by local injection of reactive gases during TEXTOR-94 discharges, U. Kögler, F. Weschenfelder, J. Winter, H.G. Esser, V. Philipps, A. Pospieszczyk, B. Schweer, J. von Seggern, M.Z. Tokar<sup>\*</sup> and P. Wienhold 241–243 (1997) 816

In-situ deposition of silicon on the leading edge of the ALT-II limiter in TEXTOR-94, G. Mank, J.A. Boedo, P. Wienhold, H.G. Esser, K.H. Finken, L. Könen, A. Pospieszczyk, J. Rapp, J. Schwelberger, F. Weschenfelder and J. Winter 241–243 (1997) 821

Chemical erosion measurements from various carbon based limiters and coatings in TEXTOR-94, A. Pospieszczyk, V. Philipps, E. Casarotto, U. Kögler, B. Schweer, B. Unterberg and F. Weschenfelder 241–243 (1997) 833

Effects of a rf limiter on TEXTOR's edge plasmas, J.A. Boedo, T. Shoji, Y. Sakawa, D.S. Gray, J.G. Schwelberger, R.W. Conn, K.H. Finken, G. Mank and N. Noda 241–243 (1997) 857

Behaviour of a tungsten coated molybdenum poloidal limiter in FTU tokamak, G. Maddaluno, F. Pierdominici and M. Vittori 241–243 (1997) 908

Field line measurements in the divertor of Heliotron-E under boronized conditions, F. Sano, T. Mizuchi, T. Hamada, H. Funaba, M. Nakasuga, K. Kondo, H. Zushi, S. Besshou, H. Okada, K. Hanatani, K. Nagasaki and T. Obiki 241–243 (1997) 961

Experimental study of edge plasma structure in various discharges on compact helical system, T. Morisaki, A. Komori, R. Akiyama, H. Idei, H. Iguchi, N. Inoue, Y. Kawai, S. Kubo, S. Masuzaki, K. Matsuoka, T. Minami, S. Morita, N. Noda, N. Ohyabu, S. Okamura, M. Osakabe, H. Suzuki, K. Tanaka, C. Takahashi, H. Yamada, I. Yamada and O. Motojima 241–243 (1997) 977

On the use of biased movable B<sub>4</sub>C-limiter for pumping O<sub>2</sub> and H<sub>2</sub>O during discharge cleaning, G.P. Glazunov, E.D. Volkov, V.G. Kotenko, A.V. Shtan', Yu.K. Mironov, N.I. Nasarov, A. Sagara, N. Ohyabu and O. Motojima 241–243 (1997) 1052

Examination of material performance of W exposed to high heat load: Postmortem analysis of W exposed to TEXTOR plasma and E-beam test stand, T. Tanabe, V. Philipps, K. Nakamura, M. Fujine, Y. Ueda, M. Wada, B. Schweer, A. Pospieszczyk and B. Unterberg 241–243 (1997) 1164

**Line Emission Diagnostic**

Behaviour of hydrogen in JET deuterium plasmas, K. Günther, G. Bracco, R. König, M.F. Stamp and K.-D. Zastrow 241–243 (1997) 462

Experimental studies of the link between production and penetration of impurity atoms into the plasma edge and the central impurity content in TEXTOR-94, B. Unterberg, H. Knauf, P. Lindner, V. Philipps, A. Pospieszczyk, D. Pusbüldt, U. Samm, B. Schweer, M. Rubel, T. Tanabe, Y. Ueda and M. Wada 241–243 (1997) 793

Impurity release from high Z test limiters immersed in TEXTOR-94 edge plasmas, M. Wada, V. Philipps, A. Pospieszczyk, B. Unterberg, B. Schweer, L. Koenen, U. Koegler, M. Tokar, J. Winter, K. Ohya, Y. Ueda, T. Tanabe and D. Larsson 241–243 (1997) 799

Measurements of tritium recycling and isotope exchange in TFTR, C.H. Skinner, J. Kamperschroer, D. Mueller, A. Nagy and D.P. Stotler 241–243 (1997) 887

Behavior of pellet injected Li into heliotron E plasmas, K. Kondo, K. Ida, C. Christou, V.Yu. Sergeev, K.V. Khlopov, S. Sudo, F. Sano, H. Zushi, T. Mizuchi, S. Besshou, H. Okada, K. Nagasaki, K. Sakamoto, Y. Kurimoto, H. Funaba, T. Hamada, T. Kinoshita, S. Kado, Y. Kanda, T. Okamoto, M. Wakatani and T. Obiki 241–243 (1997) 956

Spectroscopic measurement of kinetic energy of sputtered boron in electron cyclotron resonance plasma, Y. Ito, N. Nakano, T. Yoshidome, M. Isobe and M. Nishikawa 241–243 (1997) 1122

**Lithium**

Enhanced performance discharges in the DIII-D tokamak with lithium wall conditioning, G.L. Jackson, E.A. Lazarus, G.A. Navratil, R. Bastasz, N.H. Brooks, D.T. Garnier, K.L. Holtrop, J.C. Phillips, E.S. Marmar, T.S. Taylor,

*Lithium (continued)*

- D.M. Thomas, W.R. Wampler, D.G. Whyte and W.P. West  
241–243 (1997) 655
- Low-Z Wall Material**
- Heat exhaust control with active cooling in Tore-Supra: towards steady state operation, Ph. Chappuis  
241–243 (1997) 27
- Impurity release from low-Z materials under light particle bombardment, J.W. Davis and A.A. Haasz  
241–243 (1997) 37
- Hydrogen retention in plasma-facing materials and its consequences on tokamak operation, A.P. Zakharov, A.E. Gorodetsky, V.Kh. Alimov, S.L. Kanashenko and A.V. Markin  
241–243 (1997) 52
- Assessment of erosion and surface tritium inventory issues for the ITER divertor, J.N. Brooks, R. Causey, G. Federici and D.N. Ruzic  
241–243 (1997) 294
- Experimental comparison of carbon and beryllium as divertor target materials in JET, D.J. Campbell  
241–243 (1997) 379
- Study of carbon impurity generation by chemical sputtering in JT-60U, S. Higashijima, H. Kubo, T. Sugie, K. Shimizu, N. Asakura, K. Itami, N. Hosogane, A. Sakasai, S. Konoshima, S. Sakurai and H. Takenaga  
241–243 (1997) 574
- Properties of thin boron coatings formed during deuterated-boronization in JT-60, J. Yagyu, N. Ogiwara, M. Saidoh, J. von Seggern, T. Okabe, Y. Miyo, H. Hiratsuka, S. Yamamoto, P. Goppelt-Langer, Y. Aoki, H. Takeshita and H. Naramoto  
241–243 (1997) 579
- Study of gross and net erosion in the ASDEX Upgrade divertor, K. Krieger, J. Roth, A. Annen, W. Jacob, C.S. Pitcher, W. Schneider, A. Thoma and M. Weinlich  
241–243 (1997) 684
- Performance of the Ti doped graphite RG-Ti-91 at the divertor of the Tokamak ASDEX Upgrade, T. Burtscheva, V. Barabash, I. Mazul, C. Garcia-Rosales, S. Deschka, R. Behrisch and A. Herrmann  
241–243 (1997) 716
- Time resolved observation of the erosion of boron containing protective coatings on wall elements of TEXTOR-94 by means of colorimetry, P. Wienhold, F. Weschenfelder, J. von Seggern, B. Emmoth, H.G. Esser, P. Karduck and J. Winter  
241–243 (1997) 804
- Energy distributions and yields of sputtered C<sub>2</sub> and C<sub>3</sub> clusters, E. Vietzke, A. Refke, V. Philipps and M. Hennes  
241–243 (1997) 810
- Hydrogen retention properties of low Z and high Z plasma facing materials, Y. Yamauchi, T. Hino, K. Koyama, Y. Hirohata and T. Yamashina  
241–243 (1997) 1016
- Laboratory experiments on hydrogen and impurity behaviors in lithium-deposited environment, H. Toyoda, M. Watanabe and H. Sugai  
241–243 (1997) 1031
- Effects of lithium-implantation on the hydrogen retention in both a-C:H and a-SiC:H materials submitted to deuterium bombardment, G. Barbier, G.G. Ross, M.A. El Khakani, N. Chevarier and A. Chevarier  
241–243 (1997) 1036
- Tritium retention in S-65 beryllium after 100 eV plasma exposure, R.A. Causey, G.R. Longhurst and W. Harbin  
241–243 (1997) 1041
- Depth distribution of deuterium atoms and molecules in beryllium implanted with D ions, V.Kh. Alimov, V.N. Chernikov and A.P. Zakharov  
241–243 (1997) 1047
- Hydrogen absorption behavior into boron films by glow discharges in hydrogen and helium, K. Tsuzuki, M. Natsir, N. Inoue, A. Sagara, N. Noda, O. Motojima, T. Mochizuki, T. Hino and T. Yamashina  
241–243 (1997) 1055
- Isotope effects in hydrogen retention of graphite and beryllium irradiated simultaneously with dual H<sup>+</sup> and D<sup>+</sup> beams, B. Tsuchiya and K. Morita  
241–243 (1997) 1065
- Deuterium retention in beryllium, molybdenum and tungsten at high fluences, A.A. Haasz and J.W. Davis  
241–243 (1997) 1076
- Interaction of a high density neon plasma with graphite, C. Brosset, J. Bardon and E. Gauthier  
241–243 (1997) 1093
- Retention and erosion behavior of oxygen implanted in different Si/C-materials, A. Refke, V. Philipps and E. Vietzke  
241–243 (1997) 1103
- Investigation of beryllium self-sputtering, M.I. Guseva, S.N. Korshunov, V.M. Gureev, Yu.V. Martinenko, V.E. Netnnoin and V.G. Stoljarova  
241–243 (1997) 1117
- Spectroscopic measurement of kinetic energy of sputtered boron in electron cyclotron resonance plasma, Y. Ito, N. Nakano, T. Yoshidome, M. Isobe and M. Nishikawa  
241–243 (1997) 1122
- Interaction of energetic oxygen ions with lithium-containing amorphous hydrogenated carbon films: A mass spectrometry study, J.-U. Thiele, E. Vietzke and P. Oelhafen  
241–243 (1997) 1127
- Erosion and thermal desorption characteristics of 1D-CF/B<sub>4</sub>C composite, T. Yamaki, Y. Suzuki, Y. Chiba, M. Nakagawa, Y. Gotoh, R. Jimbou and M. Saidoh  
241–243 (1997) 1132
- Effect of irradiation ion species on internal stress in boron thin films, N. Satomi, K. Tanaka, M. Kitamura and M. Nishikawa  
241–243 (1997) 1138
- Sputtering experiments on B<sub>4</sub>C doped CFC under high particle flux with low energy, K. Nakamura, M. Dairaku, M. Akiba and Y. Okumura  
241–243 (1997) 1142
- Chemical erosion of pyrolytic graphite by low-energy H<sup>+</sup> and D<sup>+</sup> impact, B.V. Mech, A.A. Haasz and J.W. Davis  
241–243 (1997) 1147
- Reduction of the chemical erosion of doped graphite due to surface modification during low energy D<sup>+</sup> bombardment, R. Schwörer, H. Plank and J. Roth  
241–243 (1997) 1156
- Thermal conductivity and retention characteristics of composites made of boron carbide and carbon fibers with extremely high thermal conductivity for first wall armour, R. Jimbou, K. Kodama, M. Saidoh, Y. Suzuki, M. Nakagawa, K. Morita and B. Tsuchiya  
241–243 (1997) 1175
- Effect of ion-beam irradiation on power reflectivity of boron-doped CFC materials, M. Nagatsu, N. Takada, I. Tsuchikura, S. Sasaki, M. Akiba and K. Nakamura  
241–243 (1997) 1180
- Experimental and calculated basis of the lithium capillary system as divertor material, N.V. Antonov, V.G. Belan, V.A. Evtihins, L.G. Golubehikov, V.I. Khrapunov, V.M. Korjavin, I.E. Lyublinski, V.S. Maynashov, V.B. Petrov, V.I. Pistunovich, V.A. Pozharov,

**Low-Z Wall Material (continued)**

- V.I. Podkovirnov, V.V. Shapkin and A.V. Vertkov  
241–243 (1997) 1190
- Performance of beryllium, carbon, and tungsten under intense thermal fluxes, J. Linke, M. Akiba, H. Bolt, G. Breitbach, R. Duwe, A. Makhanov, I. Ovchinnikov, M. Rödig and E. Wallura  
241–243 (1997) 1210
- Basic experiments on in-situ magnetized boronization by electron cyclotron resonance discharges, H. Kokura, K. Sasaki, H. Toyota, T. Mizuuchi, K. Kondo, F. Sano, T. Obiki and H. Sugai  
241–243 (1997) 1217
- In-situ ion beam analysis and dynamic studies of deuterium retention in graphite exposed to a high flux magnetron plasma, B. Emmoth, H. Bergsäker and L. Ilyinsky  
241–243 (1997) 1022

**MARFE**

- Divertor configuration studies on JET, C.G. Lowry, D.J. Campbell, S. Davies, H. Guo, P.J. Harbour, M. von Hellermann, L.D. Horton, A. Loarte, C. Maggi, G. Matthews, R. Mohanti, R. Monk, G.J. Radford, R. Reichle, G. Saibene, J. Spence, M. Stamp, A. Taroni and G.C. Vlases  
241–243 (1997) 438
- Comprehensive 2D measurements of radiative divertor plasmas in DIII-D, M.E. Fenstermacher, R.D. Wood, S.L. Allen, N.H. Brooks, D.A. Buchenauer, T.N. Carlstrom, J.W. Cuthbertson, E.J. Doyle, T.E. Evans, P.-M. Garbet, R.W. Harvey, D.N. Hill, A.W. Hyatt, R.C. Isler, G. Jackson, R.A. James, R. Jong, C.C. Klepper, C.J. Lasnier, A.W. Leonard, M.A. Mahdavi, R. Maingi, W.H. Meyer, R.A. Moyer, D.U. Nilson, T.W. Petrie, G.D. Porter, T.L. Rhodes, M.J. Schaffer, R.D. Stambaugh, D.M. Thomas, S. Tugarjnov, M.R. Wade, J.G. Watkins, W.P. West and D.G. Whyte  
241–243 (1997) 666
- Spatial radiation profiles in the ASDEX Upgrade divertor for detached plasmas, U. Wenzel, A. Thoma, R. Dux, Ch. Fuchs, A. Herrmann, St. Hirsch, A. Kallenbach, H. Kastelewicz, M. Laux, F. Mast and B. Napiontek  
241–243 (1997) 728
- Plasma response on impurity injection in W7-AS, D. Hildebrandt, R. Brakel, A. Elsner, P. Grigull, H. Hacker, R. Burhenn, S. Fiedler, L. Giannone, C. Görner, H.J. Hartfuß, G. Herre, A. Herrmann, J.V. Hofmann, G. Küchner, D. Naujoks, F. Sardei, A. Weller and R. Wolf  
241–243 (1997) 950

**Mass Spectrometry**

- Mass spectroscopic measurements in the plasma edge of the W7-AS stellarator and their statistical analysis, P. Zebisch, P. Grigull, V. Dose and E. Taglauer  
241–243 (1997) 919
- Retention and erosion behavior of oxygen implanted in different Si/C-materials, A. Refke, V. Philipps and E. Vietzke  
241–243 (1997) 1103

**Material Probe**

- Exposure of CFC-materials to high transient heat loads in the TEXTOR tokamak, T. Scholz, J. Boedo, H. Bolt, R. Duwe, K.H. Finken, D. Gray and A. Hassanein  
241–243 (1997) 848

**Molecular Break-up**

- Chemical erosion measurements from various carbon based limiters and coatings in TEXTOR-94, A. Pospieszczyk, V. Philipps, E. Casarotto, U. Kögler, B. Schweer, B. Unterberg and F. Weschenfelder  
241–243 (1997) 833

**Momentum Balance**

- Experimental study on neoclassical properties of the ions in the edge plasma of the tokamak TEXTOR, K. Höthker, W. Bieger, M. Brix, A. Pospieszczyk, R.P. Schorn, B. Schweer, G. Van Oost and R. Weynants  
241–243 (1997) 839

**Momentum Sink**

- Non-linear effects on neutral gas transport in divertors, D. Reiter, Chr. May, M. Baelmans and P. Börner  
241–243 (1997) 342
- Modelling of plasma momentum transference to side-walls by neutral particles, G.P. Maddison, D. Reiter and J. Hugill  
241–243 (1997) 353

- Investigation of electron parallel pressure balance in the scrape-off layer of deuterium-based radiative divertor discharges in DIII-D, T.W. Petrie, S.L. Allen, T.N. Carlstrom, D.N. Hill, R. Maingi, D. Nilson, M. Brown, D.A. Buchenauer, T.E. Evans, M.E. Fenstermacher, R.A. Jong, C.J. Lasnier, A.W. Leonard, M.A. Mahdavi, G.D. Porter, M.R. Wade and W.P. West  
241–243 (1997) 639

**Monte Carlo Simulation**

- Understanding the edge physics of divertor experiments by comparison of 2D edge code calculations and experimental measurements, A. Loarte  
241–243 (1997) 118
- A review on impurity transport in divertors, K. Shimizu, T. Takizuka and A. Sakasai  
241–243 (1997) 167
- Non-linear effects on neutral gas transport in divertors, D. Reiter, Chr. May, M. Baelmans and P. Börner  
241–243 (1997) 342
- Modelling of plasma momentum transference to side-walls by neutral particles, G.P. Maddison, D. Reiter and J. Hugill  
241–243 (1997) 353

- Erosion/redeposition at the JET MkI divertor, H.Y. Guo, J.P. Coad, S.J. Davies, J.D. Elder, L.D. Horton, X.L. Li, J. Lingertat, A. Loarte, G.F. Matthews, R.D. Monk, R. Simonini, M.F. Stamp, P.C. Stangeby and A. Tabasso  
241–243 (1997) 385
- Parallel electron temperature and density gradients measured in the JET MkI divertor using thermal helium beams, S.J. Davies, P.D. Morgan, Y. Ul'Haq, C.F. Maggi, S.K. Erents, W. Fundamenski, L.D. Horton, A. Loarte, G.F. Matthews, R.D. Monk and P.C. Stangeby  
241–243 (1997) 426

- Assessment of the DIVIMP ‘onion-skin’ model in the JET Mark I divertor, S.K. Erents, P. Breger, S.J. Davies, J.D. Elder, H.Y. Guo, L.D. Horton, G.F. Matthews, R.D. Monk, P.C. Stangeby and D.D.R. Summers  
241–243 (1997) 433

- Modeling of neutral pressure and pumping in the Tore Supra ergodic divertor and outboard pump limiter, L.W. Owen, T. Loarer, A. Grosman, B. Meslin, C.C. Klepper, P.K. Mioduszewski and T. Uckan  
241–243 (1997) 499
- B2-Eirene modelling of ASDEX Upgrade, D.P. Coster, R. Schneider, J. Neuhauser, H.-S. Bosch, R. Wunderlich, C. Fuchs, F. Mast,

**Monte Carlo Simulation (continued)**

- A. Kallenbach, R. Dux, G. Becker, B.J. Braams and D. Reiter  
241–243 (1997) 690
- Divertor geometry optimization for ASDEX Upgrade, R. Schneider, H.S. Bosch, J. Neuhauser, D. Coster, K. Lackner and M. Kaufmann  
241–243 (1997) 701
- Studies on plasma edge transport and layer deposition by local injection of reactive gases during TEXTOR-94 discharges, U. Kögler, F. Weschenfelder, J. Winter, H.G. Esser, V. Philipps, A. Pospieszczyk, B. Schweer, J. von Seggern, M.Z. Tokar' and P. Wienhold  
241–243 (1997) 816
- Study of helium transport in HL-1M edge plasma region, L.L. Peng, B.Q. Deng, J.L. Luo, S.K. Yang, M. Wang, E.Y. Wang and S.J. Qian  
241–243 (1997) 883
- Measurements of tritium recycling and isotope exchange in TFTR, C.H. Skinner, J. Kamperschroer, D. Mueller, A. Nagy and D.P. Stotler  
241–243 (1997) 887
- Monte Carlo modelling of the transport in the stellarator periphery with magnetic islands, D. Naujoks, P. Bachmann, A. Runov and D. Sünder  
241–243 (1997) 925
- A 3D Monte Carlo code for plasma transport in island divertors, Y. Feng, F. Sardei, J. Kisslinger and P. Grigull  
241–243 (1997) 930
- Behavior of neutral-hydrogen and particle confinement on GAMMA 10 tandem mirror plasmas, Y. Nakashima, M. Shoji, K. Yatsu, S. Kobayashi, K. Tsuchiya, N. Yamaguchi, M. Yoshikawa, T. Aota, T. Ishijima, M. Ichimura, M. Inutake, A. Mase and T. Tamano  
241–243 (1997) 1011
- Measurements and modeling of the angular-resolved sputtering yield of D-soaked Be by 100, 300, 500 and 700 eV D<sup>+</sup>, D.N. Ruzic, P.C. Smith and R.B. Turkot, Jr.  
241–243 (1997) 1170
- Impurity generation for low energy range of ion bombardment and its transport in a plasma, M. Kojima and S. Takamura  
241–243 (1997) 1248

**Negative Central Shear**

- Enhanced performance discharges in the DIII-D tokamak with lithium wall conditioning, G.L. Jackson, E.A. Lazarus, G.A. Navratil, R. Bastasz, N.H. Brooks, D.T. Garnier, K.L. Holtrop, J.C. Phillips, E.S. Marmar, T.S. Taylor, D.M. Thomas, W.R. Wampler, D.G. Whyte and W.P. West  
241–243 (1997) 655

**Neoclassical Transport**

- Experimental study on neoclassical properties of the ions in the edge plasma of the tokamak TEXTOR, K. Höthker, W. Bieger, M. Brix, A. Pospieszczyk, R.P. Schorn, B. Schweer, G. Van Oost and R. Weynants  
241–243 (1997) 839

**Neutral Confinement and Transport**

- Neutral particle retention in the JET MK I divertor, J.K. Ehrenberg, D.J. Campbell, P.J. Harbour, L.D. Horton, A. Loarte, G.K. McCormick, R.D. Monk, G.R. Saibene, R. Simonini, A. Taroni and M.F. Stamp  
241–243 (1997) 420

- Modeling of neutral pressure and pumping in the Tore Supra ergodic divertor and outboard pump limiter, L.W. Owen, T. Loarer, A. Grosman, B. Meslin, C.C. Klepper, P.K. Mioduszewski and T. Uckan  
241–243 (1997) 499
- Experimental study on neoclassical properties of the ions in the edge plasma of the tokamak TEXTOR, K. Höthker, W. Bieger, M. Brix, A. Pospieszczyk, R.P. Schorn, B. Schweer, G. Van Oost and R. Weynants  
241–243 (1997) 839

**Neutral Particle Diagnostic**

- Low energy neutral particle fluxes in the JET divertor, R. Reichle, J.K. Ehrenberg, N.A.C. Gottardi, L.D. Horton, L.C. Ingesson, H.J. Jäckel, G.K. McCormick, A. Loarte, R. Simonini and M.F. Stamp  
241–243 (1997) 456

- Behaviour of hydrogen in JET deuterium plasmas, K. Günther, G. Bracco, R. König, M.F. Stamp and K.-D. Zastrow  
241–243 (1997) 462

- Characterization of energetic deuterium striking the divertor of the DIII-D tokamak, R. Bastasz, W.R. Wampler, J.A. Whaley, D.G. Whyte, P.B. Parks, N.H. Brooks, W.P. West and C.P.C. Wong  
241–243 (1997) 650

- Radial profiles of atomic deuterium measured in the boundary of TEXTOR 94 with laser-induced fluorescence, Ph. Mertens and M. Silz  
241–243 (1997) 842

- Spectroscopic measurement of kinetic energy of sputtered boron in electron cyclotron resonance plasma, Y. Ito, N. Nakano, T. Yoshidome, M. Isobe and M. Nishikawa  
241–243 (1997) 1122

**Neutral Transport**

- Non-linear effects on neutral gas transport in divertors, D. Reiter, Chr. May, M. Baelmans and P. Börner  
241–243 (1997) 342

**Neutral Transport and Confinement**

- Behavior of neutral-hydrogen and particle confinement on GAMMA 10 tandem mirror plasmas, Y. Nakashima, M. Shoji, K. Yatsu, S. Kobayashi, K. Tsuchiya, N. Yamaguchi, M. Yoshikawa, T. Aota, T. Ishijima, M. Ichimura, M. Inutake, A. Mase and T. Tamano  
241–243 (1997) 1011

**Non-local Transport**

- Wall effects on electron dynamics in the SOL, P. Helander, S.I. Krasheninnikov, N. Kuzmicheva and A.P. Smirnov  
241–243 (1997) 278

- Self-organized criticality in particle transport governed by ionization, Y. Sarazin and Ph. Ghendrih  
241–243 (1997) 322

**Oxygen Retention**

- Retention and erosion behavior of oxygen implanted in different Si/C-materials, A. Refke, V. Philipps and E. Vietzke  
241–243 (1997) 1103

**Particle and Energy Balance**

- A review of ELMs in divertor tokamaks, D.N. Hill  
241–243 (1997) 182

**Particle Balance**

Plasma-neutral gas interaction in a tokamak divertor: Effects of hydrogen molecules and plasma recombination, S.I. Krasheninnikov, A.Yu. Pigarov, T.K. Soboleva and D.J. Sigmar  
241–243 (1997) 283

Self-organized criticality in particle transport governed by ionization, Y. Sarazin and Ph. Ghendrih  
241–243 (1997) 322

Throat and vented pump limiters particle collection experiments with auxiliary heating in Tore Supra, B. Pégourié, T. Loarer, E. Tsitrone and G. Granata  
241–243 (1997) 494

Particle balance modelling in ergodic divertor experiments on Tore Supra, T. Loarer, B. Meslin, Ph. Ghendrih, C. Grisolia and A. Grosman  
241–243 (1997) 505

Effects of edge and central fuelling on particle confinement in JT-60U, H. Takenaga, N. Asakura, K. Shimizu, K. Nagashima, H. Kubo and A. Sakasai  
241–243 (1997) 569

Comparison of wall/divertor deuterium retention and plasma fueling requirements on the DIII-D, TdeV and ASDEX Upgrade tokamaks, R. Maingi, B. Terreault, G. Haas, G.L. Jackson, W. Zuzak, P.K. Mioduszewski, M.A. Mahdavi, M.R. Wade, S. Chiu, M.J. Schaffer, J.T. Hogan and C.C. Klepper  
241–243 (1997) 672

Role of energetic particles in heat and particle exhaust in a poloidal divertor RFP, S. Masamune, M. Iida, N. Oda, M. Awazu, K. Fujitsuka, K. Ohta and H. Oshiyama  
241–243 (1997) 1002

Isotope effects in hydrogen retention of graphite and beryllium irradiated simultaneously with dual H<sup>+</sup> and D<sup>+</sup> beams, B. Tsuchiya and K. Morita  
241–243 (1997) 1065

**Particle Confinement**

Characteristics of the scrape-off layer in DIII-D high-performance negative central magnetic shear discharges, C.J. Lasnier, R. Maingi, A.W. Leonard, S.L. Allen, D.A. Buchenauer, K.H. Burrell, T.A. Casper, J.W. Cuthbertson, M.E. Fenstermacher, D.N. Hill, R.A. Jong, L.L. Lao, E.A. Lazarus, R.A. Moyer, T.W. Petrie, G.D. Porter, B.W. Rice, B.W. Stallard, T.S. Taylor and J.G. Watkins  
241–243 (1997) 623

Retention of Ne and N<sub>2</sub> in the closed and pumped TdeV divertor with attached and detached plasmas, N. Richard, B. Terreault, E. Haddad, J. Gunn, G. Abel, S. Chiu, J.-L. Gauvreau, H.H. Mai and W.W. Zuzak  
241–243 (1997) 760

**Particle Fuelling**

Hydrogen retention in plasma-facing materials and its consequences on tokamak operation, A.P. Zakharov, A.E. Gorodetsky, V.Kh. Alimov, S.L. Kanashenko and A.V. Markin  
241–243 (1997) 52

Effects of edge and central fuelling on particle confinement in JT-60U, H. Takenaga, N. Asakura, K. Shimizu, K. Nagashima, H. Kubo and A. Sakasai  
241–243 (1997) 569

Modeling of the recycling particle flux and electron particle transport in the DIII-D Tokamak, D.R. Baker, R. Maingi, L.W. Owen, G.D. Porter and G.L. Jackson  
241–243 (1997) 602

Comparison of wall/divertor deuterium retention and plasma fueling requirements on the DIII-D, TdeV and ASDEX Upgrade

tokamaks, R. Maingi, B. Terreault, G. Haas, G.L. Jackson, W. Zuzak, P.K. Mioduszewski, M.A. Mahdavi, M.R. Wade, S. Chiu, M.J. Schaffer, J.T. Hogan and C.C. Klepper  
241–243 (1997) 672

Retention of Ne and N<sub>2</sub> in the closed and pumped TdeV divertor with attached and detached plasmas, N. Richard, B. Terreault, E. Haddad, J. Gunn, G. Abel, S. Chiu, J.-L. Gauvreau, H.H. Mai and W.W. Zuzak  
241–243 (1997) 760

Divertor target profiles and recycling studies in TCV single null lower standard discharges, R.A. Pitts, Ch. Nieswand, H. Weisen, M. Anton, R. Behn, R.F. Chavan, M.J. Dutch, B.P. Duval, S. Franke, F. Hofmann, B. Joye, J.B. Lister, X. Llobet, Y. Martin, J.-M. Moret, J. Petrzilka, Z.A. Pietrzyk, V. Piffi, P. Reinke, M.E. Rensink, G.R. Smith and W. van Toledo  
241–243 (1997) 867

**Particle Reflection**

Experimental studies of the link between production and penetration of impurity atoms into the plasma edge and the central impurity content in TEXTOR-94, B. Unterberg, H. Knauf, P. Lindner, V. Philipps, A. Pospieszczyk, D. Pusbüldt, U. Samm, B. Schweer, M. Rubel, T. Tanabe, Y. Ueda and M. Wada  
241–243 (1997) 793

**Particle Transport and Confinement**

Helium transport and exhaust experiments in tokamaks, J. Hogan  
241–243 (1997) 68

Effects of edge and central fuelling on particle confinement in JT-60U, H. Takenaga, N. Asakura, K. Shimizu, K. Nagashima, H. Kubo and A. Sakasai  
241–243 (1997) 569

Modeling of the recycling particle flux and electron particle transport in the DIII-D Tokamak, D.R. Baker, R. Maingi, L.W. Owen, G.D. Porter and G.L. Jackson  
241–243 (1997) 602

The role of turbulent transport in DIII-D edge and divertor plasmas, R.A. Moyer, J.W. Cuthbertson, T.E. Evans, G.D. Porter and J.G. Watkins  
241–243 (1997) 633

**Pellet Injection**

Enhanced performance discharges in the DIII-D tokamak with lithium wall conditioning, G.L. Jackson, E.A. Lazarus, G.A. Navratil, R. Bastasz, N.H. Brooks, D.T. Garnier, K.L. Holtrop, J.C. Phillips, E.S. Marmar, T.S. Taylor, D.M. Thomas, W.R. Wampler, D.G. Whyte and W.P. West  
241–243 (1997) 655

**Physical Erosion**

Impurity release from low-Z materials under light particle bombardment, J.W. Davis and A.A. Haasz  
241–243 (1997) 37

Impurity release and deposition processes close to limiter surfaces in TEXTOR-94, V. Philipps, A. Pospieszczyk, H.G. Esser, U. Kögler, G. Mank, U. Samm, B. Schweer, J. von Seggern, B. Unterberg, E. Vietzke, F. Weschenfelder, P. Wienhold and J. Winter  
241–243 (1997) 105

**Physical Erosion (continued)**

- A review on impurity transport in divertors, K. Shimizu, T. Takizuka and A. Sakasai 241–243 (1997) 167
- Side radiation damage from ablated vapor following an ITER-scale disruption, A.E. Koniges, D.C. Eder, H.A. Scott, H. Würz and F. Kappler 241–243 (1997) 244
- Erosion lifetime of iter divertor plates, H.D. Pacher, I. Smid, G. Federici, Yu. Igitkhanov, G. Janeschitz, R. Raffray and G. Vieider 241–243 (1997) 255
- High heat load testing of plasma sprayed W coatings, M. Urquiza Valdes, R.O. Saint-Jacques, J.-F. Côté and C. Moreau 241–243 (1997) 750
- Energy distributions and yields of sputtered C<sub>2</sub> and C<sub>3</sub> clusters, E. Vietzke, A. Refke, V. Philipps and M. Hennes 241–243 (1997) 810
- ICRF wall conditioning at TEXTOR-94 in the presence of a 2.25 T magnetic field, H.G. Esser, A. Lyssiovan, M. Freisinger, R. Koch, G. Van Oost, F. Weschenfelder and J. Winter 241–243 (1997) 861
- Behaviour of a tungsten coated molybdenum poloidal limiter in FTU tokamak, G. Maddaluno, F. Pierdomini and M. Vittori 241–243 (1997) 908
- Investigation of beryllium self-sputtering, M.I. Guseva, S.N. Korshunov, V.M. Gureev, Yu.V. Martinenko, V.E. Netnoin and V.G. Stoljarova 241–243 (1997) 1117
- Sputtering experiments on B<sub>4</sub>C doped CFC under high particle flux with low energy, K. Nakamura, M. Dairaku, M. Akiba and Y. Okumura 241–243 (1997) 1142
- Angle resolved velocity distributions of sputtered medium Z atoms, A. Goehlich, N. Niemöller and H.F. Döbele 241–243 (1997) 1160
- High heat load properties of TiC dispersed Mo alloys, K. Tokunaga, Y. Miura, N. Yoshida, T. Muroga, H. Kurishita, Y. Kitsunai and H. Kayano 241–243 (1997) 1197
- Impurity generation for low energy range of ion bombardment and its transport in a plasma, M. Kojima and S. Takamura 241–243 (1997) 1248

**Physical Sputtering**

- Reduction of the chemical erosion of doped graphite due to surface modification during low energy D<sup>+</sup> bombardment, R. Schwörer, H. Plank and J. Roth 241–243 (1997) 1156

**Plasma Density and Temperature Diagnostic**

- Parallel electron temperature and density gradients measured in the JET MkI divertor using thermal helium beams, S.J. Davies, P.D. Morgan, Y. Ul'Haq, C.F. Maggi, S.K. Erents, W. Fundamenski, L.D. Horton, A. Loarte, G.F. Matthews, R.D. Monk and P.C. Stangeby 241–243 (1997) 426

**Plasma Density Diagnostic**

- Island divertor studies on W7-AS, F. Sardei, Y. Feng, P. Grigull, G. Herre, D. Hildebrandt, J.V. Hofmann, J. Kisslinger, R. Brakel, J. Das, J. Geiger, O. Heinrich, G. Kühner, H. Niedermeyer, D. Reiter, M. Richter-Glötzl, A. Runov, R. Schneider, U. Stroth, H. Verbeek, F. Wagner and R. Wolf 241–243 (1997) 135

- Edge density profiles in high-performance JET plasmas, D.D.R. Summers, P. Breger, K. Erents, Z.A. Pietrzyk, B. Viaccoz and J. Vince 241–243 (1997) 391
- Experimental study of edge plasma structure in various discharges on compact helical system, T. Morisaki, A. Komori, R. Akiyama, H. Idei, H. Iguchi, N. Inoue, Y. Kawai, S. Kubo, S. Masuzaki, K. Matsuoka, T. Minami, S. Morita, N. Noda, N. Ohayabu, S. Okamura, M. Osakabe, H. Suzuki, K. Tanaka, C. Takahashi, H. Yamada, I. Yamada and O. Motojima 241–243 (1997) 977

- Testing of a pulsed He supersonic beam for plasma edge diagnostic in the TJ-IU torsatron, F.L. Tabarés, D. Tafalla, V. Herrero and I. Tanarro 241–243 (1997) 1228

**Plasma Detachment**

- Neutral particle retention in the JET MK I divertor, J.K. Ehrenberg, D.J. Campbell, P.J. Harbour, L.D. Horton, A. Loarte, G.K. McCormick, R.D. Monk, G.R. Saibene, R. Simonini, A. Taroni and M.F. Stamp 241–243 (1997) 420

**Plasma Disruptions**

- Modeling and simulation of melt-layer erosion during a plasma disruption, A. Hassanein, V. Belan, I. Konkashbaev, L. Nikandrov, V. Safronov, A. Zhitlukhin and V. Litunovsky 241–243 (1997) 288

**Plasma Facing Components**

- DiMES divertor erosion experiments on DIII-D, D.G. Whyte, J.N. Brooks, C.P.C. Wong, W.P. West, R. Bastasz, W.R. Wampler and J. Rubenstein 241–243 (1997) 660

**Plasma Flow**

- Direct measurement of divertor exhaust neon enrichment in DIII-D, M.J. Schaffer, M.R. Wade, R. Maingi, P. Monier-Garbet, W.P. West, D.G. Whyte, R.D. Wood and M.A. Mahdavi 241–243 (1997) 585

**Plasma Flow Diagnostic**

- Local impurity puffing as a scrape-off layer diagnostic on the Alcator C-Mod tokamak, D. Jablonski, B. LaBombard, G.M. McCracken, S. Lisgo, B. Lipschultz, I.H. Hutchinson, J. Terry and P.C. Stangeby 241–243 (1997) 782

- The fluctuations and flow velocities measured with a mach probe array on the HL-1M tokamak, W.Y. Hong, E.Y. Wang, L.B. Ran, S.K. Yang, Y.D. Pan, L.Y. Chen and S.J. Qian 241–243 (1997) 1234

**Plasma Temperature Diagnostic**

- Island divertor studies on W7-AS, F. Sardei, Y. Feng, P. Grigull, G. Herre, D. Hildebrandt, J.V. Hofmann, J. Kisslinger, R. Brakel, J. Das, J. Geiger, O. Heinrich, G. Kühner, H. Niedermeyer, D. Reiter, M. Richter-Glötzl, A. Runov, R. Schneider, U. Stroth, H. Verbeek, F. Wagner and R. Wolf 241–243 (1997) 135

- First measurements of electron temperature and density with divertor Thomson scattering in radiative divertor discharges on DIII-D, S.L. Allen, D.N. Hill, T.N. Carlstrom, D.G. Nilson,

**Plasma Temperature Diagnostic (continued)**

- R. Stockdale, C.L. Hsieh, T.W. Petrie, A.W. Leonard, D. Ryutov, G.D. Porter, R. Maingi, M.R. Wade, R. Cohen, W. Nevins, M.E. Fenstermacher, R.D. Wood, C.J. Lasnier, W.P. West and M.D. Brown 241–243 (1997) 595
- Testing of a pulsed He supersonic beam for plasma edge diagnostic in the TJ-II torsatron, F.L. Tabarés, D. Tafalla, V. Herrero and I. Tanarro 241–243 (1997) 1228
- Plasma-Wall Interaction**
- Spatial distributions of neutral atoms in the near-target plasma: Theory and experiment, D. Naujoks, J. Steinbrink and U. Wenzel 241–243 (1997) 707
- Chemical erosion of pyrolytic graphite by low-energy H<sup>+</sup> and D<sup>+</sup> impact, B.V. Mech, A.A. Haasz and J.W. Davis 241–243 (1997) 1147
- Measurements and modeling of the angular-resolved sputtering yield of D-soaked Be by 100, 300, 500 and 700 eV D<sup>+</sup>, D.N. Ruzic, P.C. Smith and R.B. Turkot, Jr. 241–243 (1997) 1170
- Plasma-Wall Interaction Simulator**
- Side radiation damage from ablated vapor following an ITER-scale disruption, A.E. Koniges, D.C. Eder, H.A. Scott, H. Würz and F. Kappler 241–243 (1997) 244
- Modeling and simulation of melt-layer erosion during a plasma disruption, A. Hassanein, V. Belan, I. Konkashbaev, L. Nikandrov, V. Safronov, A. Zhitlukhin and V. Litunovsky 241–243 (1997) 288
- Arc jets for divertor component testing, J. Balboni, S.A. Cohen and T. Munsat 241–243 (1997) 483
- Laboratory experiments on hydrogen and impurity behaviors in lithium-deposited environment, H. Toyoda, M. Watanabe and H. Sugai 241–243 (1997) 1031
- Tritium retention in S-65 beryllium after 100 eV plasma exposure, R.A. Causey, G.R. Longhurst and W. Harbin 241–243 (1997) 1041
- Interaction of a high density neon plasma with graphite, C. Brosset, J. Bardon and E. Gauthier 241–243 (1997) 1093
- Erosion behavior and surface characterization of beryllium under high-flux deuterium plasma bombardment, J. Won, F.E. Spada, R. Boivin, R. Doerner, S. Luckhardt, F.C. Sze and R.W. Conn 241–243 (1997) 1110
- Investigation of beryllium self-sputtering, M.I. Guseva, S.N. Korshunov, V.M. Gureev, Yu.V. Martinenko, V.E. Netrnoin and V.G. Stoljarova 241–243 (1997) 1117
- Comparison of chemical sputtering yields for different graphites at high ion flux densities, H. Grote, W. Bohmeyer, H.-D. Reiner, T. Fuchs, P. Kornejew and J. Steinbrink 241–243 (1997) 1152
- Examination of material performance of W exposed to high heat load: Postmortem analysis of W exposed to TEXTOR plasma and E-beam test stand, T. Tanabe, V. Philipps, K. Nakamura, M. Fujine, Y. Ueda, M. Wada, B. Schreer, A. Pospieszczyk and B. Uterberg 241–243 (1997) 1164
- Basic experiments on in-situ magnetized boronization by electron cyclotron resonance discharges, H. Kokura, K. Sasaki, H. To-yoda, T. Mizuuchi, K. Kondo, F. Sano, T. Obiki and H. Sugai 241–243 (1997) 1217
- PoIoidal Divertor**
- Particle exhaust in radiative divertor experiments, H.-S. Bosch, D. Coster, R. Dux, C. Fuchs, G. Haas, A. Herrmann, S. Hirsch, A. Kallenbach, J. Neuhauser, R. Schneider, J. Schweinzer and M. Weinlich 241–243 (1997) 82
- Understanding the edge physics of divertor experiments by comparison of 2D edge code calculations and experimental measurements, A. Loarte 241–243 (1997) 118
- Classical drifts in the tokamak sol and divertor: Models and experiment, A.V. Chankin 241–243 (1997) 199
- Modelling of transition from attached to detached state and self-consistent calculations of He levels in ITER, M. Sugihara, T. Amano, D. Boucher, Y. Igitkhanov, G. Janeschitz, H.D. Pacher, D. Post and P. Yushmanov 241–243 (1997) 299
- Experimental comparison of carbon and beryllium as divertor target materials in JET, D.J. Campbell 241–243 (1997) 379
- The amount and distribution of deuterium retained in the jet divertor after the C and Be phases in 1994–1995, J.P. Coad, M. Rubel and C.H. Wu 241–243 (1997) 408
- First measurements of electron temperature and density with divertor Thomson scattering in radiative divertor discharges on DIII-D, S.L. Allen, D.N. Hill, T.N. Carlstrom, D.G. Nilson, R. Stockdale, C.L. Hsieh, T.W. Petrie, A.W. Leonard, D. Ryutov, G.D. Porter, R. Maingi, M.R. Wade, R. Cohen, W. Nevins, M.E. Fenstermacher, R.D. Wood, C.J. Lasnier, W.P. West and M.D. Brown 241–243 (1997) 595
- Performance of the Ti doped graphite RG-Ti-91 at the divertor of the Tokamak ASDEX Upgrade, T. Burtseva, V. Barabash, I. Mazul, C. Garcia-Rosales, S. Deschka, R. Behrisch and A. Herrmann 241–243 (1997) 716
- Controlled detachment and particle transport in the divertor plasma in TdeV, B.L. Stansfield, F. Meo, G. Abel, C. Boucher, J.-L. Gauvreau, J.P. Gunn, E. Haddad, J.-L. Lachambre, J. Mailloux, R. Marchand, G. Ratel, N. Richard, M.M. Shoucri, B. Terreault, S. Beaudry, R. Décoste, G.W. Pacher, W. Zuzak, J.D. Elder and P.C. Stangeby 241–243 (1997) 739
- Radiative plasmas in TdeV, B. Terreault, N. Richard, J. Mailloux, G. Abel, C. Côté, E. Haddad, W. Zhang, C. Boucher, S. Chiu, J. Gunn, H.H. Mai, F. Meo, B.L. Stansfield and W.W. Zuzak 241–243 (1997) 755
- Screening of recycling and non-recycling impurities in the Alcator C-Mod tokamak, G.M. McCracken, R.S. Granetz, B. Lipschultz, B. LaBombard, F. Bombarda, J.A. Goetz, S. Lisgo, D. Jablonski, H. Ohkawa, J.E. Rice, P.C. Stangeby, J.L. Terry and Y. Wang 241–243 (1997) 777
- A comparison of impurity screening between limiter and divertor plasmas in the Alcator C-Mod tokamak, R.S. Granetz, G.M. McCracken, F. Bombarda, J.A. Goetz, D. Jablonski, B. Labombard, B. Lipschultz, H. Ohkawa, J.E. Rice, J.L. Terry and Y. Wang 241–243 (1997) 788
- Role of energetic particles in heat and particle exhaust in a poloidal divertor RFP, S. Masamune, M. Iida, N. Oda, M. Awazu, K. Fujitsuka, K. Ohta and H. Oshiyama 241–243 (1997) 1002

**Poloidal Divertor (continued)**

- Thermal conductivity and retention characteristics of composites made of boron carbide and carbon fibers with extremely high thermal conductivity for first wall armour, R. Jimbou, K. Kodama, M. Saidoh, Y. Suzuki, M. Nakagawa, K. Morita and B. Tsuchiya 241–243 (1997) 1175  
 Impurity feedback control for enhanced divertor and edge radiation in DIII-D discharges, G.L. Jackson, G.M. Staebler, S.L. Allen, N.H. Brooks, T.E. Evans, J.R. Ferron, A.W. Leonard, R. Maingi, T.W. Petrie, M.J. Schaffer, R.D. Wood, W.P. West and D.G. Whyte 241–243 (1997) 618

**Pumping and Fuelling**

- Plasma-wall interactions in ITER, R. Parker, G. Janeschitz, H.D. Pacher, D. Post, S. Chiocchio, G. Federici and P. Ladd 241–243 (1997) 1

**Radial Electric Field**

- Core  $V_\phi$  and  $T_i$  profiles and transport in TFTR DD and DT plasmas with lithium conditioning, C.E. Bush, R.E. Bell, B. LeBlanc, D.K. Mansfield, E.J. Synakowski, R.V. Budny, K.W. Hill, W. Houlberg, E. Mazzucato, P. Mioduszewski, H. Park, C.H. Skinner and M.C. Zarnstorff 241–243 (1997) 892

- Low-energetic He-atom beam as a diagnostic probe for electric field measurement in the plasma edges, K. Takiyama, T. Katsuta, H. Toyota, M. Watanabe, K. Mizuno, T. Ogawa and T. Oda 241–243 (1997) 1222

- The fluctuations and flow velocities measured with a mach probe array on the HL-1M tokamak, W.Y. Hong, E.Y. Wang, L.B. Ran, S.K. Yang, Y.D. Pan, L.Y. Chen and S.J. Qian 241–243 (1997) 1234

**Radiation**

- Scaling of radiated power to plasma contarnination for neon seeded discharges on boronized TEXTOR-94, G. Telesca, H.A. Claassen, P. Franz, A.M. Messiaen, J. Ongena, J. Rapp, U. Samm, N. Schoon, B. Schweer, M.Z. Tokar', B. Unterberg and G. Van Oost 241–243 (1997) 853

**Radiation Asymmetry**

- Radiative edge layers in limiter tokamaks, P. Monier-Garbé 241–243 (1997) 92  
 Divertor configuration studies on JET, C.G. Lowry, D.J. Campbell, S. Davies, H. Guo, P.J. Harbour, M. von Hellermann, L.D. Horton, A. Loarte, C. Maggi, G. Matthews, R. Mohanti, R. Monk, G.J. Radford, R. Reichle, G. Saibene, J. Spence, M. Stamp, A. Taroni and G.C. Vlases 241–243 (1997) 438

- Comprehensive 2D measurements of radiative divertor plasmas in DIII-D, M.E. Fenstermacher, R.D. Wood, S.L. Allen, N.H. Brooks, D.A. Buchenauer, T.N. Carlstrom, J.W. Cuthbertson, E.J. Doyle, T.E. Evans, P.-M. Garbet, R.W. Harvey, D.N. Hill, A.W. Hyatt, R.C. Isler, G. Jackson, R.A. James, R. Jong, C.C. Klepper, C.J. Lasnier, A.W. Leonard, M.A. Mahdavi, R. Maingi, W.H. Meyer, R.A. Moyer, D.U. Nilson,

- T.W. Petrie, G.D. Porter, T.L. Rhodes, M.J. Schaffer, R.D. Stambaugh, D.M. Thomas, S. Tugarjnov, M.R. Wade, J.G. Watkins, W.P. West and D.G. Whyte 241–243 (1997) 666  
 Plasma response on impurity injection in W7-AS, D. Hildebrandt, R. Brakel, A. Elsner, P. Grigull, H. Hacker, R. Burhenn, S. Fiedler, L. Giannone, C. Görner, H.J. Hartfuß, G. Herre, A. Herrmann, J.V. Hofmann, G. Kühner, D. Naujoks, F. Sardei, A. Weller and R. Wolf 241–243 (1997) 950

**Radiation Cooling**

- On the relation between radiation level, central impurity concentration and helium exhaust in a burning fusion plasma, U. Samm, M.Z. Tokar' and B. Unterberg 241–243 (1997) 827

**Radiation Diagnostic**

- Measurement and analysis of radiated power components in the JET MkI divertor using VUV spectroscopy, C.F. Maggi, J.D. Elder, W. Fundamenski, R. Giannella, L.D. Horton, K.D. Lawson, A. Loarte, A. Maas, R. Reichle, M. Stamp, P.C. Stangeby and H.P. Summers 241–243 (1997) 414

**Radiation Energy Sink**

- Impurity fueling to terminate Tokamak discharges, S. Putvinski, N. Fujisawa, D. Post, N. Putvinskaya, M.N. Rosenbluth and J. Wesley 241–243 (1997) 316

- Scaling radiative plasmas to ITER, G.F. Matthews, S. Allen, N. Asakura, J. Goetz, H. Guo, A. Kallenbach, B. Lipschultz, K. McCormick, M. Stamp, U. Samm, P.C. Stangeby, K.-H. Steuer, A. Taroni, B. Unterberg and P. West 241–243 (1997) 450

- Routes to divertor detachment in ASDEX Upgrade, C.S. Pitcher, A.W. Carlson, C. Fuchs, A. Herrmann, W. Suttrop, J. Schweinzer and M. Weinlich 241–243 (1997) 696

- Impurity feedback control for enhanced divertor and edge radiation in DIII-D discharges, G.L. Jackson, G.M. Staebler, S.L. Allen, N.H. Brooks, T.E. Evans, J.R. Ferron, A.W. Leonard, R. Maingi, T.W. Petrie, M.J. Schaffer, R.D. Wood, W.P. West and D.G. Whyte 241–243 (1997) 618

**Radiation-enhanced Sublimation**

- Impurity release from low-Z materials under light particle bombardment, J.W. Davis and A.A. Haasz 241–243 (1997) 37

**Radiation Symmetry**

- Radiative plasmas in TdeV, B. Terreault, N. Richard, J. Mailoux, G. Abel, C. Côté, E. Haddad, W. Zhang, C. Boucher, S. Chiu, J. Gunn, H.H. Mai, F. Meo, B.L. Stansfield and W.W. Zuzak 241–243 (1997) 755

**Reflectometry**

- Radial distributions and poloidal asymmetries of T-10 sol parameters and turbulence, V.A. Vershkov, S.A. Grashin, V.V. Dreval, V.V. Piterskii, S.V. Soldatov and A.N. Jakovets 241–243 (1997) 873

**Reversed Field Pinch**

Investigation of plasma facing components and vacuum vessel in RFX, P. Sonato, V. Antoni, M. Bagatin, W.R. Baker, S. Peruzzo, L. Tramontin, P. Zaccaria and G. Zollino  
241–243 (1997) 982

Locked modes induced plasma–wall interactions in RFX, M. Valisa, T. Bolzonella, L. Carraro, E. Casarotto, S. Costa, L. Garzotti, P. Innocente, S. Martini, R. Pasqualotto, M.E. Puiatti, R. Pugno and P. Scarin  
241–243 (1997) 988

Wall conditioning and particle control in extrap T2, H. Bergsäker, D. Larsson, P. Brunsell, A. Möller and L. Tramontin  
241–243 (1997) 993

Behavior of edge plasma in STP-3M reversed field pinch, A. Matsuoka, H. Kajikawa, Y. Suzuki, H. Arimoto, A. Nagata, K. Aoto, M. Sugawara and K.I. Sato  
241–243 (1997) 998

Role of energetic particles in heat and particle exhaust in a poloidal divertor RFP, S. Masamune, M. Iida, N. Oda, M. Awazu, K. Fujitsuka, K. Ohta and H. Oshiyama  
241–243 (1997) 1002

The first results of siliconization on SWIP-RFP device, Z. Peng, L. Qiang, L. Cuiwen, L. Jieping, Q. Shangjie, F. Shuiquan, Y. Ping, X. Jun, L. Kehua, L. Junlin, H. Wenyu, C. Zeng, Z. Nianman, W. Quanming, L. Jie, H. Ming, Z. Yunze, Z. Qingchun and L. Cuixian  
241–243 (1997) 1008

**RF Heating**

Investigation of interaction between MeV-ions and first wall from neutron and  $\gamma$ -ray measurements in JT-60U, T. Kondoh, Y. Kusama, H. Kimura, M. Saigusa, T. Fujii, S. Moriyama, M. Nemoto, K. Tobita, A. Morioka, K. Nagashima and T. Nishitani  
241–243 (1997) 564

Strong toroidal asymmetries in power deposition on divertor and first wall components during LHCD on TdeV and Tore Supra, J. Mailloux, Y. Demers, V. Fuchs, P. Jaquet, C. Boucher, A. Côté, C. Côté, J. Gunn, B. Terreault, M. Goniche, P. Bibet, P. Froissard, D. Guilhem, J.H. Harris, G. Rey and M. Tareb  
241–243 (1997) 745

Plasma–surface interactions with ICRF antennas and lower hybrid grills in Tore Supra, J.H. Harris, T. Hutter, J.T. Hogan, V. Basiuk, B. Beaumont, A. Becoulet, S. Bremond, M.D. Carter, M. Goniche, R.H. Goulding, D. Guilhem, G.R. Haste, D.J. Hoffman, X. Litaudon and F. Nguyen  
241–243 (1997) 511

**Scaling Law**

Experimental investigation of transport phenomena in the scrape-off layer and divertor, B. LaBombard, J.A. Goetz, I. Hutchinson, D. Jablonski, J. Kesner, C. Kurz, B. Lipschultz, G.M. McCracken, A. Niemczewski, J. Terry, A. Allen, R.L. Boivin, F. Bombarda, P. Bonoli, C. Christensen, C. Fiore, D. Garnier, S. Golovato, R. Granetz, M. Greenwald, S. Horne, A. Hubbard, J. Irby, D. Lo, D. Lumma, E. Marmar, M. May, A. Mazurenko, R. Nachtrieb, H. Ohkawa, P. O’Shea, M. Porkolab, J. Reardon, J. Rice, J. Rost, J. Schachter, J. Snipes, J. Sorci, P. Stek, Y. Takase, Y. Wang, R. Watterson, J. Weaver, B. Welch and S. Wolfe  
241–243 (1997) 149

Divertor scaling laws for tokamaks, P.J. Catto, D.A. Knoll, S.I. Krasheninnikov and J.W. Connor  
241–243 (1997) 369

Scaling radiative plasmas to ITER, G.F. Matthews, S. Allen, N. Asakura, J. Goetz, H. Guo, A. Kallenbach, B. Lipschultz, K. McCormick, M. Stamp, U. Samm, P.C. Stangeby, K.-H. Steuer, A. Taroni, B. Unterberg and P. West  
241–243 (1997) 450

**Sheath Physics**

Long pulse operation with actively cooled limiters, D. Guilhem, J. Hogan, D. Van Houtte, M. Lipa, T. Loarer, P. Chappuis, T. Hoang, J. Schlosser and R. Mitteau  
241–243 (1997) 542

The separation of angle and size effects on Langmuir characteristics, A. Carlson, V. Rohde and M. Weinlich  
241–243 (1997) 722

Plasma–surface interactions with ICRF antennas and lower hybrid grills in Tore Supra, J.H. Harris, T. Hutter, J.T. Hogan, V. Basiuk, B. Beaumont, A. Becoulet, S. Bremond, M.D. Carter, M. Goniche, R.H. Goulding, D. Guilhem, G.R. Haste, D.J. Hoffman, X. Litaudon and F. Nguyen  
241–243 (1997) 511

**SiC**

Thermal response for divertor mock-up using surface-modified CFC tile, L. Fujita, Y. Hirohata, T. Hino, T. Yamashina, Y. Kubota, N. Noda, O. Motojima, T. Sogabe, T. Matsudas and K. Kurodas  
241–243 (1997) 1185

**SOL Plasma**

Experimental investigation of transport phenomena in the scrape-off layer and divertor, B. LaBombard, J.A. Goetz, I. Hutchinson, D. Jablonski, J. Kesner, C. Kurz, B. Lipschultz, G.M. McCracken, A. Niemczewski, J. Terry, A. Allen, R.L. Boivin, F. Bombarda, P. Bonoli, C. Christensen, C. Fiore, D. Garnier, S. Golovato, R. Granetz, M. Greenwald, S. Horne, A. Hubbard, J. Irby, D. Lo, D. Lumma, E. Marmar, M. May, A. Mazurenko, R. Nachtrieb, H. Ohkawa, P. O’Shea, M. Porkolab, J. Reardon, J. Rice, J. Rost, J. Schachter, J. Snipes, J. Sorci, P. Stek, Y. Takase, Y. Wang, R. Watterson, J. Weaver, B. Welch and S. Wolfe  
241–243 (1997) 149

A review of ELMs in divertor tokamaks, D.N. Hill  
241–243 (1997) 182

Classical drifts in the tokamak sol and divertor: Models and experiment, A.V. Chankin  
241–243 (1997) 199

Stability of a radiative mantle in ITER, M.A. Mahdavi, G.M. Staebler, R.D. Wood, D.G. Whyte and W.P. West  
241–243 (1997) 305

Scrape-off layer broadening by the  $E \times B$  convective cell induced by non-axisymmetric divertor biasing, J. Hara, Y. Uesugi, Y. Miura and H. Kawashima  
241–243 (1997) 338

Code–code comparisons of DIVIMP’s ‘onion-skin model’ and the EDGE2D fluid code, P.C. Stangeby, J.D. Elder, W. Fundamenski, A. Loarte, L.D. Horton, R. Simonini, A. Taroni, O.F. Matthews and R.D. Monk  
241–243 (1997) 358

Kinetic simulation of parallel transport and ELM propagation in the Alcator C-Mod tokamak, O.V. Batishchev, A.A. Batishcheva, P.J. Catto, S.I. Krasheninnikov, B. LaBombard, B. Lipschultz and D.J. Sigmar  
241–243 (1997) 374

Derivation of SOL transport coefficients using 2D modelling for hot-ion ELM-free H-modes in JET, G.K. McCormick,

**SOL Plasma (continued)**

- A. Chankin, S. Clement, S. Davies, J. Ehrenberg, A. Loarte, R. Monk, R. Simonini, J. Spence, M. Stamp, A. Taroni and G. Vlases 241–243 (1997) 444
- SOL plasma profiles under radiative and detached divertor conditions in JT-60U, N. Asakura, Y. Koide, K. Itami, N. Hosogane, K. Shimizu, S. Tsuji-Iio, S. Sakurai and A. Sakasai 241–243 (1997) 559
- Simulation of the scrape-off layer plasma during a disruption, T.D. Rognlien, J.A. Crottinger, G.D. Porter, G.R. Smith, A.G. Kellman and P.L. Taylor 241–243 (1997) 590
- Investigation of electron parallel pressure balance in the scrape-off layer of deuterium-based radiative divertor discharges in DIII-D, T.W. Petrie, S.L. Allen, T.N. Carlstrom, D.N. Hill, R. Maingi, D. Nilson, M. Brown, D.A. Buchenauer, T.E. Evans, M.E. Fenstermacher, R.A. Jong, C.J. Lasnier, A.W. Leonard, M.A. Mahdavi, G.D. Porter, M.R. Wade and W.P. West 241–243 (1997) 639
- Direct measurement of the plasma potential in the edge of ASDEX Upgrade using a self emitting probe, V. Rohde, M. Laux, P. Bachmann, A. Herrmann and M. Weinlich 241–243 (1997) 712
- Strong toroidal asymmetries in power deposition on divertor and first wall components during LHCD on TDeV and Tore Supra, J. Mailloux, Y. Demers, V. Fuchs, P. Jaquet, C. Boucher, A. Côté, C. Côté, J. Gunn, B. Terreault, M. Goniche, P. Bibet, P. Froissard, D. Guilhem, J.H. Harris, G. Rey and M. Tareb 241–243 (1997) 745
- Local impurity puffing as a scrape-off layer diagnostic on the Alcator C-Mod tokamak, D. Jablonski, B. LaBombard, G.M. McCracken, S. Lisgo, B. Lipschultz, I.H. Hutchinson, J. Terry and P.C. Stangeby 241–243 (1997) 782
- Time resolved observation of the erosion of boron containing protective coatings on wall elements of TEXTOR-94 by means of colorimetry, P. Wienhold, F. Weschenfelder, J. von Seggern, B. Emmoth, H.G. Esser, P. Karduck and J. Winter 241–243 (1997) 804
- Radial distributions and poloidal asymmetries of T-10 sol parameters and turbulence, V.A. Vershkov, S.A. Grashin, V.V. Dreval, V.V. Piterskii, S.V. Soldatov and A.N. Jakovets 241–243 (1997) 873
- SOL parameters and local transport in the FTU tokamak, M. Leigheb, V. Pericoli Ridolfini and R. Zagórski 241–243 (1997) 914
- Low-energetic He-atom beam as a diagnostic probe for electric field measurement in the plasma edges, K. Takiyama, T. Katsuta, H. Toyota, M. Watanabe, K. Mizuno, T. Ogawa and T. Oda 241–243 (1997) 1222
- The fluctuations and flow velocities measured with a mach probe array on the HL-1M tokamak, W.Y. Hong, E.Y. Wang, L.B. Ran, S.K. Yang, Y.D. Pan, L.Y. Chen and S.J. Qian 241–243 (1997) 1234

**Spatial Neutral Distribution**

Spatial distributions of neutral atoms in the near-target plasma:

Theory and experiment, D. Naujoks, J. Steinbrink and U. Wenzel 241–243 (1997) 707

**Sputtering Measurements**

Measurements and modeling of the angular-resolved sputtering yield of D-soaked Be by 100, 300, 500 and 700 eV D<sup>+</sup>, D.N. Ruzic, P.C. Smith and R.B. Turkot, Jr. 241–243 (1997) 1170

**Sputtering Yield**

Erosion behavior and surface characterization of beryllium under high-flux deuterium plasma bombardment, J. Won, F.E. Spada, R. Boivin, R. Doerner, S. Luckhardt, F.C. Sze and R.W. Conn 241–243 (1997) 1110

**Steady-State Fusion**

On the relation between radiation level, central impurity concentration and helium exhaust in a burning fusion plasma, U. Samm, M.Z. Tokar' and B. Unterberg 241–243 (1997) 827

**Steady-State Regime**

Heat exhaust control with active cooling in Tore-Supra: towards steady state operation, Ph. Chappuis 241–243 (1997) 27

**Stellarator**

Monte Carlo modelling of the transport in the stellarator periphery with magnetic islands, D. Naujoks, P. Bachmann, A. Runov and D. Sünder 241–243 (1997) 925

A 2D approach to island divertor modelling for Wendelstein 7-AS, G. Herre, R. Schneider, D. Coster, F. Sardei, D. Reiter, P. Grigrull and J. Kißlinger 241–243 (1997) 941

Plasma response on impurity injection in W7-AS, D. Hildebrandt, R. Brakel, A. Elsner, P. Grigull, H. Hacker, R. Burhenn, S. Fiedler, L. Giannone, C. Görner, H.J. Hartfuß, G. Herre, A. Herrmann, J.V. Hofmann, G. Kühner, D. Naujoks, F. Sardei, A. Weller and R. Wolf 241–243 (1997) 950

Behavior of pellet injected Li into heliotron E plasmas, K. Kondo, K. Ida, C. Christou, V.Yu. Sergeev, K.V. Khlopovkov, S. Sudo, F. Sano, H. Zushi, T. Mizuuchi, S. Besshou, H. Okada, K. Nagasaki, K. Sakamoto, Y. Kurimoto, H. Funaba, T. Hamada, T. Kinoshita, S. Kado, Y. Kanda, T. Okamoto, M. Wakatani and T. Obiki 241–243 (1997) 956

Testing of a pulsed He supersonic beam for plasma edge diagnostic in the TJ-IU torsatron, F.L. Tabarés, D. Tafalla, V. Herrero and I. Tanarro 241–243 (1997) 1228

**Stochastic Boundary**

Temperature profiles in stochastic boundaries, S. Féron and Ph. Ghendrih 241–243 (1997) 328

Field line measurements in the divertor of Heliotron-E under boronized conditions, F. Sano, T. Mizuuchi, T. Hamada, H. Funaba, M. Nakasuga, K. Kondo, H. Zushi, S. Besshou, H. Okada, K. Hanatani, K. Nagasaki and T. Obiki 241–243 (1997) 961

Experimental study of edge plasma structure in various discharges on compact helical system, T. Morisaki, A. Komori, R. Akiyama,

**Stochastic Boundary (continued)**

- H. Idei, H. Iguchi, N. Inoue, Y. Kawai, S. Kubo, S. Masuzaki, K. Matsuka, T. Minami, S. Morita, N. Noda, N. Ohyabu, S. Okamura, M. Osakabe, H. Suzuki, K. Tanaka, C. Takahashi, H. Yamada, I. Yamada and O. Motojima  
241–243 (1997) 977

**Surface Layer**

- Release of hydrogen from co-existing layers of carbon and beryllium with vacuum heating, K. Ashida, K. Watanabe and T. Okabe  
241–243 (1997) 1060

**Tandem Mirror**

- Behavior of neutral-hydrogen and particle confinement on GAMMA 10 tandem mirror plasmas, Y. Nakashima, M. Shoji, K. Yatsu, S. Kobayashi, K. Tsuchiya, N. Yamaguchi, M. Yoshikawa, T. Aota, T. Ishijima, M. Ichimura, M. Inutake, A. Mase and T. Tamano  
241–243 (1997) 1011

**Technology**

- Tritium removal from TFTR, D. Mueller, W. Blanchard, J. Collins, J. Hosea, J. Kamperschroer, P.H. LaMarche, A. Nagy, D.K. Owens and C.H. Skinner  
241–243 (1997) 897

**Tokamak**

- Helium transport and exhaust experiments in tokamaks, J. Hogan  
241–243 (1997) 68

- A review of ELMs in divertor tokamaks, D.N. Hill  
241–243 (1997) 182

- Stability of a radiative mantle in ITER, M.A. Mahdavi, G.M. Staebler, R.D. Wood, D.G. Whyte and W.P. West  
241–243 (1997) 305

- Experimental comparison of carbon and beryllium as divertor target materials in JET, D.J. Campbell  
241–243 (1997) 379

- Studies of giant ELM interaction with the divertor target in JET, J. Lingertat, A. Tabasso, S. Ali-Arshad, B. Alper, P. van Belle, K. Borras, S. Clement, J.P. Coad and R. Monk  
241–243 (1997) 402

- The amount and distribution of deuterium retained in the jet divertor after the C and Be phases in 1994–1995, J.P. Coad, M. Rubel and C.H. Wu  
241–243 (1997) 408

- Derivation of SOL transport coefficients using 2D modelling for hot-ion ELM-free H-modes in JET, G.K. McCormick, A. Chankin, S. Clement, S. Davies, J. Ehrenberg, A. Loarte, R. Monk, R. Simonini, J. Spence, M. Stamp, A. Taroni and G. Vlases  
241–243 (1997) 444

- Analysis of wall particle content with premagnetization plasmas, C. Grisolia, Ph. Ghendrih, G. Martin and D. Van Houtte  
241–243 (1997) 538

- Investigation of interaction between MeV-ions and first wall from neutron and  $\gamma$ -ray measurements in JT-60U, T. Kondoh, Y. Kusama, H. Kimura, M. Saigusa, T. Fujii, S. Moriyama, M. Nemoto, K. Tobita, A. Morioka, K. Nagashima and T. Nishitani  
241–243 (1997) 564

- Effects of edge and central fuelling on particle confinement in JT-60U, H. Takenaga, N. Asakura, K. Shimizu, K. Nagashima, H. Kubo and A. Sakasai  
241–243 (1997) 569

- Study of carbon impurity generation by chemical sputtering in JT-60U, S. Higashijima, H. Kubo, T. Sugie, K. Shimizu, N. Asakura, K. Itami, N. Hosogane, A. Sakasai, S. Konoshima, S. Sakurai and H. Takenaga  
241–243 (1997) 574

- Modeling of the recycling particle flux and electron particle transport in the DIII-D Tokamak, D.R. Baker, R. Maingi, L.W. Owen, G.D. Porter and G.L. Jackson  
241–243 (1997) 602

- Measurements of non-axisymmetric halo currents with and without 'killer' pellets during disruptions in the DIII-D tokamak, T.E. Evans, A.G. Kellman, D.A. Humphreys, M.J. Schaffer, P.L. Taylor, D.G. Whyte, T.C. Jernigan, A.W. Hyatt and R.L. Lee  
241–243 (1997) 606

- Core/divertor/wall particle dynamics in the DIII-D tokamak, J.T. Hogan, R. Maingi, P.K. Mioduszewski, Th. Hutter, C.C. Klepper and M.R. Wade  
241–243 (1997) 612

- Screening of recycling and non-recycling impurities in the Alcator C-Mod tokamak, G.M. McCracken, R.S. Granetz, B. Lipschultz, B. LaBombard, F. Bombarda, J.A. Goetz, S. Lisgo, D. Jablonski, H. Ohkawa, J.E. Rice, P.C. Stangeby, J.L. Terry and Y. Wang  
241–243 (1997) 777

- Effects of a rf limiter on TEXTOR's edge plasmas, J.A. Boedo, T. Shoji, Y. Sakawa, D.S. Gray, J.G. Schwelberger, R.W. Conn, K.H. Finken, G. Mank and N. Noda  
241–243 (1997) 857
- Radial distributions and poloidal asymmetries of T-10 sol parameters and turbulence, V.A. Vershkov, S.A. Grashin, V.V. Dreval, V.V. Piterskii, S.V. Soldatov and A.N. Jakovets  
241–243 (1997) 873

- Tritium removal from TFTR, D. Mueller, W. Blanchard, J. Collins, J. Hosea, J. Kamperschroer, P.H. LaMarche, A. Nagy, D.K. Owens and C.H. Skinner  
241–243 (1997) 897

- SOL parameters and local transport in the FTU tokamak, M. Leigheb, V. Pericoli Ridolfini and R. Zagórski  
241–243 (1997) 914

- Effects of lithium-implantation on the hydrogen retention in both a-C:H and a-SiC:H materials submitted to deuterium bombardment, G. Barbier, G.G. Ross, M.A. El Khakani, N. Chevarier and A. Chevarier  
241–243 (1997) 1036

- Effect of ion-beam irradiation on power reflectivity of boron-doped CFC materials, M. Nagatsu, N. Takada, I. Tsuchikura, S. Sasaki, M. Akiba and K. Nakamura  
241–243 (1997) 1180

- The fluctuations and flow velocities measured with a mach probe array on the HL-1M tokamak, W.Y. Hong, E.Y. Wang, L.B. Ran, S.K. Yang, Y.D. Pan, L.Y. Chen and S.J. Qian  
241–243 (1997) 1234

**Transport and Confinement**

- Core  $V_\phi$  and  $T_i$  profiles and transport in TFTR DD and DT plasmas with lithium conditioning, C.E. Bush, R.E. Bell, B. LeBlanc, D.K. Mansfield, E.J. Synakowski, R.V. Budny, K.W. Hill, W. Houlberg, E. Mazzucato, P. Mioduszewski, H. Park, C.H. Skinner and M.C. Zarnstorff  
241–243 (1997) 892

**Transverse Transport**

Experimental investigation of transport phenomena in the scrape-off layer and divertor, B. LaBombard, J.A. Goetz, I. Hutchinson, D. Jablonski, J. Kesner, C. Kurz, B. Lipschultz, G.M. McCracken, A. Niemczewski, J. Terry, A. Allen, R.L. Boivin, F. Bombarda, P. Bonoli, C. Christensen, C. Fiore, D. Garnier, S. Golovato, R. Granetz, M. Greenwald, S. Horne, A. Hubbard, J. Irby, D. Lo, D. Lumma, E. Marmar, M. May, A. Mazurenko, R. Nachtrieb, H. Ohkawa, P. O'Shea, M. Porkolab, J. Reardon, J. Rice, J. Rost, J. Schachter, J. Snipes, J. Sorci, P. Stek, Y. Takase, Y. Wang, R. Watterson, J. Weaver, B. Welch and S. Wolfe

241–243 (1997) 149

Temperature profiles in stochastic boundaries, S. Féron and Ph. Ghendrih

241–243 (1997) 328

Assessment of the DIVIMP ‘onion-skin’ model in the JET Mark I divertor, S.K. Erents, P. Breger, S.J. Davies, J.D. Elder, H.Y. Guo, L.D. Horton, G.F. Matthews, R.D. Monk, P.C. Stangeby and D.D.R. Summers

241–243 (1997) 433

Derivation of SOL transport coefficients using 2D modelling for hot-ion ELM-free H-modes in JET, G.K. McCormick, A. Chankin, S. Clement, S. Davies, J. Ehrenberg, A. Loarte, R. Monk, R. Simonini, J. Spence, M. Stamp, A. Taroni and G. Vlases

241–243 (1997) 444

The separation of angle and size effects on Langmuir characteristics, A. Carlson, V. Rohde and M. Weinlich

241–243 (1997) 722

**Tritium Inventory**

A review of recent experiments on W and high Z materials as plasma-facing components in magnetic fusion devices, N. Noda, V. Philipps and R. Neu

241–243 (1997) 227

Assessment of erosion and surface tritium inventory issues for the ITER divertor, J.N. Brooks, R. Causey, G. Federici and D.N. Ruzic

241–243 (1997) 294

The amount and distribution of deuterium retained in the jet divertor after the C and Be phases in 1994–1995, J.P. Coad, M. Rubel and C.H. Wu

241–243 (1997) 408

Hydrogen absorption behavior into boron films by glow discharges in hydrogen and helium, K. Tsuzuki, M. Natsir, N. Inoue, A. Sagara, N. Noda, O. Motojima, T. Mochizuki, T. Hino and T. Yamashina

241–243 (1997) 1055

Deuterium retention in beryllium, molybdenum and tungsten at high fluences, A.A. Haasz and J.W. Davis

241–243 (1997) 1076

**Tritium Inventory and Economy**

Plasma wall interaction and tritium retention in TFTR, C.H. Skinner, E. Amerescu, G. Ascione, W. Blanchard, C.W. Barnes, S.H. Batha, M. Beer, M.G. Bell, R. Bell, M. Bitter, N.L. Bretz, R. Budny, C.E. Bush, R. Camp, M. Casey, J. Collins, M. Cropper, Z. Chang, D.S. Darrow, H.H. Duong, R. Durst, P.C. Efthimion, D. Ernst, N. Fisch, R.J. Fonck, E. Fredrickson, G.Y. Fu, H.P. Furth, C.A. Gentile, M. Gibson, J. Gilbert, B. Grek, L.R. Grisham, G. Hammert, R.J. Hawryluk, H.W. Herrmann, K.W. Hill, J. Hosea, A. Janos, D.L. Jassby, F.C. Jobes, D.W. Johnson, L.C. Johnson, J. Kamperschroer, M. Kalish, H. Kugel,

J. Langford, S. Langish, P.H. LaMarche, B. LeBlanc, F.M. Levinton, J. Machuzak, R. Majeski, J. Manikam, D.K. Mansfield, E. Mazzucato, K.M. McGuire, R. Mika, G. McKee, D.M. Meade, S.S. Medley, D.R. Mikkelsen, H.E. Mynick, D. Mueller, A. Nagy, R. Nazikian, M. Ono, D.K. Owens, H. Park, S.F. Paul, G. Pearson, M. Petrov, C.K. Phillips, S. Raftopoulos, A. Ramsey, R. Raucci, M.H. Redi, G. Rewoldt, J. Rogers, A.L. Roquemore, E. Ruskov, S.A. Sabbagh, G. Schilling, J.F. Schivell, G.L. Schmidt, S.D. Scott, S. Sesnic, B.C. Stratton, J.D. Strachan, T. Stevenson, D.P. Stotler, E. Synakowski, H. Takahashi, W. Tang, G. Taylor, W. Tighe, J.R. Timberlake, A. von Halle, S. von Goeler, R.T. Walters, R.B. White, J.R. Wilson, J. Winston, K.L. Wong, K.M. Young, M.C. Zarnstorff and S.J. Zweber

241–243 (1997) 214

The influence of key operation parameters and material properties on the quantification of tritium inventory and permeation in the plasma facing components of ITER, G. Federici, D. Holland, G. Janeschitz and C.H. Wu

241–243 (1997) 260

Measurements of tritium recycling and isotope exchange in TFTR, C.H. Skinner, J. Kamperschroer, D. Mueller, A. Nagy and D.P. Stotler

241–243 (1997) 887

Tritium removal from TFTR, D. Mueller, W. Blanchard, J. Collins, J. Hosea, J. Kamperschroer, P.H. LaMarche, A. Nagy, D.K. Owens and C.H. Skinner

241–243 (1997) 897

Tritium retention in S-65 beryllium after 100 eV plasma exposure, R.A. Causey, G.R. Longhurst and W. Harbin

241–243 (1997) 1041

Hydrogen trapping in and release from tungsten: Modeling and comparison with graphite with regard to its use as fusion reactor material, P. Franzen, C. Garcia-Rosales, H. Plank and V.Kh. Alimov

241–243 (1997) 1082

**Turbulence**

Self-organized criticality in particle transport governed by ionization, Y. Sarazin and Ph. Ghendrih

241–243 (1997) 322

Theory of ion transport in the tokamak SOL, P. Helander, R.D. Hazeltine and P.J. Catto

241–243 (1997) 363

The role of turbulent transport in DIII-D edge and divertor plasmas, R.A. Moyer, J.W. Cuthbertson, T.E. Evans, G.D. Porter and J.G. Watkins

241–243 (1997) 633

Radial distributions and poloidal asymmetries of T-10 sol parameters and turbulence, V.A. Vershkov, S.A. Grashin, V.V. Dreval, V.V. Piterskii, S.V. Soldatov and A.N. Jakovets

241–243 (1997) 873

Radial distributions and poloidal asymmetries of T-10 sol parameters and turbulence, V.A. Vershkov, S.A. Grashin, V.V. Dreval, V.V. Piterskii, S.V. Soldatov and A.N. Jakovets

241–243 (1997) 873

**Vaporization and Melting**

Modeling and simulation of melt-layer erosion during a plasma disruption, A. Hassanein, V. Belan, I. Konkashbaev, L. Nikandrov, V. Safronov, A. Zhitlukhin and V. Litunovsky

241–243 (1997) 288

**VUV Spectroscopy**

Spatial radiation profiles in the ASDEX Upgrade divertor for detached plasmas, U. Wenzel, A. Thoma, R. Dux, Ch. Fuchs, A. Herrmann, St. Hirsch, A. Kallenbach, H. Kastelicewicz, M. Laux, F. Mast and B. Napiontek 241–243 (1997) 728

**Wall Coating**

Properties of thin boron coatings formed during deuterated-boronization in JT-60, J. Yagyu, N. Ogiwara, M. Saidoh, J. von Seggern, T. Okabe, Y. Miyo, H. Hiratsuka, S. Yamamoto, P. Goppelt-Langer, Y. Aoki, H. Takeshita and H. Naramoto 241–243 (1997) 579

High heat load testing of plasma sprayed W coatings, M. Urquiaga Valdes, R.O. Saint-Jacques, J.-F. Côté and C. Moreau 241–243 (1997) 750

In-situ deposition of silicon on the leading edge of the ALT-II limiter in TEXTOR-94, G. Mank, J.A. Boedo, P. Wienhold, H.G. Esser, K.H. Finken, L. Könen, A. Pospieszczyk, J. Rapp, J. Schuelberger, F. Weschenfelder and J. Winter 241–243 (1997) 821

Field line measurements in the divertor of Heliotron-E under boronized conditions, F. Sano, T. Mizuchi, T. Hamada, H. Funaba, M. Nakasuga, K. Kondo, H. Zushi, S. Besshou, H. Okada, K. Hanatani, K. Nagasaki and T. Obiki 241–243 (1997) 961

Real time boronization experiments in CHS and scaling for LHD, A. Sagara, Y. Hasegawa, K. Tsuzuki, N. Inoue, H. Suzuki, T. Morisaki, N. Noda, O. Motojima, S. Okamura, K. Matsuoka, R. Akiyama, K. Ida, H. Idei, K. Iwasaki, S. Kubo, T. Minami, S. Morita, K. Narihara, T. Ozaki, K. Sato, C. Takahashi, K. Tanaka, K. Toi and I. Yamada 241–243 (1997) 972

The first results of siliconization on SWIP-RFP device, Z. Peng, L. Qiang, L. Cuiwen, L. Jieping, Q. Shangjie, F. Shuiquan, Y. Ping, X. Jun, L. Kehua, L. Junlin, H. Wenyu, C. Zeng, Z. Nianman, W. Quanming, L. Jie, H. Ming, Z. Yunze, Z. Qingchun and L. Cuixian 241–243 (1997) 1008

Laboratory experiments on hydrogen and impurity behaviors in lithium-deposited environment, H. Toyoda, M. Watanabe and H. Sugai 241–243 (1997) 1031

Hydrogen absorption behavior into boron films by glow discharges in hydrogen and helium, K. Tsuzuki, M. Natsir, N. Inoue, A. Sagara, N. Noda, O. Motojima, T. Mochizuki, T. Hino and T. Yamashina 241–243 (1997) 1055

Interaction of energetic oxygen ions with lithium-containing amorphous hydrogenated carbon films: A mass spectrometry study, J.-U. Thiele, E. Vietzke and P. Oelhafen 241–243 (1997) 1127

Effect of irradiation ion species on internal stress in boron thin films, N. Satomi, K. Tanaka, M. Kitamura and M. Nishikawa 241–243 (1997) 1138

Effect of ion-beam irradiation on power reflectivity of boron-doped CFC materials, M. Nagatsu, N. Takada, I. Tsuchikura, S. Sasaki, M. Akiba and K. Nakamura 241–243 (1997) 1180

Basic experiments on in-situ magnetized boronization by electron cyclotron resonance discharges, H. Kokura, K. Sasaki, H. To-

yoda, T. Mizuchi, K. Kondo, F. Sano, T. Obiki and H. Sugai 241–243 (1997) 1217

**Wall Conditioning**

Plasma wall interaction and tritium retention in TFTR, C.H. Skinner, E. Amerescu, G. Ascione, W. Blanchard, C.W. Barnes, S.H. Batha, M. Beer, M.G. Bell, R. Bell, M. Bitter, N.L. Bretz, R. Budny, C.E. Bush, R. Camp, M. Casey, J. Collins, M. Cropper, Z. Chang, D.S. Darrow, H.H. Duong, R. Durst, P.C. Efthimion, D. Ernst, N. Fisch, R.J. Fonck, E. Fredrickson, G.Y. Fu, H.P. Furth, C.A. Gentile, M. Gibson, J. Gilbert, B. Grek, L.R. Grisham, G. Hammert, R.J. Hawryluk, H.W. Herrmann, K.W. Hill, J. Hosea, A. Janos, D.L. Jassby, F.C. Jobes, D.W. Johnson, L.C. Johnson, J. Kamperschoer, M. Kalish, H. Kugel, J. Langford, S. Langish, P.H. LaMarche, B. LeBlanc, F.M. Levinton, J. Machuzak, R. Majeski, J. Manikam, D.K. Mansfield, E. Mazzucato, K.M. McGuire, R. Mika, G. McKee, D.M. Meade, S.S. Medley, D.R. Mikkelsen, H.E. Mynick, D. Mueller, A. Nagy, R. Nazikian, M. Ono, D.K. Owens, H. Park, S.F. Paul, G. Pearson, M. Petrov, C.K. Phillips, S. Raftopoulos, A. Ramsey, R. Rucci, M.H. Redi, G. Rewoldt, J. Rogers, A.L. Roquemore, E. Ruskov, S.A. Sabbagh, G. Schilling, J.F. Schivell, G.L. Schmidt, S.D. Scott, S. Sesnic, B.C. Stratton, J.D. Strachan, T. Stevenson, D.P. Stotler, E. Synakowski, H. Takahashi, W. Tang, G. Taylor, W. Tighe, J.R. Timberlake, A. von Halle, S. von Goeler, R.T. Walters, R.B. White, J.R. Wilson, J. Winston, K.L. Wong, K.M. Young, M.C. Zarnstorff and S.J. Zweber 241–243 (1997) 214

Analysis of wall particle content with premagnetization plasmas, C. Grisolia, Ph. Ghendrih, G. Martin and D. Van Houtte 241–243 (1997) 538

Wall conditioning technique development in Tore Supra with permanent magnetic field by ICRF wave injection, E. Gauthier, E. de la Cal, B. Beaumont, A. Becoulet, C. Gil, C. Grisolia, A. Grosman, T. Hutter, H. Kuus, L. Ladurelle and J.L. Segui 241–243 (1997) 553

Enhanced performance discharges in the DIII-D tokamak with lithium wall conditioning, G.L. Jackson, E.A. Lazarus, G.A. Navratil, R. Bastasz, N.H. Brooks, D.T. Garnier, K.L. Holtrop, J.C. Phillips, E.S. Marmar, T.S. Taylor, D.M. Thomas, W.R. Wampler, D.G. Whyte and W.P. West 241–243 (1997) 655

In-situ deposition of silicon on the leading edge of the ALT-II limiter in TEXTOR-94, G. Mank, J.A. Boedo, P. Wienhold, H.G. Esser, K.H. Finken, L. Könen, A. Pospieszczyk, J. Rapp, J. Schuelberger, F. Weschenfelder and J. Winter 241–243 (1997) 821

ICRF wall conditioning at TEXTOR-94 in the presence of a 2.25 T magnetic field, H.G. Esser, A. Lyssoivan, M. Freisinger, R. Koch, G. Van Oost, F. Weschenfelder and J. Winter 241–243 (1997) 861

Divertor target profiles and recycling studies in TCV single null lower standard discharges, R.A. Pitts, Ch. Nieswand, H. Weisen, M. Anton, R. Behn, R.F. Chavan, M.J. Dutch, B.P. Duval, S. Franke, F. Hofmann, B. Joye, J.B. Lister, X. Llobet, Y. Martin, J.-M. Moret, J. Petrzilka, Z.A. Pietrzyk, V. Piffl, P. Reinke, M.E.

**Wall Conditioning (continued)**

- Rensink, G.R. Smith and W. van Toledo  
241–243 (1997) 867
- Core  $V_\phi$  and  $T_i$  profiles and transport in TFTR DD and DT plasmas with lithium conditioning, C.E. Bush, R.E. Bell, B. LeBlanc, D.K. Mansfield, E.J. Synakowski, R.V. Budny, K.W. Hill, W. Houlberg, E. Mazzucato, P. Mioduszewski, H. Park, C.H. Skinner and M.C. Zarnstorff  
241–243 (1997) 892
- Behavior of pellet injected Li into heliotron E plasmas, K. Kondo, K. Ida, C. Christou, V.Yu. Sergeev, K.V. Khlopenkov, S. Sudo, F. Sano, H. Zushi, T. Mizuuchi, S. Besshou, H. Okada, K. Nagasaki, K. Sakamoto, Y. Kurimoto, H. Funaba, T. Hamada, T. Kinoshita, S. Kado, Y. Kanda, T. Okamoto, M. Wakatani and T. Obiki  
241–243 (1997) 956
- Real time boronization experiments in CHS and scaling for LHD, A. Sagara, Y. Hasegawa, K. Tsuzuki, N. Inoue, H. Suzuki, T. Morisaki, N. Noda, O. Motojima, S. Okamura, K. Matsuoka, R. Akiyama, K. Ida, H. Idei, K. Iwasaki, S. Kubo, T. Minami, S. Morita, K. Narihara, T. Ozaki, K. Sato, C. Takahashi, K. Tanaka, K. Toi and I. Yamada  
241–243 (1997) 972
- Wall conditioning and particle control in extrap T2, H. Bergsäker, D. Larsson, P. Brunsell, A. Möller and L. Tramontin  
241–243 (1997) 993
- The first results of siliconization on SWIP-RFP device, Z. Peng, L. Qiang, L. Cuiwen, L. Jieping, Q. Shangjie, F. Shuiquan, Y. Ping, X. Jun, L. Kehua, L. Junlin, H. Wenyu, C. Zeng, Z. Nianman, W. Quanming, L. Jie, H. Ming, Z. Yunze, Z. Qingchun and L. Cuixian  
241–243 (1997) 1008
- Laboratory experiments on hydrogen and impurity behaviors in lithium-deposited environment, H. Toyoda, M. Watanabe and H. Sugai  
241–243 (1997) 1031
- Effect of irradiation ion species on internal stress in boron thin films, N. Satomi, K. Tanaka, M. Kitamura and M. Nishikawa  
241–243 (1997) 1138
- Basic experiments on in-situ magnetized boronization by electron cyclotron resonance discharges, H. Kokura, K. Sasaki, H. Toyoda, T. Mizuuchi, K. Kondo, F. Sano, T. Obiki and H. Sugai  
241–243 (1997) 1217

**Wall Erosion**

- Plasma-wall interactions in ITER, R. Parker, G. Janeschitz, H.D. Pacher, D. Post, S. Chiocchio, G. Federici and P. Ladd  
241–243 (1997) 1

**Wall Impurity Trapping**

- Hydrogen trapping in and release from tungsten: Modeling and comparison with graphite with regard to its use as fusion reactor material, P. Franzen, C. Garcia-Rosales, H. Plank and V.Kh. Alimov  
241–243 (1997) 1082
- Interaction of energetic oxygen ions with lithium-containing amorphous hydrogenated carbon films: A mass spectrometry study, J.-U. Thiele, E. Vietzke and P. Oelhafen  
241–243 (1997) 1127

**Wall Particle Reflection**

- Reflection, re-emission and permeation of deuterium implanted in Ti-6Al-4V alloy, V. Bandourko, K. Ohkoshi, K. Yamaguchi and M. Yamawaki  
241–243 (1997) 1071

**Wall Particle Retention**

- Plasma-wall interactions in ITER, R. Parker, G. Janeschitz, H.D. Pacher, D. Post, S. Chiocchio, G. Federici and P. Ladd  
241–243 (1997) 1
- Hydrogen retention in plasma-facing materials and its consequences on tokamak operation, A.P. Zakharov, A.E. Gorodetsky, V.Kh. Alimov, S.L. Kanashenko and A.V. Markin  
241–243 (1997) 52

- Plasma wall interaction and tritium retention in TFTR, C.H. Skinner, E. Amereescu, G. Ascione, W. Blanchard, C.W. Barnes, S.H. Batha, M. Beer, M.G. Bell, R. Bell, M. Bitter, N.L. Bretz, R. Budny, C.E. Bush, R. Camp, M. Casey, J. Collins, M. Cropper, Z. Chang, D.S. Darrow, H.H. Duong, R. Durst, P.C. Efthimion, D. Ernst, N. Fisch, R.J. Fonck, E. Fredrickson, G.Y. Fu, H.P. Furth, C.A. Gentile, M. Gibson, J. Gilbert, B. Grek, L.R. Grisham, G. Hammett, R.J. Hawryluk, H.W. Herrmann, K.W. Hill, J. Hosea, A. Janos, D.L. Jassby, F.C. Jobes, D.W. Johnson, L.C. Johnson, J. Kamperschroer, M. Kalish, H. Kugel, J. Langford, S. Langish, P.H. LaMarche, B. LeBlanc, F.M. Levinton, J. Machuzak, R. Majeski, J. Manikam, D.K. Mansfield, E. Mazzucato, K.M. McGuire, R. Mika, G. McKee, D.M. Meade, S.S. Medley, D.R. Mikkelsen, H.E. Mynick, D. Mueller, A. Nagy, R. Nazikian, M. Ono, D.K. Owens, H. Park, S.F. Paul, G. Pearson, M. Petrov, C.K. Phillips, S. Raftopoulos, A. Ramsey, R. Raucci, M.H. Redi, G. Rewoldt, J. Rogers, A.L. Roquemore, E. Ruskov, S.A. Sabbagh, G. Schilling, J.F. Schivell, G.L. Schmidt, S.D. Scott, S. Sesnic, B.C. Stratton, J.D. Strachan, T. Stevenson, D.P. Stotler, E. Synakowski, H. Takahashi, W. Tang, G. Taylor, W. Tighe, J.R. Timberlake, A. von Halle, S. von Goeler, R.T. Walters, R.B. White, J.R. Wilson, J. Winston, K.L. Wong, K.M. Young, M.C. Zarnstorff and S.J. Zweber  
241–243 (1997) 214

- The influence of key operation parameters and material properties on the quantification of tritium inventory and permeation in the plasma facing components of ITER, G. Federici, D. Holland, G. Janeschitz and C.H. Wu  
241–243 (1997) 260

- The amount and distribution of deuterium retained in the jet divertor after the C and Be phases in 1994–1995, J.P. Coad, M. Rubel and C.H. Wu  
241–243 (1997) 408

- Behaviour of hydrogen in JET deuterium plasmas, K. Günther, G. Bracco, R. König, M.F. Stamp and K.-D. Zastrow  
241–243 (1997) 462

- Analysis of wall particle content with premagnetization plasmas, C. Grisolia, Ph. Ghendrih, G. Martin and D. Van Houtte  
241–243 (1997) 538

- Properties of thin boron coatings formed during deuterated-boronization in JT-60, J. Yagyu, N. Ogiwara, M. Saidoh, J. von Seggern, T. Okabe, Y. Miyo, H. Hiratsuka, S. Yamamoto, P. Goppelt-Langer, Y. Aoki, H. Takeshita and H. Naramoto  
241–243 (1997) 579

**Wall Particle Retention (continued)**

- Direct measurement of divertor exhaust neon enrichment in DIII-D, M.J. Schaffer, M.R. Wade, R. Maingi, P. Monier-Garbet, W.P. West, D.G. Whyte, R.D. Wood and M.A. Mahdavi 241–243 (1997) 585
- Characteristics of the scrape-off layer in DIII-D high-performance negative central magnetic shear discharges, C.J. Lasnier, R. Maingi, A.W. Leonard, S.L. Allen, D.A. Buchenauer, K.H. Burrell, T.A. Casper, J.W. Cuthbertson, M.E. Fenstermacher, D.N. Hill, R.A. Jong, L.L. Lao, E.A. Lazarus, R.A. Moyer, T.W. Petrie, G.D. Porter, B.W. Rice, B.W. Stallard, T.S. Taylor and J.G. Watkins 241–243 (1997) 623
- Comparison of wall/divertor deuterium retention and plasma fueling requirements on the DIII-D, TdeV and ASDEX Upgrade tokamaks, R. Maingi, B. Terreault, G. Haas, G.L. Jackson, W. Zuzak, P.K. Mioduszewski, M.A. Mahdavi, M.R. Wade, S. Chiu, M.J. Schaffer, J.T. Hogan and C.C. Klepper 241–243 (1997) 672
- Performance of the Ti doped graphite RG-Ti-91 at the divertor of the Tokamak ASDEX Upgrade, T. Burtseva, V. Barabash, I. Mazul, C. García-Rosales, S. Deschka, R. Behrisch and A. Herrmann 241–243 (1997) 716
- Measurements of tritium recycling and isotope exchange in TFTR, C.H. Skinner, J. Kamperschoer, D. Mueller, A. Nagy and D.P. Stotler 241–243 (1997) 887
- Hydrogen retention properties of low  $Z$  and high  $Z$  plasma facing materials, Y. Yamauchi, T. Hino, K. Koyama, Y. Hirohata and T. Yamashina 241–243 (1997) 1016
- Ion-induced release of deuterium from co-deposits by high energy helium bombardment, M. Rubel, H. Bergsäker and P. Wienhold 241–243 (1997) 1026
- Tritium retention in S-65 beryllium after 100 eV plasma exposure, R.A. Causey, G.R. Longhurst and W. Harbin 241–243 (1997) 1041
- Depth distribution of deuterium atoms and molecules in beryllium implanted with D ions, V.Kh. Alimov, V.N. Chernikov and A.P. Zakharov 241–243 (1997) 1047
- Hydrogen absorption behavior into boron films by glow discharges in hydrogen and helium, K. Tsuzuki, M. Natsir, N. Inoue, A. Sagara, N. Noda, O. Motojima, T. Mochizuki, T. Hino and T. Yamashina 241–243 (1997) 1055
- Isotope effects in hydrogen retention of graphite and beryllium irradiated simultaneously with dual  $H^+$  and  $D^+$  beams, B. Tsuchiya and K. Morita 241–243 (1997) 1065
- Deuterium retention in beryllium, molybdenum and tungsten at high fluences, A.A. Haasz and J.W. Davis 241–243 (1997) 1076
- Hydrogen trapping in and release from tungsten: Modeling and comparison with graphite with regard to its use as fusion reactor material, P. Franzen, C. García-Rosales, H. Plank and V.Kh. Alimov 241–243 (1997) 1082
- Deuterium trapping in and release from tungsten carbide, W. Wang, V.Kh. Alimov, B.M.U. Scherzer and J. Roth 241–243 (1997) 1087
- Helium retention properties of plasma facing materials, H. Yanagihara, Y. Yamauchi, T. Hino, Y. Hirohata and T. Yamashina 241–243 (1997) 1098
- Thermal conductivity and retention characteristics of composites made of boron carbide and carbon fibers with extremely high thermal conductivity for first wall armour, R. Jimbou, K. Kodama, M. Saidoh, Y. Suzuki, M. Nakagawa, K. Morita and B. Tsuchiya 241–243 (1997) 1175
- In-situ ion beam analysis and dynamic studies of deuterium retention in graphite exposed to a high flux magnetron plasma, B. Emmoth, H. Bergsäker and L. Illyinsky 241–243 (1997) 1022

**Wall Pumping**

- Analysis of wall particle content with premagnetization plasmas, C. Grisolia, Ph. Ghendrih, G. Martin and D. Van Houtte 241–243 (1997) 538
- Core/divertor/wall particle dynamics in the DIII-D tokamak, J.T. Hogan, R. Maingi, P.K. Mioduszewski, Th. Hutter, C.C. Klepper and M.R. Wade 241–243 (1997) 612
- Comparison of wall/divertor deuterium retention and plasma fueling requirements on the DIII-D, TdeV and ASDEX Upgrade tokamaks, R. Maingi, B. Terreault, G. Haas, G.L. Jackson, W. Zuzak, P.K. Mioduszewski, M.A. Mahdavi, M.R. Wade, S. Chiu, M.J. Schaffer, J.T. Hogan and C.C. Klepper 241–243 (1997) 672
- ICRF wall conditioning at TEXTOR-94 in the presence of a 2.25 T magnetic field, H.G. Esser, A. Lyssoivan, M. Freisinger, R. Koch, G. Van Oost, F. Weschenfelder and J. Winter 241–243 (1997) 861

- Mass spectroscopic measurements in the plasma edge of the W7-AS stellarator and their statistical analysis, P. Zebisch, P. Grigull, V. Dose and E. Taglauer 241–243 (1997) 919
- Wall conditioning and particle control in extrap T2, H. Bergsäker, D. Larsson, P. Brunsell, A. Möller and L. Tramontin 241–243 (1997) 993
- Laboratory experiments on hydrogen and impurity behaviors in lithium-deposited environment, H. Toyoda, M. Watanabe and H. Sugai 241–243 (1997) 1031
- Hydrogen trapping in and release from tungsten: Modeling and comparison with graphite with regard to its use as fusion reactor material, P. Franzen, C. García-Rosales, H. Plank and V.Kh. Alimov 241–243 (1997) 1082

**Wall Structure**

- Reduction of the chemical erosion of doped graphite due to surface modification during low energy  $D^+$  bombardment, R. Schwörer, H. Plank and J. Roth 241–243 (1997) 1156

**Devices****ALCATOR C-MOD**

- Experimental investigation of transport phenomena in the scrape-off layer and divertor, B. LaBombard, J.A. Goetz, I. Hutchinson,

**ALCATOR C-MOD (continued)**

- D. Jablonski, J. Kesner, C. Kurz, B. Lipschultz, G.M. McCracken, A. Niemczewski, J. Terry, A. Allen, R.L. Boivin, F. Bombarda, P. Bonoli, C. Christensen, C. Fiore, D. Garnier, S. Golovato, R. Granetz, M. Greenwald, S. Horne, A. Hubbard, J. Irby, D. Lo, D. Lumma, E. Marmar, M. May, A. Mazurenko, R. Nachtrieb, H. Ohkawa, P. O'Shea, M. Porkolab, J. Reardon, J. Rice, J. Rost, J. Schachter, J. Snipes, J. Sorci, P. Stek, Y. Takase, Y. Wang, R. Watterson, J. Weaver, B. Welch and S. Wolfe  
241–243 (1997) 149
- Simulation of plasma flux detachment in Alcator C-Mod and ITER, F. Wising, S.I. Krasheninnikov, D.J. Sigmar, D.A. Knoll, T.D. Rognlien, B. LaBombard, B. Lipschultz and G. McCracken  
241–243 (1997) 273
- Plasma–neutral gas interaction in a tokamak divertor: Effects of hydrogen molecules and plasma recombination, S.I. Krasheninnikov, A.Yu. Pigarov, T.K. Soboleva and D.J. Sigmar  
241–243 (1997) 283
- Screening of recycling and non-recycling impurities in the Alcator C-Mod tokamak, G.M. McCracken, R.S. Granetz, B. Lipschultz, B. LaBombard, F. Bombarda, J.A. Goetz, S. Lisgo, D. Jablonski, H. Ohkawa, J.E. Rice, P.C. Stangeby, J.L. Terry and Y. Wang  
241–243 (1997) 777
- Local impurity puffing as a scrape-off layer diagnostic on the Alcator C-Mod tokamak, D. Jablonski, B. LaBombard, G.M. McCracken, S. Lisgo, B. Lipschultz, I.H. Hutchinson, J. Terry and P.C. Stangeby  
241–243 (1997) 782
- A comparison of impurity screening between limiter and divertor plasmas in the Alcator C-Mod tokamak, R.S. Granetz, G.M. McCracken, F. Bombarda, J.A. Goetz, D. Jablonski, B. Labombard, B. Lipschultz, H. Ohkawa, J.E. Rice, J.L. Terry and Y. Wang  
241–243 (1997) 788
- Divertor geometry optimization for ASDEX Upgrade, R. Schneider, H.S. Bosch, J. Neuhauser, D. Coster, K. Lackner and M. Kaufmann  
241–243 (1997) 701
- Direct measurement of the plasma potential in the edge of ASDEX Upgrade using a self emitting probe, V. Rohde, M. Laux, P. Bachmann, A. Herrmann and M. Weinlich  
241–243 (1997) 712
- Performance of the Ti doped graphite RG-Ti-91 at the divertor of the Tokamak ASDEX Upgrade, T. Burtseva, V. Barabash, I. Mazul, C. Garcia-Rosales, S. Deschka, R. Behrisch and A. Herrmann  
241–243 (1997) 716
- The separation of angle and size effects on Langmuir characteristics, A. Carlson, V. Rohde and M. Weinlich  
241–243 (1997) 722
- Spatial radiation profiles in the ASDEX Upgrade divertor for detached plasmas, U. Wenzel, A. Thoma, R. Dux, Ch. Fuchs, A. Herrmann, St. Hirsch, A. Kallenbach, H. Kastelawicz, M. Laux, F. Mast and B. Napiontek  
241–243 (1997) 728
- Migration of tungsten eroded from divertor tiles in ASDEX Upgrade, K. Krieger, V. Rohde, R. Schwörer, K. Asmussen, C. Garcia-Rosales, A. Herrmann, R. Neu, J. Roth, A. Thoma and M. Weinlich  
241–243 (1997) 734

**CHS**

- Local island divertor experiments on CHS, A. Komori, N. Ohyabu, S. Masuzaki, T. Morisaki, H. Suzuki, C. Takahashi, S. Sakakibara, K. Watanabe, T. Watanabe, T. Minami, S. Morita, K. Tanaka, S. Ohdachi, S. Kubo, N. Inoue, H. Yamada, K. Nishimura, S. Okamura, K. Matsuoka, O. Motojima, M. Fujiwara, A. Iiyoshi, C.C. Klepper, J.F. Lyon, A.C. England, D.E. Greenwood, D.K. Lee, D.R. Overbey, J.A. Rome, D.E. Schechter and C.T. Wilson  
241–243 (1997) 967

**COMPASS-D**

- ELM structure in the boundary plasma on COMPASS-D, S.J. Fielding, K.B. Axon, M.G. Booth, R.J. Buttery, J. Dowling, D. Gates, C. Hunt, C. Silva and M. Valovic  
241–243 (1997) 902

**DIII-D**

- Direct measurement of divertor exhaust neon enrichment in DIII-D, M.J. Schaffer, M.R. Wade, R. Maingi, P. Monier-Garbet, W.P. West, D.G. Whyte, R.D. Wood and M.A. Mahdavi  
241–243 (1997) 585

- Simulation of the scrape-off layer plasma during a disruption, T.D. Rognlien, J.A. Crottinger, G.D. Porter, G.R. Smith, A.G. Kellman and P.L. Taylor  
241–243 (1997) 590

- First measurements of electron temperature and density with divertor Thomson scattering in radiative divertor discharges on DIII-D, S.L. Allen, D.N. Hill, T.N. Carlstrom, D.G. Nilson, R. Stockdale, C.L. Hsieh, T.W. Petrie, A.W. Leonard, D. Ryutov, G.D. Porter, R. Maingi, M.R. Wade, R. Cohen, W. Nevins, M.E. Fenstermacher, R.D. Wood, C.J. Lasnier, W.P. West and M.D. Brown  
241–243 (1997) 595

- Modeling of the recycling particle flux and electron particle transport in the DIII-D Tokamak, D.R. Baker, R. Maingi,

**ASDEX-UPGRADE**

- Divertor heat and particle flux due to ELMs in DIII-D and ASDEX-upgrade, A.W. Leonard, W. Suttrop, T.H. Osborne, T.E. Evans, D.N. Hill, A. Herrmann, C.J. Lasnier, D.N. Thomas, J.G. Watkins, W.P. West, M. Weinlich and H. Zohm  
241–243 (1997) 628

- The tungsten experiment in ASDEX Upgrade, R. Neu, K. Asmussen, S. Deschka, A. Thoma, M. Bessenrodt-Weberpals, R. Dux, W. Engelhardt, J.C. Fuchs, J. Gaffert, C. García-Rosales, A. Herrmann, K. Krieger, F. Mast, J. Roth, V. Rohde, M. Weinlich and U. Wenzel  
241–243 (1997) 678

- Study of gross and net erosion in the ASDEX Upgrade divertor, K. Krieger, J. Roth, A. Annen, W. Jacob, C.S. Pitcher, W. Schneider, A. Thoma and M. Weinlich  
241–243 (1997) 684

- B2-Eirene modelling of ASDEX Upgrade, D.P. Coster, R. Schneider, J. Neuhauser, H.-S. Bosch, R. Wunderlich, C. Fuchs, F. Mast, A. Kallenbach, R. Dux, G. Becker, B.J. Braams and D. Reiter  
241–243 (1997) 690

- Routes to divertor detachment in ASDEX Upgrade, C.S. Pitcher, A.W. Carlson, C. Fuchs, A. Herrmann, W. Suttrop, J. Schweinzer and M. Weinlich  
241–243 (1997) 696

**DIII-D (continued)**

- L.W. Owen, G.D. Porter and G.L. Jackson 241–243 (1997) 602
- Measurements of non-axisymmetric halo currents with and without 'killer' pellets during disruptions in the DIII-D tokamak, T.E. Evans, A.G. Kellman, D.A. Humphreys, M.J. Schaffer, P.L. Taylor, D.G. Whyte, T.C. Jernigan, A.W. Hyatt and R.L. Lee 241–243 (1997) 606
- Core/divertor/wall particle dynamics in the DIII-D tokamak, J.T. Hogan, R. Maingi, P.K. Mioduszewski, Th. Hutter, C.C. Klepper and M.R. Wade 241–243 (1997) 612
- Characteristics of the scrape-off layer in DIII-D high-performance negative central magnetic shear discharges, C.J. Lasnier, R. Maingi, A.W. Leonard, S.L. Allen, D.A. Buchenauer, K.H. Burrell, T.A. Casper, J.W. Cuthbertson, M.E. Fenstermacher, D.N. Hill, R.A. Jong, L.L. Lao, E.A. Lazarus, R.A. Moyer, T.W. Petrie, G.D. Porter, B.W. Rice, B.W. Stallard, T.S. Taylor and J.G. Watkins 241–243 (1997) 623
- Divertor heat and particle flux due to ELMs in DIII-D and ASDEX-upgrade, A.W. Leonard, W. Suttrop, T.H. Osborne, T.E. Evans, D.N. Hill, A. Herrmann, C.J. Lasnier, D.N. Thomas, J.G. Watkins, W.P. West, M. Weinlich and H. Zohm 241–243 (1997) 628
- The role of turbulent transport in DIII-D edge and divertor plasmas, R.A. Moyer, J.W. Cuthbertson, T.E. Evans, G.D. Porter and J.G. Watkins 241–243 (1997) 633
- Investigation of electron parallel pressure balance in the scrape-off layer of deuterium-based radiative divertor discharges in DIII-D, T.W. Petrie, S.L. Allen, T.N. Carlstrom, D.N. Hill, R. Maingi, D. Nilson, M. Brown, D.A. Buchenauer, T.E. Evans, M.E. Fenstermacher, R.A. Jong, C.J. Lasnier, A.W. Leonard, M.A. Mahdavi, G.D. Porter, M.R. Wade and W.P. West 241–243 (1997) 639
- Reciprocating and fixed probe measurements of  $n_e$  and  $T_e$  in the DIII-D divertor, J.G. Watkins, R.A. Moyer, J.W. Cuthbertson, D.A. Buchenauer, T.N. Carlstrom, D.N. Hill and M. Ulrickson 241–243 (1997) 645
- Characterization of energetic deuterium striking the divertor of the DIII-D tokamak, R. Bastasz, W.R. Wampler, J.A. Whaley, D.G. Whyte, P.B. Parks, N.H. Brooks, W.P. West and C.P.C. Wong 241–243 (1997) 650
- Enhanced performance discharges in the DIII-D tokamak with lithium wall conditioning, G.L. Jackson, E.A. Lazarus, G.A. Navratil, R. Bastasz, N.H. Brooks, D.T. Garnier, K.L. Holtrop, J.C. Phillips, E.S. Marmar, T.S. Taylor, D.M. Thomas, W.R. Wampler, D.G. Whyte and W.P. West 241–243 (1997) 655
- Comprehensive 2D measurements of radiative divertor plasmas in DIII-D, M.E. Fenstermacher, R.D. Wood, S.L. Allen, N.H. Brooks, D.A. Buchenauer, T.N. Carlstrom, J.W. Cuthbertson, E.J. Doyle, T.E. Evans, P.-M. Garbet, R.W. Harvey, D.N. Hill, A.W. Hyatt, R.C. Isler, G. Jackson, R.A. James, R. Jong, C.C. Klepper, C.J. Lasnier, A.W. Leonard, M.A. Mahdavi, R. Maingi, W.H. Meyer, R.A. Moyer, D.U. Nilson, T.W. Petrie, G.D. Porter, T.L. Rhodes, M.J. Schaffer, R.D. Stamm, baugh, D.M. Thomas, S. Tugarjnov, M.R. Wade, J.G. Watkins, W.P. West and D.G. Whyte 241–243 (1997) 666
- Impurity feedback control for enhanced divertor and edge radiation in DIII-D discharges, G.L. Jackson, G.M. Staebler, S.L. Allen, N.H. Brooks, T.E. Evans, J.R. Ferron, A.W. Leonard, R. Maingi, T.W. Petrie, M.J. Schaffer, R.D. Wood, W.P. West and D.G. Whyte 241–243 (1997) 618

**EXTRAP-T2**

- Wall conditioning and particle control in extrap T2, H. Bergsäker, D. Larsson, P. Brunsell, A. Möller and L. Tramontin 241–243 (1997) 993

**FTU**

- Behaviour of a tungsten coated molybdenum poloidal limiter in FTU tokamak, G. Maddaluno, F. Pierdomini and M. Vittori 241–243 (1997) 908
- SOL parameters and local transport in the FTU tokamak, M. Leigheb, V. Pericoli Ridolfini and R. Zagórski 241–243 (1997) 914

**GAMMA 10**

- Behavior of neutral-hydrogen and particle confinement on GAMMA 10 tandem mirror plasmas, Y. Nakashima, M. Shoji, K. Yatsu, S. Kobayashi, K. Tsuchiya, N. Yamaguchi, M. Yoshikawa, T. Aota, T. Ishijima, M. Ichimura, M. Inutake, A. Mase and T. Tamano 241–243 (1997) 1011

**Heliotron E**

- Field line measurements in the divertor of Heliotron-E under boronized conditions, F. Sano, T. Mizuuchi, T. Hamada, H. Funaba, M. Nakasuga, K. Kondo, H. Zushi, S. Besshou, H. Okada, K. Hanatani, K. Nagasaki and T. Obiki 241–243 (1997) 961

- Behavior of pellet injected Li into heliotron E plasmas, K. Kondo, K. Ida, C. Christou, V.Yu. Sergeev, K.V. Khlopov, S. Sudo, F. Sano, H. Zushi, T. Mizuuchi, S. Besshou, H. Okada, K. Nagasaki, K. Sakamoto, Y. Kurimoto, H. Funaba, T. Hamada, T. Kinoshita, S. Kado, Y. Kanda, T. Okamoto, M. Wakatani and T. Obiki 241–243 (1997) 956

**HL-1M**

- Study of helium transport in HL-1M edge plasma region, L.L. Peng, B.Q. Deng, J.L. Luo, S.K. Yang, M. Wang, E.Y. Wang and S.J. Qian 241–243 (1997) 883
- The fluctuations and flow velocities measured with a mach probe array on the HL-1M tokamak, W.Y. Hong, E.Y. Wang, L.B. Ran, S.K. Yang, Y.D. Pan, L.Y. Chen and S.J. Qian 241–243 (1997) 1234

**HT-6M**

- Effects of high Z probe on plasma behavior in HT-6M tokamak, J. Li, X. Gong, L. Luo, F.X. Yin, N. Noda, B. Wan, W. Xu, X. Gao, F. Yin, J.G. Jiang, Z. Wu, J.Y. Zhao, M. Wu, S. Liu and Y. Han 241–243 (1997) 878

**ICRF**

Wall conditioning technique development in Tore Supra with permanent magnetic field by ICRF wave injection, E. Gauthier, E. de la Cal, B. Beaumont, A. Becoulet, C. Gil, C. Grisolia, A. Grosman, T. Hutter, H. Kuus, L. Ladurelle and J.L. Segui  
241–243 (1997) 553

**ITER**

Plasma-wall interactions in ITER, R. Parker, G. Janeschitz, H.D. Pacher, D. Post, S. Chiocchio, G. Federici and P. Ladd  
241–243 (1997) 1

Erosion lifetime of iter divertor plates, H.D. Pacher, I. Smid, G. Federici, Yu. Igitkhanov, G. Janeschitz, R. Raffray and G. Vieider  
241–243 (1997) 255

The influence of key operation parameters and material properties on the quantification of tritium inventory and permeation in the plasma facing components of ITER, G. Federici, D. Holland, G. Janeschitz and C.H. Wu  
241–243 (1997) 260

2D modelling of radiating divertor regime for ITER, A. Kukushkin, H.D. Pacher, M. Baelmans, D. Coster, G. Janeschitz, D. Reiter and R. Schneider  
241–243 (1997) 268

Simulation of plasma flux detachment in Alcator C-Mod and ITER, F. Wising, S.I. Krasheninnikov, D.J. Sigmar, D.A. Knoll, T.D. Rognlien, B. LaBombard, B. Lipschultz and G. McCracken  
241–243 (1997) 273

Assessment of erosion and surface tritium inventory issues for the ITER divertor, J.N. Brooks, R. Causey, G. Federici and D.N. Ruzic  
241–243 (1997) 294

Modelling of transition from attached to detached state and self-consistent calculations of He levels in ITER, M. Sugihara, T. Amano, D. Boucher, Y. Igitkhanov, G. Janeschitz, H.D. Pacher, D. Post and P. Yushmanov  
241–243 (1997) 299

Lightly- or non-seeded, partially detached ITER divertor operation, G. Vlases, G. Corrigan and A. Taromi  
241–243 (1997) 310

Impurity fueling to terminate Tokamak discharges, S. Putvinski, N. Fujisawa, D. Post, N. Putvinskaya, M.N. Rosenbluth and J. Wesley  
241–243 (1997) 316

Non-linear effects on neutral gas transport in divertors, D. Reiter, Chr. May, M. Baelmans and P. Börner  
241–243 (1997) 342

**JET**

Study of recombining gas targets, K. Borrass, D. Coster, D. Reiter and R. Schneider  
241–243 (1997) 250

Experimental comparison of carbon and beryllium as divertor target materials in JET, D.J. Campbell  
241–243 (1997) 379

Erosion/redeposition at the JET MkI divertor, H.Y. Guo, J.P. Coad, S.J. Davies, J.D. Elder, L.D. Horton, X.L. Li, J. Lingertat, A. Loarte, G.F. Matthews, R.D. Monk, R. Simonini, M.F. Stamp, P.C. Stangeby and A. Tabasso  
241–243 (1997) 385

Edge density profiles in high-performance JET plasmas, D.D.R. Summers, P. Breger, K. Erents, Z.A. Pietrzyk, B. Viacozz and J. Vince  
241–243 (1997) 391

Interpretation of ion flux and electron temperature profiles at the JET divertor target during high recycling and detached discharges, R.D. Monk, A. Loarte, A. Chankin, S. Clement, S.J. Davies, J.K. Ehrenberg, H.Y. Guo, J. Lingertat,

O.F. Matthews, M.F. Stamp and P.C. Stangeby

241–243 (1997) 396

Studies of giant ELM interaction with the divertor target in JET, J. Lingertat, A. Tabasso, S. Ali-Arshad, B. Alper, P. van Belle, K. Borrass, S. Clement, J.P. Coad and R. Monk  
241–243 (1997) 402

The amount and distribution of deuterium retained in the jet divertor after the C and Be phases in 1994–1995, J.P. Coad, M. Rubel and C.H. Wu  
241–243 (1997) 408

Measurement and analysis of radiated power components in the JET MkI divertor using VUV spectroscopy, C.F. Maggi, J.D. Elder, W. Fundamenski, R. Giannella, L.D. Horton, K.D. Lawson, A. Loarte, A. Maas, R. Reichle, M. Stamp, P.C. Stangeby and H.P. Summers  
241–243 (1997) 414

Neutral particle retention in the JET MK I divertor, J.K. Ehrenberg, D.J. Campbell, P.J. Harbour, L.D. Horton, A. Loarte, G.K. McCormick, R.D. Monk, G.R. Saibene, R. Simonini, A. Taroni and M.F. Stamp  
241–243 (1997) 420

Assessment of the DIVIMP ‘onion-skin’ model in the JET Mark I divertor, S.K. Erents, P. Breger, S.J. Davies, J.D. Elder, H.Y. Guo, L.D. Horton, G.F. Matthews, R.D. Monk, P.C. Stangeby and D.D.R. Summers  
241–243 (1997) 433

Divertor configuration studies on JET, C.G. Lowry, D.J. Campbell, S. Davies, H. Guo, P.J. Harbour, M. von Hellermann, L.D. Horton, A. Loarte, C. Maggi, G. Matthews, R. Mohanti, R. Monk, G.J. Radford, R. Reichle, G. Saibene, J. Spence, M. Stamp, A. Taroni and G.C. Vlases  
241–243 (1997) 438

Low energy neutral particle fluxes in the JET divertor, R. Reichle, J.K. Ehrenberg, N.A.C. Gottardi, L.D. Horton, L.C. Ingesson, H.J. Jäckel, G.K. McCormick, A. Loarte, R. Simonini and M.F. Stamp  
241–243 (1997) 456

Behaviour of hydrogen in JET deuterium plasmas, K. Günther, G. Bracco, R. König, M.F. Stamp and K.-D. Zastrow  
241–243 (1997) 462

Erosion at the vessel walls of JET, M. Mayer, R. Behrisch, P. Andrew and A.T. Peacock  
241–243 (1997) 469

Influence of active pumping on density and confinement behaviour of JET plasmas, G. Saibene, D. Campbell, L.D. Horton, A. Loarte, R.D. Monk, E. Righi and D. Stork  
241–243 (1997) 476

**JFT-2M**

Scrape-off layer broadening by the  $E \times B$  convective cell induced by non-axisymmetric divertor biasing, J. Hara, Y. Uesugi, Y. Miura and H. Kawashima  
241–243 (1997) 338

Low-energetic He-atom beam as a diagnostic probe for electric field measurement in the plasma edges, K. Takiyama, T. Katsuta, H. Toyota, M. Watanabe, K. Mizuno, T. Ogawa and T. Oda  
241–243 (1997) 1222

**JT-60U**

SOL plasma profiles under radiative and detached divertor conditions in JT-60U, N. Asakura, Y. Koide, K. Itami, N. Hosogane, K. Shimizu, S. Tsuji-Iio, S. Sakurai and A. Sakasai  
241–243 (1997) 559

**JT-60U (continued)**

Investigation of interaction between MeV-ions and first wall from neutron and  $\gamma$ -ray measurements in JT-60U, T. Kondoh, Y. Kusama, H. Kimura, M. Saigusa, T. Fujii, S. Moriyama, M. Nemoto, K. Tobita, A. Morioka, K. Nagashima and T. Nishitani 241–243 (1997) 564

Effects of edge and central fuelling on particle confinement in JT-60U, H. Takenaga, N. Asakura, K. Shimizu, K. Nagashima, H. Kubo and A. Sakasai 241–243 (1997) 569

Study of carbon impurity generation by chemical sputtering in JT-60U, S. Higashijima, H. Kubo, T. Sugie, K. Shimizu, N. Asakura, K. Itami, N. Hosogane, A. Sakasai, S. Konoshima, S. Sakurai and H. Takenaga 241–243 (1997) 574

Properties of thin boron coatings formed during deuterated-boronization in JT-60, J. Yagyu, N. Ogiwara, M. Saidoh, J. von Seggern, T. Okabe, Y. Miyo, H. Hiratsuka, S. Yamamoto, P. Goppelt-Langer, Y. Aoki, H. Takeshita and H. Naramoto 241–243 (1997) 579

Thermal conductivity and retention characteristics of composites made of boron carbide and carbon fibers with extremely high thermal conductivity for first wall armour, R. Jimbou, K. Kodama, M. Saidoh, Y. Suzuki, M. Nakagawa, K. Morita and B. Tsuchiya 241–243 (1997) 1175

**LHD**

Real time boronization experiments in CHS and scaling for LHD, A. Sagara, Y. Hasegawa, K. Tsuzuki, N. Inoue, H. Suzuki, T. Morisaki, N. Noda, O. Motojima, S. Okamura, K. Matsuoka, R. Akiyama, K. Ida, H. Idei, K. Iwasaki, S. Kubo, T. Minami, S. Morita, K. Narihara, T. Ozaki, K. Sato, C. Takahashi, K. Tanaka, K. Toi and I. Yamada 241–243 (1997) 972

**NAGDIS-I**

Impurity generation for low energy range of ion bombardment and its transport in a plasma, M. Kojima and S. Takamura 241–243 (1997) 1248

**PISCES-B**

Erosion behavior and surface characterization of beryllium under high-flux deuterium plasma bombardment, J. Won, F.E. Spada, R. Boivin, R. Doerner, S. Luckhardt, F.C. Sze and R.W. Conn 241–243 (1997) 1110

**RFX**

Investigation of plasma facing components and vacuum vessel in RFX, P. Sonato, V. Antoni, M. Bagatin, W.R. Baker, S. Peruzzo, L. Tramontin, P. Zaccaria and G. Zollino 241–243 (1997) 982

Locked modes induced plasma-wall interactions in RFX, M. Valisa, T. Bolzonella, L. Carraro, E. Casarotto, S. Costa, L. Garzotti, P. Innocente, S. Martini, R. Pasqualotto, M.E. Puiatti, R. Pugno and P. Scarin 241–243 (1997) 988

**STP-3M**

Behavior of edge plasma in STP-3M reversed field pinch, A. Matsuoka, H. Kajikawa, Y. Suzuki, H. Arimoto, A. Nagata, K. Aoto, M. Sugawara and K.I. Sato 241–243 (1997) 998

**SWIP-RFP**

The first results of siliconization on SWIP-RFP device, Z. Peng, L. Qiang, L. Cuiwen, L. Jieping, Q. Shangjie, F. Shuiquan, Y. Ping, X. Jun, L. Kehua, L. Junlin, H. Wenyu, C. Zeng, Z. Nianman, W. Quanming, L. Jie, H. Ming, Z. Yunze, Z. Qingchun and L. Cuixian 241–243 (1997) 1008

**TCV**

Divertor target profiles and recycling studies in TCV single null lower standard discharges, R.A. Pitts, Ch. Nieswand, H. Weisen, M. Anton, R. Behn, R.F. Chavan, M.J. Dutch, B.P. Duval, S. Franke, F. Hofmann, B. Joye, J.B. Lister, X. Llobet, Y. Martin, J.-M. Moret, J. Petrzilka, Z.A. Pietrzyk, V. Piffl, P. Reinke, M.E. Rensink, G.R. Smith and W. van Toledo 241–243 (1997) 867

**TdeV**

Controlled detachment and particle transport in the divertor plasma in TdeV, B.L. Stansfield, F. Meo, G. Abel, C. Boucher, J.-L. Gauvreau, J.P. Gunn, E. Haddad, J.-L. Lachambre, J. Mailloux, R. Marchand, G. Ratel, N. Richard, M.M. Shoucri, B. Terreault, S. Beaudry, R. Décoste, G.W. Pacher, W. Zuzak, J.D. Elder and P.C. Stangeby 241–243 (1997) 739

Strong toroidal asymmetries in power deposition on divertor and first wall components during LHCD on TdeV and Tore Supra, J. Mailloux, Y. Demers, V. Fuchs, P. Jaquet, C. Boucher, A. Côté, C. Côté, J. Gunn, B. Terreault, M. Goniche, P. Bibet, P. Froissard, D. Guilhem, J.H. Harris, G. Rey and M. Tareb 241–243 (1997) 745

High heat load testing of plasma sprayed W coatings, M. Urquiaga Valdes, R.O. Saint-Jacques, J.-F. Côté and C. Moreau 241–243 (1997) 750

Retention of Ne and N<sub>2</sub> in the closed and pumped TdeV divertor with attached and detached plasmas, N. Richard, B. Terreault, E. Haddad, J. Gunn, G. Abel, S. Chiu, J.-L. Gauvreau, H.H. Mai and W.W. Zuzak 241–243 (1997) 760

Use of a quartz microbalance for plasma-wall interaction studies, D. Bourgoin, G.G. Ross, S. Savoie, Y. Drolet and E. Haddad 241–243 (1997) 765

**TEXTOR**

Radiative edge layers in limiter tokamaks, P. Monier-Garbet 241–243 (1997) 92

Impurity release and deposition processes close to limiter surfaces in TEXTOR-94, V. Philipps, A. Pospieszczyk, H.G. Esser, U. Kögl, G. Mank, U. Samm, B. Schaefer, J. von Seggern, B. Unterberg, E. Vietzke, F. Weschenfelder, P. Wienhold and J. Winter 241–243 (1997) 105

Impurity release from high Z test limiters immersed in TEXTOR-94 edge plasmas, M. Wada, V. Philipps, A. Pospieszczyk, B. Unterberg, B. Schaefer, L. Koenen,

**TEXTOR (continued)**

- U. Koegler, M. Tokar, J. Winter, K. Ohya, Y. Ueda, T. Tanabe and D. Larsson 241–243 (1997) 799
- Experimental study on neoclassical properties of the ions in the edge plasma of the tokamak TEXTOR, K. Höthker, W. Bieger, M. Brix, A. Pospieszczyk, R.P. Schorn, B. Schweer, G. Van Oost and R. Weynants 241–243 (1997) 839
- Exposure of CFC-materials to high transient heat loads in the TEXTOR tokamak, T. Scholz, J. Boedo, H. Bolt, R. Duwe, K.H. Finken, D. Gray and A. Hassanein 241–243 (1997) 848
- Effects of a rf limiter on TEXTOR's edge plasmas, J.A. Boedo, T. Shoji, Y. Sakawa, D.S. Gray, J.G. Schwelberger, R.W. Conn, K.H. Finken, G. Mank and N. Noda 241–243 (1997) 857
- ICRF wall conditioning at TEXTOR-94 in the presence of a 2.25 T magnetic field, H.G. Esser, A. Lysoivan, M. Freisinger, R. Koch, G. Van Oost, F. Weschenfelder and J. Winter 241–243 (1997) 861
- Ion-induced release of deuterium from co-deposits by high energy helium bombardment, M. Rubel, H. Bergsäker and P. Wienhold 241–243 (1997) 1026
- Examination of material performance of W exposed to high heat load: Postmortem analysis of W exposed to TEXTOR plasma and E-beam test stand, T. Tanabe, V. Philipps, K. Nakamura, M. Fujine, Y. Ueda, M. Wada, B. Schweer, A. Pospieszczyk and B. Unterberg 241–243 (1997) 1164

**TEXTOR-94**

- Experimental studies of the link between production and penetration of impurity atoms into the plasma edge and the central impurity content in TEXTOR-94, B. Unterberg, H. Knauf, P. Lindner, V. Philipps, A. Pospieszczyk, D. Pusbüldt, U. Samm, B. Schweer, M. Rubel, T. Tanabe, Y. Ueda and M. Wada 241–243 (1997) 793
- Studies on plasma edge transport and layer deposition by local injection of reactive gases during TEXTOR-94 discharges, U. Kögl, F. Weschenfelder, J. Winter, H.G. Esser, V. Philipps, A. Pospieszczyk, B. Schweer, J. von Seggern, M.Z. Tokar' and P. Wienhold 241–243 (1997) 816

- Chemical erosion measurements from various carbon based limiters and coatings in TEXTOR-94, A. Pospieszczyk, V. Philipps, E. Casarotto, U. Kögl, B. Schweer, B. Unterberg and F. Weschenfelder 241–243 (1997) 833

- Radial profiles of atomic deuterium measured in the boundary of TEXTOR 94 with laser-induced fluorescence, Ph. Mertens and M. Silz 241–243 (1997) 842
- Scaling of radiated power to plasma contarnination for neon seeded discharges on boronized TEXTOR-94, G. Telesca, H.A. Claassen, P. Franz, A.M. Messiaen, J. Onghena, J. Rapp, U. Samm, N. Schoon, B. Schweer, M.Z. Tokar', B. Unterberg and G. Van Oost 241–243 (1997) 853

**TFTR**

- Plasma wall interaction and tritium retention in TFTR, C.H. Skinner, E. Amerescu, G. Ascione, W. Blanchard, C.W. Barnes, S.H. Batha, M. Beer, M.G. Bell, R. Bell, M. Bitter, N.L. Bretz, R. Budny, C.E. Bush, R. Camp, M. Casey, J. Collins, M. Cropper,

- Z. Chang, D.S. Darrow, H.H. Duong, R. Durst, P.C. Efthimion, D. Ernst, N. Fisch, R.J. Fonck, E. Fredrickson, G.Y. Fu, H.P. Furth, C.A. Gentile, M. Gibson, J. Gilbert, B. Grek, L.R. Grisham, G. Hammert, R.J. Hawryluk, H.W. Herrmann, K.W. Hill, J. Hosea, A. Janos, D.L. Jassby, F.C. Jobes, D.W. Johnson, L.C. Johnson, J. Kamperschroer, M. Kalish, H. Kugel, J. Langford, S. Langish, P.H. LaMarche, B. LeBlanc, F.M. Levinton, J. Machuzak, R. Majeski, J. Manikam, D.K. Mansfield, E. Mazzucato, K.M. McGuire, R. Mika, G. McKee, D.M. Meade, S.S. Medley, D.R. Mikkelsen, H.E. Mynick, D. Mueller, A. Nagy, R. Nazikian, M. Ono, D.K. Owens, H. Park, S.F. Paul, G. Pearson, M. Petrov, C.K. Phillips, S. Raftopoulos, A. Ramsey, R. Raucci, M.H. Redi, G. Rewoldt, J. Rogers, A.L. Roquemore, E. Ruskov, S.A. Sabbagh, G. Schilling, J.F. Schivell, G.L. Schmidt, S.D. Scott, S. Sesnic, B.C. Stratton, J.D. Strachan, T. Stevenson, D.P. Stotler, E. Synakowski, H. Takahashi, W. Tang, G. Taylor, W. Tighe, J.R. Timberlake, A. von Halle, S. von Goeler, R.T. Walters, R.B. White, J.R. Wilson, J. Winston, K.L. Wong, K.M. Young, M.C. Zarnstorff and S.J. Zweber 241–243 (1997) 214

- Core  $V_\phi$  and  $T_i$  profiles and transport in TFTR DD and DT plasmas with lithium conditioning, C.E. Bush, R.E. Bell, B. LeBlanc, D.K. Mansfield, E.J. Synakowski, R.V. Budny, K.W. Hill, W. Houlberg, E. Mazzucato, P. Mioduszewski, H. Park, C.H. Skinner and M.C. Zarnstorff 241–243 (1997) 892

- Tritium removal from TFTR, D. Mueller, W. Blanchard, J. Collins, J. Hosea, J. Kamperschroer, P.H. LaMarche, A. Nagy, D.K. Owens and C.H. Skinner 241–243 (1997) 897

**T-10**

- Radial distributions and poloidal asymmetries of T-10 sol parameters and turbulence, V.A. Vershkov, S.A. Grashin, V.V. Dreval, V.V. Piterskii, S.V. Soldatov and A.N. Jakovets 241–243 (1997) 873

**TJ-IU**

- Testing of a pulsed He supersonic beam for plasma edge diagnostic in the TJ-IU torsatron, F.L. Tabarés, D. Tafalla, V. Herrero and I. Tanarro 241–243 (1997) 1228

**Tolev**

- Effects of lithium-implantation on the hydrogen retention in both a-C:H and a-SiC:H materials submitted to deuterium bombardment, G. Barbier, G.G. Ross, M.A. El Khakani, N. Chevarier and A. Chevarier 241–243 (1997) 1036

**TORE SUPRA**

- Radiative edge layers in limiter tokamaks, P. Monier-Garbet 241–243 (1997) 92

- Throat and vented pump limiters particle collection experiments with auxiliary heating in Tore Supra, B. Pégourié, T. Loarer, E. Tsitrone and G. Granata 241–243 (1997) 494

- Modeling of neutral pressure and pumping in the Tore Supra ergodic divertor and outboard pump limiter, L.W. Owen, T. Loarer,

**TORE SUPRA (continued)**

- A. Grosman, B. Meslin, C.C. Klepper, P.K. Mioduszewski and T. Uckan 241–243 (1997) 499  
 Particle balance modelling in ergodic divertor experiments on Tore Supra, T. Loarer, B. Meslin, Ph. Ghendrih, C. Grisolia and A. Grosman 241–243 (1997) 505  
 Calculation of power deposition patterns on the ergodic divertor, Ph. Ghendrih and A. Grosman 241–243 (1997) 517  
 Runaway electron damage to the Tore Supra Phase III outboard pump limiter, R. Nygren, T. Lutz, D. Walsh, G. Martin, M. Chatelier, T. Loarer and D. Guilhem 241–243 (1997) 522  
 Effect of magnetic field stochasticization on impurity behavior in a tokamak, M.Z. Tokar', H. Lasaar, W. Mandl, W.R. Hess, C. De Michelis, A. Grosman and U. Samm 241–243 (1997) 528  
 Power and particle flux to the neutraliser plates of the Tore Supra ergodic divertor modules, A. Grosman, Ph. Ghendrih, B. Meslin and D. Guilhem 241–243 (1997) 532  
 Analysis of wall particle content with premagnetization plasmas, C. Grisolia, Ph. Ghendrih, G. Martin and D. Van Houtte 241–243 (1997) 538  
 Long pulse operation with actively cooled limiters, D. Guilhem, J. Hogan, D. Van Houtte, M. Lipa, T. Loarer, P. Chappuis, T. Hoang, J. Schlosser and R. Mitteau 241–243 (1997) 542  
 Edge MHD activity in the ergodic divertor configuration of Tore Supra, S. Turlur, E. Joffrin, M. Zabiégo, Ph. Ghendrih and A. Grosman 241–243 (1997) 548  
 Wall conditioning technique development in Tore Supra with permanent magnetic field by ICRF wave injection, E. Gauthier, E. de la Cal, B. Beaumont, A. Becoulet, C. Gil, C. Grisolia, A. Grosman, T. Hutter, H. Kuus, L. Ladurelle and J.L. Segui 241–243 (1997) 553  
 Plasma–surface interactions with ICRF antennas and lower hybrid grills in Tore Supra, J.H. Harris, T. Hutter, J.T. Hogan, V. Basiuk, B. Beaumont, A. Becoulet, S. Bremond, M.D. Carter, M. Goniche, R.H. Goulding, D. Guilhem, G.R. Haste, D.J. Hoffman, X. Litaudon and F. Nguyen 241–243 (1997) 511  
**Torsatron**  
 On the use of biased movable B<sub>4</sub>C-limiter for pumping O<sub>2</sub> and H<sub>2</sub>O during discharge cleaning, G.P. Glazunov, E.D. Volkov, V.G. Kotenko, A.V. Shtan', Yu.K. Mironov, N.I. Nasarov, A. Sagara, N. Ohyabu and O. Motojima 241–243 (1997) 1052

**TPD-II**

- A double electron capture by alpha particles in collisions with hydrogen molecules in low temperature plasma, T. Oda, K. Sato, S. Namba, S. Kusakabe, K. Takahara, H. Tawara, T. Katsuta, K. Takiyama and U. Furukane 241–243 (1997) 1238

**Uragan-3M**

- On the use of biased movable B<sub>4</sub>C-limiter for pumping O<sub>2</sub> and H<sub>2</sub>O during discharge cleaning, G.P. Glazunov, E.D. Volkov, V.G. Kotenko, A.V. Shtan', Yu.K. Mironov, N.I. Nasarov, A. Sagara, N. Ohyabu and O. Motojima 241–243 (1997) 1052

**W7-AS**

- Island divertor studies on W7-AS, F. Sardei, Y. Feng, P. Grigull, G. Herre, D. Hildebrandt, J.V. Hofmann, J. Kisslinger, R. Brakel, J. Das, J. Geiger, O. Heinrich, G. Kühner, H. Niedermeyer, D. Reiter, M. Richter-Glötzl, A. Runov, R. Schneider, U. Stroth, H. Verbeek, F. Wagner and R. Wolf 241–243 (1997) 135  
 A 3D Monte Carlo code for plasma transport in island divertors, Y. Feng, F. Sardei, J. Kisslinger and P. Grigull 241–243 (1997) 930

- Experimental study on highly collisional edge plasmas in W7-AS island divertor configurations, P. Grigull, D. Hildebrandt, F. Sardei, Y. Feng, G. Herre, A. Herrmann, J.V. Hofmann, J. Kisslinger, G. Kuehner, H. Niedermeyer, R. Schneider, H. Verbeek, F. Wagner, R. Wolf and X.D. Zhang 241–243 (1997) 935

- A 2D approach to island divertor modelling for Wendelstein 7-AS, G. Herre, R. Schneider, D. Coster, F. Sardei, D. Reiter, P. Grigull and J. Kißlinger 241–243 (1997) 941  
 Plasma response on impurity injection in W7-AS, D. Hildebrandt, R. Brakel, A. Elsner, P. Grigull, H. Hacker, R. Burhenn, S. Fiedler, L. Giannone, C. Görner, H.J. Hartfuß, G. Herre, A. Herrmann, J.V. Hofmann, G. Kühner, D. Naujoks, F. Sardei, A. Weller and R. Wolf 241–243 (1997) 950

**W7-X**

- Boundary modelling of the stellarator Wendelstein 7-X, H. Renner, E. Strumberger, J. Kisslinger, J. Nührenberg and H. Wobig 241–243 (1997) 946