

14. PUBLICATIONS

14.1. MAGNETIC FUSION

14.1.1. Ph.D thesis

- “*Statistical properties of turbulence: a new approach to characterize transport in fusion plasmas*”
Bruno Gonçalves, Abril 2003
Universidade Técnica de Lisboa
- “*Controlo em Tempo Real do Tokamak ISTTOK*”
Bernardo Brotas Carvalho, Setembro 2003
Universidade Técnica de Lisboa
- “*Estabilização do modo kink interno $m=1$, $n=1$ por partículas rápidas aquecidas na ressonância ciclotrónica dos iões*”
Fernando Nabais, Outubro 2003
Universidade Técnica de Lisboa
- “*A low cost, fully integrated, event-driven, real-time control and data acquisition system for fusion experiments*”
Batista, A.J.N., A. Combo, J. Sousa, and C.A.F. Varandas
Review of Scientific Instruments, 74, (3), 1803, 2003
- “*Edge localized mode physics and operational aspects in tokamaks*”
Bécoulet, M., G Huysmans, Y Sarazin, X Garbet, Ph Ghendrih, F Rimini, E Joffrin, X Litaudon, P Monier-Garbet, J-M Ané, P Thomas, A Grosman, V Parail, H Wilson, P Lomas, P deVries, K-D Zastrow, G F Matthews, J Lonnroth, S Gerasimov, S Sharapov, M Gryaznevich, G Counsell, A Kirk, M Valovic, R Buttery, A Loarte, G Saibene, R Sartori, A Leonard, P Snyder, L L Lao, P Gohil, T E Evans, R A Moyer, Y Kamada, A Chankin, N Oyama, T Hatae, N Asakura, O Tudisco, E Giovannozzi, F Crisanti, C P Perez, H R Koslowski, T Eich, A Sips, L Horton, A Hermann, P Lang, J Stober, W Suttrop, P Beyer, S Saarelma and Contributors to JET-EFDA Workprogramme
Plasma Physics and Controlled Fusion, 45, (12A), A93, 2003

14.1.2. Master thesis

- “*The Realtime implementation of the motional Stark effect diagnostic in JET*”
Diogo Alves, Dezembro 2003
- “*Operação e controlo remoto do sistema de reflectometria do tokamak ASDEX-Upgrade*”
Sílvia Graça, Dezembro 2003

14.1.3. Articles in scientific journals

- “*Evolution of the ITER project during the CTA*”
Aymar, R., W.R. Spears, ITER International Team
Fusion Engineering and Design, 66-68, 17, 2003
- “*Emissive probe measurements of plasma potential fluctuations in the edge plasma regions of tokamaks*”
Balan, P., R. Schrittwieser, C. Ionita, J.A. Cabral, H.F.C. Figueiredo, H. Fernandes, C. Varandas, J. Adamek, M. Hron, J. Stockel, E. Martinez, M. Tichy, and G. Van Oost
Review of Scientific Instruments, 74, (3), 1583, 2003
- “*Real-time determination of confinement parameters in JET*”
Barana, O., E. Joffrin, A. Murari, F. Sartori, Contributors to the EFDA-JET Workprogramme
Fusion Engineering and Design, 66-68, 697, 2003
- “*Onset of neoclassical tearing modes on JET*”
Buttery, R.J., T.C. Hender, D.F. Howell, R.J. La Haye, O. Sauter, D. Testa and EFDA-JET 2000 workprogramme contributors.
Nuclear Fusion, 43, (2), 69, 2003
- “*Improved 20 keV injection system for the heavy-ion-beam diagnostic of the tokamak ISTTOK*”
Cabral, J.A.C., I.S. Nedzelskiy, A.J. Malaquias, B. Gonçalves, C.A.F. Varandas, I.S. Bondarenko, S.M. Khrebtov, A.D. Komarov, A.L. Kozachok, and L.I. Krupnik
Review of Scientific Instruments, 74, (3), 1853, 2003
- “*Report on the 10th European Fusion Physics Workshop (Vaals, The Netherlands, 9-11 December 2002)*”
Campbell, D.J., D. Borba, J. Bucalossi, D. Moreau, O. Sauter, J. Stober and G. Vayakis
Plasma Physics and Controlled Fusion, 45, (6), 1051, 2003

- “A low cost, real-time DSP-based diagnostic for the control of operation of a fusion experiment”
Carvalho, B.B., H. Fernandes, and C.A.F. Varandas
Review of Scientific Instruments, 74, (3), 1799, 2003
- “Transport properties in the TJ-II Flexible Helic”
Castejón, F., E. Ascasibar, C. Alejandre, J. Alonso, L. Almoguera, A. Baciero, R. Balbín, E. Blanco, M. Blaumoser, J. Botija, B. Brañas, A. Cappa, R. Carrasco, J. R. Cepero, A. A. Chmyga, J. Doncel, N. B. Dreval, S. Eguilior, L. Eliseev, T. Estrada, O. Fedyanin, A. Fernández, C. Fuentes, A. García, I. García-Cortés, B. Gonçalves, J. Guasp, J. Herranz, A. Hidalgo, C. Hidalgo, J. A. Jiménez, I. Kirpichev, S. M. Khrebtov, A. D. Komarov, A. S. Kozachok, L. Krupnik, F. Lapayese, K. Likin, M. Liniers, D. López-Bruna, A. López-Fraguas, J. López-Rázola, A. López-Sánchez, E. de la Luna, A. Malaquias, R. Martín, M. Medrano, A. V. Melnikov, P. Méndez, K. J. McCarthy, F. Medina, B. van Milligen, I. S. Nedzelskiy, M. Ochando, L. Pacios, I. Pastor, M. A. Pedrosa, A. de la Peña, A. Petrov, A. Portas, J. Romero, L. Rodríguez-Rodrigo, A. Salas, E. Sánchez, J. Sánchez, K. Sarkisian, S. Schchepetov, N. Skvortsova, F. Tabarés, D. Tafalla, V. Tribaldos, C. F. A. Varandas, J. Vega, and B. Zurro
AIP Conference Proceedings June 11, 669, 1, 162, 2003
- “Ideal stability of an elliptical plasma column on the presence of external feedback currents”
Coelho, R. and F. Porcelli
Phys. of Plasmas, 10, (4), 930, 2003
- “An event-driven reconfigurable real-time processing system for the next generation fusion experiments”
Combo, A., A.J.N. Batista, J. Sousa, and C.A.F. Varandas
Review of Scientific Instruments, 74, (3), 1815, 2003
- “Measurement of the plasma radial electric field by the motional Stark effect diagnostic on JET plasmas”
Cortés, S. Reyes, N.C. Hawkes, P. Lotte, C. Fenzi, B.C. Stratton, J. Hobirk, R. De Angelis, F. Orsitto, C.A.F. Varandas, and Contributors to the EFDA-JET Work Program
Review of Scientific Instruments, 74, (3), 1596, 2003
- “Role of the plasma shaping in ITB experiments on JET”
Crisanti, F., P.L. Lomas, O. Tudisco, A. Bécoulet, M. Bécoulet, L. Bertalot, T. Bolzonella, G. Bracco, M. De Benedetti, B. Esposito, C. Giroud, N.C. Hawkes, T.C. Hender, O.N. Jarvis, E. Joffrin, D. Pacella, V. Riccardo, F. Rimini, K.D. Zastrow and contributors to the EFDA-JET Workprogramme
Plasma Physics and Controlled Fusion, 45, (4), 379, 2003.
- “JET enhancements under EFDA”
Damiani, C., EFDA-JET workprogramme
Fusion Engineering and Design, 66-68, 153, 2003
- “Influence of the heating profile on impurity transport in ASDEX Upgrade”
Dux, R., R. Neu, A.G. Peeters, G. Pereverzev, A. Mück, F. Ryter, J. Stober and ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 45, (9), 1815, 2003
- “JET internal transport barriers: experiment vs theory”
Esposito, B., F. Crisanti, V. Parail, P. Maget, Y. Baranov, A. Becoulet, C. Castaldo, C.D. Challis, R. De Angelis, X. Garbet, C. Giroud, N. Hawkes, E. Joffrin, X. Litaudon, D. Mazon, M. Riva, K.D. Zastrow and contributors to the EFDA JET Workprogramme
Plasma Physics and Controlled Fusion, 45, (6), 933, 2003
- “On the use of the analytic signal to retrieve the phase from broadband reflectometry signals”
Figueiredo, A.C.A., J.P. Bizarro
Review of Scientific Instruments, 74, (3), 1514, 2003
- “Micro-stability and transport modeling of internal transport barriers on JET”
Garbet, X., Y. Baranov, G. Bateman, S. Benkadda, P. Beyer, R. Budny, F. Crisanti, B. Esposito, C. Figarella, C. Fourment, P. Ghendrih, F. Imbeaux, E. Joffrin, J. Kinsey, A. Kritiz, X. Litaudon, P. Maget, P. Mantica, D. Moreau, Y. Sarazin, A. Pankin, V. Parail, A. Peeters, T. Tala, G. Tardini, A. Thyagaraja, I. Voitsekhovitch, J. Weiland, R. Wolf and JET EFDA contributors
Nuclear Fusion, 43, (9), 975, 2003
- “High dispersion spectrometer for time resolved Doppler measurements of impurity lines emitted during ISTOK tokamak discharges”
Gomes, R.B., C.A.F. Varandas, J.A.C. Cabral, E. Sokolova, and S.R. Cortes
Review of Scientific Instruments, 74, (3), 2071, 2003
- “Edge localized modes and fluctuations in the JET SOL region”
Gonçalves, B., C. Hidalgo, M.A. Pedrosa, C. Silva, R. Balbín, K. Ereñts, M. Hron, A. Loarte and G. Matthews

- Plasma Physics and Controlled Fusion, 45, (9), 1627, 2003
- “Velocity fluctuations and time dependent $E \times B$ flows in the JET boundary region”
Gonçalves, B., C. Hidalgo, M.A. Pedrosa, C. Silva, K. Erents, and G. Matthews
Review of Scientific Instruments, 74, (3), 1571, 2003
 - “Statistical properties of turbulence: a new approach to characterize transport in fusion plasmas”
Gonçalves, B., C. Hidalgo, C. Silva, M.A. Pedrosa, K. Erents, M. Hron, A. Loarte, G. Matthews, R. Pitts, Czech. J. Phys., 53 (10), 827-852, 2003
 - “ITER: burning plasma physics experiment”
Green, B.J., ITER International Team and Participants Teams
Plasma Physics and Controlled Fusion, 45, (5), 687, 2003
 - “Neoclassical tearing modes on ASDEX Upgrade: improved scaling laws, high confinement at high β_N and new stabilization experiments”
Günter, S., G. Gantenbein, A. Gude, V. Igoshine, M. Maraschek, A. Mück, S. Saarelma, O. Sauter, A.C.C. Sips, H. Zohm and the ASDEX Upgrade Team
Nuclear Fusion, 43, (3), 161, 2003
 - “Optimization of the FM-CM reflectometry W-band antenna for core density profile measurements on ASDEX Upgrade”
Hacquin, S., D. Wagner, M. Manso, J. Borreicho, and L. Farinha
Review of Scientific Instruments, 74, (3), 1485, 2003
 - “Radial wave number spectrum of density fluctuations deduced from reflectometry phase signals”
Heurax, S., S. Hacquin, F. Da Silva, F. Clairet, R. Sabot, and G. Leclert
Review of Scientific Instruments, 74, (3), 1501, 2003
 - “Experimental investigation of dynamical coupling between turbulent transport and parallel flows in the JET plasma boundary region”
Hidalgo, C., B. Gonçalves, C. Silva, M. A. Pedrosa, K. Erents, M. Hron, and G. F. Matthews
Physical Review Letters, 91, 6, 065001, 2003
 - “Experimental evidence of fluctuations and flows near marginal stability and dynamical interplay between gradients and transport in the JET plasma boundary region”
Hidalgo, C., B. Gonçalves, M.A. Pedrosa, C. Silva, R. Balbín, M. Hron, A. Loarte, K. Erents, G. F. Matthews, R. Pitts
Journal Nucl. Mater, 316, 863, 2003
 - “Internal transport barrier triggering by rational magnetic flux surfaces in tokamaks”
Joffrin, E., C.D. Challis, G.D. Conway, X. Garbet, A. Gude, S. Günter, N.C. Hawkes, T.C. Hender, D.F. Howell, G.T.A. Huysmans, E. Lazzaro, P. Maget, M. Maraschek, A.G. Peeters, S.D. Pinches, S.E. Sharapov and JET-EFDA contributors
Nuclear Fusion, 43, (10) 1167, 2003
 - “Integrated scenario in JET using real-time profile control”
Joffrin, E., F. Crisanti, R. Felton, X. Litaudon, D. Mazon, D. Moreau, L. Zabeo, R. Albanese, M. Ariola, D. Alves, O. Barana, V. Basiuk, A. Bécoulet, M. Bécoulet, J. Blum, T. Bolzonella, K. Bosak, J.M. Chareau, M. de Baar, E de la Luna, P. de Vries, P. Dumortier, D. Elbeze, J. Farthing, H. Fernandes, C. Fenzi, R. Giannella, K. Guenther, J. Harling, N. Hawkes, D.F. Howell, P. Heesterman, F. Imbeaux, P. Innocente, L. Laborde, G. Lloyd, P.J. Lomas, D.C. McDonald, J. Mailloux, M. Mantsinen, A. Messiaen, A. Murari, J. Ongena, F. Orsitto, V. Pericoli-Ridolfini, M. Riva, J. Sanchez, F. Sartori, O. Sauter, A.C.C. Sips, T. Tala, A. Tuccillo, D. Van Ester, K-D. Zastrow and M. Zerbini
Plasma Physics and Controlled Fusion, 45, (12A), A367, 2003
 - “Edge transport and its interconnection with main chamber recycling in ASDEX Upgrade”
Kallenbach, A., R. Dux, J. Gafert, G. Haas, L.D. Horton, M. Jakobi, B. Kurzan, H.W. Müller, R. Neu, J. Neuhauser, R. Pugno, T. Pütterich, V. Rohde, W. Sandmann, S.-W Yoon and the ASDEX Upgrade Team.
Nuclear Fusion, 43, (7), 573, 2003
 - “Hydrocarbon transport in the MkIIa divertor of JET”
Kirschner, A., J.N. Brooks, V. Philipps, J.P. Coad and contributors to the EFDA-JET Workprogramme
Plasma Physics and Controlled Fusion, 45, (3), 309, 2003

- *"ELM frequency control by continuous small pellet injection in ASDEX Upgrade"*
Lang, P.T., J. Neuhauser, L.D. Horton, T. Eich, L. Fattorini, J.C. Fuchs, O. Gehre, A. Herrmann, P. Ignácz, M. Jakobi, S. Kálvin, M. Kaufmann, G. Kocsis, B. Kurzan, C. Maggi, M.E. Manso, M. Maraschek, V. Mertens, A. Mück, H.D. Murmann, R. Neu, I. Nunes, D. Reich, M. Reich, S.Saarelma, W. Sandmann, J. Strober, U. Vogl and the ASDEX Upgrade Team.
Nuclear Fusion, 43, 1110, 2003
- *"Progress towards steady-state operation and real-time control of internal transport barriers in JET"*
Litaudon, X., A. Bécoulet, F. Crisanti, R.C. Wolf, Yu. F. Baranov, E. Barbato, M. Bécoulet, R. Budny, C. Castaldo, R. Cesario, C.D. Challis, G.D. Conway, M.R. De Baar, P. De Vries, R. Dux, L.G. Eriksson, B. Esposito, R. Felton, C. Fourment, D. Frigione, X. Garbet, R. Giannella, C. Giroud, G. Gorini, N.C. Hawkes, T. Hellsten, T.C. Hender, P. Hennequin, G.M.D. Hogeweyj, G.T.A. Huysmans, F. Imbeaux, E. Joffrin, P.J. Lomas, Ph. Lotte, P. Maget, J. Mailloux, P. Mantica, M.J. Mantsinen, D. Mazon, D. Moreau, V. Parail, V. Pericoli, E. Rachlew, M. Riva, F. Rimini, Y. Sarazin, B.C. Stratton, T.J.J. Tala, G. Tresset, O. Tudisco, L. Zabeo, K.-D. Zastrow and JET-EFDA contributors.
Nuclear Fusion, 43, (7), 565, 2003
- *"Integrated predictive modeling of the effect of neutral gas puffing in ELMy H-mode plasmas"*
Lonnroth, J-S, V.V. Parail, G. Corrigan, D. Heading, G. Huysmans, A. Loarte, S. Saarelma, G. Saibene, S. Sharapov, J. Spence, and contributors to the EFDA-JET Workprogramme
Plasma Physics and Controlled Fusion, 45, (9), 1689, 2003
- *"Impurity-seeded plasma experiments on JET"*
Maddison, G.P., M. Brix, R. Budny, M. Charlet, I. Coffey, J.G. Cordey, P. Dumortier, S.K. Erements, N.C. Hawkes, M. von Hellermann, D.L. Hillis, J. Hogan, L.D. Horton, L.C. Ingesson, S. Jachmich, G.L. Jackson, A. Kallenbach, H.R. Koslowski, K.D. Lawson, A. Loarte, G.F. Matthews, D. McDonald, G.R. McKee, A. Meigs, A.M. Messiaen, F. Milani, P. Monier-Garbet, M. Murakami, M.F.F. Nave, J. Ongena, M.E. Puiatti, E. Rachlew, J. Rapp, S. Sharapov, G.M. Staebler, M. Stamp, J.D. Strachan, W. Suttrop, G. Telesca, M.Z. Tokar, B. Unterberg, M. Valisa, K.-D. Zastrow and EFDA-JET 2000 workprogramme contributors.
Nuclear Fusion, 43, 49, 2003
- *"Improved ELM scaling with impurity seeding in JET"*
Maddison, G.P., R.V. Budny, P. Dumortier, S. Jachmich, A. Loarte, A.M. Messiaen, P. Monier-Garbet, M.F.F. Nave, J. Ongena, J. Rapp, J.D. Strachan and JET EFDA contributors
Plasma Physics and Controlled Fusion, 45, (9), 1657, 2003
- *"Real-time signal analysis on the TCV PHA diagnostic"*
Madeira, T.I., A.P. Rodrigues, C.A.F. Varandas, P. Amorim, and B.P. Duval
Review of Scientific Instruments, 74, (3), 2004, 2003
- *"Statistical analysis of internal transport barriers in JET"*
Maget, P., B. Esposito, E. Joffrin, N. Hawkes, D. Mazon, Y. Baranov, C. Fourment, G.T. Hoang and contributors to the JET-EFDA Workprogramme.
Plasma Physics and Controlled Fusion, 45, (8), 1385, 2003
- *"Comparative study design of a heavy ion and neutral beam diagnostic for the International Tokamak Experiment Reactor"*
Malaquias, A., I. Nedzelsky, B. Gonçalves, C.A.F. Varandas, J.A.C. Cabral, A. Melnikov, L. Eliseev, S. Perfilov, O. Yudina, and L. Krupnik
Review of Scientific Instruments, 74, (3), 1857, 2003
- *"Signal processing techniques based on singular value decomposition applied to modulated ECH experiments"*
Manini, A., J.-Moret, F. Ryter and the ASDEX Upgrade Team
Nuclear Fusion, 43, (6), 490, 2003
- *"Scaling of the marginal β_p of neoclassical tearing modes during power ramp-down experiments in ASDEX Upgrade"*
Maraschek, M., O. Sauter, S. Günter, H. Zohm and ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 45, 1369, 2003
- *"Accessibility and properties of ELMy H-mode and ITB plasmas in TCV"*
Martin, Y.R., M.A. Henderson, S. Alberti, P. Amorim, Y. Andrebe, K. Appert, G. Arnoux, R. Behn, P. Blanchard, P. Bosshard, A. Bottino, Y. Camenen, R. Chavan, S. Coda, I. Condrea, A.W. Degeling, V.N. Dokouka, B.P. Duval, D. Fasel, A. Fasoli, J-Y Favez, S. Ferrando, T.P. Goodman, J-P Hogge, J. Horacek, P. Isoz, B. Joye, A. Karpushov, R.R. Khayrutdonov, I. Klimanov, J.B. Lister, X.

- Llobet, V.E. Lukash, T. Madeira, B. Marletaz, P. Marmillod, A.A. Martynov, S. Yu Medvedev, J-M Moret, E. Nelson-Melby, P. Nikkola, P.J. Paris, A. Perez, R.A. Pitts, A. Pochelon, L. Porte, O. Sauter, A. Scarabosio, E. Scavino, S-H Seo, U. Siravo, G. Tonetti, M.Q. Tran, L. Villard, H. Weisen, M. Wischmeier, A. Zabolotsky and G. Zhuang.
Plasma Physics and Controlled Fusion, 45, (12A), A351, 2003
- “Steady-state and transient power handling in JET”
Matthews, G.F., P. Andrew, T. Eich, W. Fundamenski, A. Herrmann, A. Loarte, V. Riccardo and JET EFDA contributors.
Nuclear Fusion, 43, (9), 999, 2003
 - “Active control of the current density profile in JET”
Mazon, D., X. Litaudon, D. Moreau, V. Pericoli-Ridolfini, L. Zabeo, F. Crisanti, P. De Vries, R. Felton, E. Joffrin, A. Murari, M. Riva, G. Tresset, K.D. Zastrow and contributors to the EFDA-JET Workprogramme.
Plasma Physics and Controlled Fusion, L47, 2003
 - “Development of active control systems on ASDEX Upgrade in view of ITER discharge scenarios”
Mertens, V., J. Hobirk, A. Kallenbach, P. Lang, A. Mück, G. Pautasso, G. Raupp, A. Sips, J. Stober, H. Zohm, ASDEX Upgrade Team
Fusion Engineering and Design, 66-68, 119, 2003
 - “Real-time control of the q-profile in JET for steady state advanced tokamak operation”
Moreau, D., F. Crisanti, X. Litaudon, D. Mazon, P. De Vries, R. Felton, E. Joffrin, L. Laborde, M. Lennholm, A. Murari, V. Pericoli-Ridolfini, M. Riva, T. Tala, G. Tresset, L. Zabeo, K.D. Zastrow and contributors to the EFDA-JET Workprogramme
Nuclear Fusion, 43, (9), 870, 2003
 - “Triggering of neo-classical tearing modes by mode coupling”
Nave, M.F.F., E. Lazzaro, R. Coelho, P. Belo, D. Borba, R.J. Buttery, S. Nowak, F. Serra and EFDA-JET Contributors.
Nuclear Fusion, 43, (3), 179, 2003
 - “Role of sawtooth in avoiding impurity accumulation and maintaining good confinement in JET radiative mantle discharges”
Nave, M.F.F., J. Rapp, T. Bolzonella, R. Dux, M.J. Mantsinen, R. Budny, P. Dumortier, M. von Hellermann, S. Jachmich, H.R. Koslowski, G. Maddison, A. Messina, P. Monier-Garbet, J. Ongena, M.E. Puiatti, J. Strachan, G. Telesca, B. Unterberg, M. Valisa and P. de Vries
Nuclear Fusion, 43, (10), 1204, 2003
 - “Evaluation of the incident angle of the beam into 30° electrostatic energy analyzer directly during HIBP operation in plasma experiments”
Nedzelskiy, I.S., A. Malaquias, B. Gonçalves, C.A.F. Varandas, J.A.C. Cabral, N.B. Dreval, S.M. Khrebtov, A.D. Komarov, A.L. Kozachok and L.I. Krupnik
Review of Scientific Instruments, 74, (3), 1850, 2003
 - “Heating, current drive and energetic particle studies on JET in preparation of ITER operation”
Noterdaeme, J.-M., R. Budny, A. Cardinali, C. Castaldo, R. Cesario, F. Crisanti, J. De Grassie, D.A.D’Ippolito, F. Durodié, A. Ekedahl, A. Figueiredo, C. Ingesson, E. Joffrin, D. Hartmann, J. Heikkinen, T. Hellsten, T. Jones, V. Kiptily, Ph. Lamalle, X. Litaudon, F. Nguyen, J. Mailloux, M. Mantsinen, M. Mayoral, D. Mazon, F. Meo, I. Monakhon, J.R. Myra, J. Paméla, V. Pericoli, Yu. Petrov, O. Sauter, Y. Sarazin, S.E. Sharapov, A.A. Tuccillo, D. Van Eester and JET EFDA Contributors.
Nuclear Fusion, 43, (3), 202, 2003
 - “Spatially resolved toroidal plasma rotation with ICRF on JET”
Noterdaeme, J.-M., E. Righi, V. Chan, J. de Grassie, K. Kirov, M. Mantsinen, M.F.F. Nave, D. Testa, K.-D. Zastrow, R. Budny, R. Cesario, A. Gondhalekar, N. Hawkes, T. Hellsten, Ph. Lamalle, F. Meo, F. Nguyen, and EFDA-JET-EFDA contributors
Nuclear Fusion, 43, (4), 274, 2003
 - “Emissivity toroidal asymmetries induced by ECRH driven convective fluxes in the TJ-II stellarator”
Ochando, M.A., F. Medina and the TJ-II Team
Plasma Physics and Controlled Fusion, 45, (3), 221, 2003
 - “Turbulent transport reduction by $E \times B$ velocity shear during edge plasma biasing: recent experimental results”
Oost, G. Van, J. Adámek, V. Antoni, P. Balan, J.A. Boedo, P. Devynck, I. Duran, L. Eliseev, J.P. Gunn, M. Hron, C. Ionita, S. Jachmich, G.S. Kirnev, E. Martinez, A. Melnikov, R. Schrittwieser, C. Silva, J. Stöckel, M. Tendler, C. Varandas, M. Van Schoor, V. Vershkov and R.R. Weynants
Plasma Physics and Controlled Fusion, 45, (5), 621, 2003
 - “Overview of JET results”
Paméla, J., Emília R. Solano and JET EFDA Contributors
Nuclear Fusion, 43, (12) 1540, 2003

- *"Overview of JET results, near term plans"*
Pam la, J., J. Rapp, JET EFDA contributors
Fusion Engineering and Design, 66-68, 25, 2003
- *"Electron temperature determination and subsequent analysis of short time-scale variation of plasma parameters in ISTTOK discharges"*
Plyusnin, V.V., J.A.C. Cabral, H. Figueiredo, and C.A.F. Varandas
Review of Scientific Instruments, 74, (3), 1807, 2003
- *"Runaway effects at the plasma boundary in ISTTOK"*
Plyusnin, V.V., J.A.C. Cabral, H. Figueiredo, C.A.F. Varandas
Journal of Nuclear Materials, 313-316, 1052, 2003
- *"Simulation of the time behaviour of impurities in JET Ar-seeded discharges and its relation with sawtooth and RF heating"*
Puiatti, M.E., M Valisa, M Mattioli, T Bolzonella, A Bortolon, I Coffey, R Dux, M von Hellermann, P Monier-Garbet, M F F Nave, J Ongena and contributors to the EFDA-JET Workprogramme
Plasma Physics and Controlled Fusion, 45, (12) 2011, 2003
- *"Disruptions and disruption mitigation"*
Riccardo, V. and JET EFDA contributors
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- *"Controlling confinement with induced toroidal current in the flexible Helic TJ-II"*
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- *"JET carbon screening experiments using methane gas puffing and its relation to intrinsic carbon impurities"*
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- *"Spectroscopic Diagnostics for ITER"*
Sugie, T., A. Costley, A. Malaquias, C. Walker
Journal of Plasma and Fusion Research, 79, 10, 1051, 2003
- *"ELM-free stationary H-mode plasmas in the ASDEX Upgrade tokamak"*
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- *"Experimental test of damping models for n=1 toroidal Alfv n eigenmodes in JET"*
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 - “*Energy and particle losses during type-I ELMy H-mode in ASDEX Upgrade*”
Urano, H., W. Suttrop, L.D. Horton, A. Herrmann, J.C. Fuchs and ASDEX Upgrade Team
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 - “*Characterization of ion heat conduction in JET and ASDEX Upgrade plasmas with and without internal transport barriers*”
Wolf, R.C., Y. Baranov, X. Garbet, N. Hawkes, A.G. Peeters, C. Challis, M. de Baar, C. Giroud, E. Joffrin, M. Mantsinen, D. Mazon, H. Meister, W. Suttrop, K.-D. Zastrow and the ASDEX Upgrade team and contributors to the EFDA-JET Workprogramme
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- 14.1.4. Papers in international conferences**
- **6th International Reflectometry Workshop, May 5-7, 2003, San Diego, USA**
 - “*2D reflectometry simulation as a tool for evaluating data processing capabilities*”
Silva, F. da, S. Heuraux, P. Varela and M. Manso.
 - **15th Top. Conf. on RF Power in Plasmas, May 19-21, 2003, Grand Teton National Park, Moran, Wyoming, USA**
 - “*Recent ³He Radio Frequency Heating Experiments On JET*”
Eester, D. Van, F. Imbeaux, P. Mantica, M. Mantsinen, M. de Baar, P. de Vries, L.-G. Eriksson, R. Felton, A. Figueiredo, J. Harling, E. Joffrin, K. Lawson, H. Leggate, X. Litaudon, V. Kiptily, J.-M. Noterdaeme, V. Pericoli, E. Rachlew, A. Tuccillo, K.-D. Zastrow & JET-EFDA contributors
 - **17th International Conference on Technologies and Combustion for a Clean Environment, Julho de 2003, Portugal**
 - *Fusion: a Safe, Clean and Sustainable Energy for the Future*
Varandas, C.A.F.

- **30th EPS Conference on Plasma Physics and Controlled Fusion, 7-11 July 2003, St. Petersburg, Rússia**
- *“The Fibber Optic Multiplexed Thomson Scattering Diagnostic for the ETE Tokamak”*
Alonso, M. P., L. A. Berni e E. D. Bosco
- *“Design Study for X-ray and VUV Spectroscopy on ITER”*
Barnsley, R., L.C. Ingesson, A. Malaquias, M. O’Mullane and Contributors to the EFDA-JET Work Program
- *“Destabilisation of TAE modes using ICRH in ASDEX Upgrade”*
Borba, D., G.D.Conway, S. Günter, G.T.A.Huysmans, S. Klose, M. Maraschek, A. Mück, I. Nunes, S. D. Pinches, F. Serra and the ASDEX Upgrade Team
- *“Non-linear model for the plasma column macroscopic oscillations in the tokamak ISTTOK”*
Borba, D., B. Carvalho, C. Silva, H. Figueiredo, H. Fernandes, C.A.F. Varandas
- *“Radial electric fields and confinement in the TJ-II Stellarator”*
Chmyga, A.A., N.B. Dreval, S.M. Khrebtov, A.D. Komarov, A.S. Kozachok, L.I. Krupnik, L. Eliseev, A.V. Melnikov, B. Gonçalves, I.S. Nedzelskiy, C.A.F. Varandas, T. Estrada, C. Hidalgo, J. López, E. de la Luna, B. van Milligen, M.A. Pedrosa, E. Sánchez e V. Tribaldos
- *“Bifurcation of generic metastable tearing modes interacting with resonant magnetic fields”*
Coelho, R., and E. Lazzaro
- *“Ideal stability of an elliptical plasma column in the presence of external feedback currents”*
Coelho, R. and F. Porcelli
- *“Long pulse operation in ITER: issues for diagnostics”*
Costley, A.E., K. Itami, T. Kondoh, A. Malaquias, T. Sugie, G.Vayakis e C. I. Walker
- *“Effects of Magnetic Field Perturbations on the Reconstruction of Density Profiles from X-mode and Combined O/X-Modes Reflectometry”*
Fattorini, L. and M.E. Manso
- *“Lower Hybrid Ray-tracing Calculations on Toroidal Plasmas with Magnetic Ripple: Nonlinear Oscillations and Spectral Gap”*
Ferreira, J.S. and J.P.S. Bizarro
- *“Time-Frequency Analysis of Non-Stationary Signals in Fusion Plasmas Using the Choi-Williams Distribution”*
Figueiredo, A.C.A., M.F.F. Nave and Contributors to the EFDA-JET Work Program
- *“On the probability density function of the radial structure of turbulence in fusion plasmas”*
Gonçalves, B., C. Hidalgo, C. Silva, M.A. Pedrosa, K. Erents e G. Matthews
- *“Effect of the Poloidal Rotation of the Turbulence in Reflectometry Measurements”*
Hacquin, S., S. Heurax, F. Silva, G. Leclert and M. Manso
- *“Active Beam Spectroscopy for ITER”*
Hellermann, M. von, C. Giroud, R. Jaspers, A. Krasilnikov, P. Lotte, G. McKee, A. Malaquias, M. O’Mullane, S. Tugarinov e K-D. Zastrow
- *“Effects of the density fluctuation characteristics on the phase fluctuation spectrum obtained from a reflectometer”*
Heurax, S., L. Vermare, F. da Silva, G. Leclert, F. Clairet, S. Hacquin, R. Sabot.
- *“Experimental investigation of dynamical coupling between turbulent transport and parallel flows in the JET plasma boundary region”*
Hidalgo, C., B. Gonçalves, C. Silva, M.A. Pedrosa, K. Erents, M. Hron e G. F. Matthews
- *“Improved confinement regimes induced by limiter biasing in the TJ-II Stellarator”*
Hidalgo, C., M.A. Pedrosa, N. Dreval, L. Eliseev), K. J. McCarthy, M.A. Ochando, T. Estrada, I. Pastor, E. Ascasibar, C. Alejaldre, J. Alonso, L. Almoguera, F. de Aragón, A. Baciero, R. Balbín, E. Blanco, B. Brañas, E. Calderón, A. Cappa, R. Carrasco, F. Castejón, A.A. Chmyga, J. Encabo, S. Eguilior, A. Fernández, J. de la Gama, A. García, B. Gonçalves, J. Herranz, A. Hidalgo, J. A. Jiménez, I. Kirpichev, S.M. Khrebtov, A.D. Komarov, A.S. Kozachok, L. Krupnik, F. Lapayese, D. López-Bruna, A. López-Fraguas, J. López-Rázola, A. López-Sánchez, E. de la Luna, A.V.Melnikov, P. Méndez, F. Medina, B. van Milligen, L. Pacios, A. de la Peña, A. Portas, E. Sánchez, J. Sánchez, C. Silva, F. Tabarés, D. Tafalla, V. Tribaldos and J. Vega
- *“Assessment of the derivation of the plasma rotation and ion temperature profiles from an ITER X-ray crystal spectrometer”*
Ingesson, L.C., R. Barnsley e A. Malaquias

- *“Toroidal interferometer/polarimeter density measurement system for long pulse operation on ITER”*
Kondoh, T., Y. Kawano, A. Costley, A. Malaquias, T. Sugie e C. Walker
- *“Active edge localized mode (ELM) frequency control with pellets”*
Lang, P.T., A. Kallenbach, L. Fattorini, L.D. Horton, J. Neuhauser, H. Urano and ASDEX Upgrade Team
- *“Modification of EXB shear near rational surfaces in response to magnetic driven reconnection due to mode coupling or external fields”*
Lazzaro, E., E. Joffrin, P. Zanca, R.Coelho, G. Gervasini, P. Mantica, A.I.Smolyakov, M.C. Varischetti, and the EFDA JET contributors
- *“Polarization and reflectivity changes on mirror based viewing systems during long pulse operation”*
Malaquias, A., M. von Hellermann, P. Lotte, S.Tugarinov and V.S.Voitsenya
- *“Update on integration of vacuum coupled, spectroscopic and microwave diagnostics in ITER”*
Malaquias, A., C. Walker, A. Costley, T. Kondoh, T. Sugie and G. Vayakis
- *“Recent developments on diagnostic integration in ITER”*
Malaquias, A., C. Walker, A. Costley, T. Kondoh, T. Sugie and G. Vayakis
- *“Accessibility and Properties of ELMy H-mode and ITB Plasmas in TCV”*
Martin, Y.R., S.Alberti, P.Amorim, Y.Andrebe, K.Appert, G.Arnoux, R.Behn, P.Blanchard, P.Bosshard, A.Bottino, Y.Camenen, R.Chavan, S.Coda, I.Condrea, A.W.Degeling, B.P.Duval, D.Fasel, A.Fasoli, J.-Y.Favez, S.Ferrando, T.P.Goodman, M.A.Henderson, J.-P.Hogge, J.Horacek, P.Isoz, B.Joye, A.Karpushov, I.Klimanov, J.B.Lister, X.Llobet, T.Madeira, B.Marletaz, P.Marmillod, A.Martynov, J.-M.Moret, E.Nelson-Melby, P.Nikkola, P.J.Paris, A.Perez, R.A.Pitts, A.Pochelon, L.Porte, O.Sauter, A.Scarabosio, E.Scavino, S.-H.Seo, U.Siravo, G.Tonetti, M.Q.Tran, L.Villard, H.Weisen, M.Wischmeier, A.Zabolotsky e G.Zhuan.
- *“Study of ELM density crash in ASDEX Upgrade”*
Nunes, I., G.D. Conway, A. Loarte, M. Manso, G. Saibene, R. Sartori, F. Serra, W. Suttrop, and the CFN and ASDEX Upgrade Teams
- *“Runaway Electrons in JET Disruptions”*
Plyusnin, V.V., V. Riccardo, R. Jaspers, M.F. Johnson, V.G. Kiptily, F. Salzedas, T. C. Hender, E. de La Luna and Contributors to the EFDA-JET Work Program
- *“Flux surface geometry for turbulence computation on open field lines”*
Ribeiro, T., B. Scott, D. Coster e F. Serra
- *“Noniterative Magnetic Equilibrium Reconstruction in Axisymmetric, Large-Aspect-Ratio, Low-Beta Tokamak Plasmas”*
Rodrigues, P. and J. P. S. Bizarro
- *“Behavior of Density Fluctuations and Electron Temperature Profiles in JET Density Limit Disruptions”*
Salzedas, F., L. Meneses, E. de La Luna, V. Plyusnin, V. Riccardo, R. Jaspers, T. C. Hender, F. Serra and Contributors to the EFDA-JET Work Program
- *“Biasing Experiments on the Tokamak ISTTOK”*
Silva, C., H. Figueiredo, I. Nedzelsky, J.A.C. Cabral e C.A.F. Varandas
- *“Spectroscopic Measurement System for ITER Divertor Plasma: Divertor Impurity Monitor”*
Sugie, T., A. Costley, A. Malaquias, A. Medvedev e C. Walker
- *“ELM-free stationary H-mode plasmas in ASDEX UPGRADE”*
Suttrop, W., M. Maraschek, G. D. Conway, H.-U. Fahrbach, L. Fattorini, G. Haas, L. D. Horton, S. Klose, T. Kurki-Suoniob, C. F. Maggi, P. J. McCarthy, H. Meister, A. Mück, R. Neu, I. Nunes, Th. Pütterich, M. Reich, A. C. C. Sips and ASDEX Upgrade Team
- *“ITER Generic Diagnostic Components and Systems for Integration”*
Walker, C.I., A.Costley, K. Itami, T.Kondoh, A.Malaquias, T.Sugie and G.Vayakis
- **Workshop on the Electric Fields, Structures and Relaxation in Edge Plasmas, St. Petersburg, Russia, July 13–14, 2003**
- *“Statistical properties of turbulence: a new approach to characterize transport in fusion plasmas”*
Gonçalves, B., C. Hidalgo, C. Silva, M.A. Pedrosa, K. Erents, M. Hron, A. Loarte, G. Matthews, R. Pitts

- **4th IAEA Technical Committee Meeting on Control, Data Acquisition and Remote Participation on Fusion Research, 21-23 de Julho de 2003, San Diego, USA**
 - “Real-Time Motional Stark Effect in JET”
Alves, D., A. Stephen, N. Hawkes, S. Dalley, A. Goodyear, R. Felton, E. Joffrin, H. Fernandes and EFDA-JET work programme contributors.
 - “A test-bench for the JET Real Time Project”
Batista, A. J. N., H. Fernandes, J. Sousa, C. A. F. Varandas, E. Joffrin, R. Felton e J. Farthing
 - “Real-Time DSP-based Shape Determination and Plasma Position in the ISTTOK Tokamak”
Carvalho, B., H. Fernandes, C. Silva, D. Borba e C.A.F. Varandas
 - “A PCI transient recorder module for the JET magnetic proton recoil neutron spectrometer”
Combo, A., R. Pereira, J. Sousa, N. Cruz, P. Carvalho, C.A.F. Varandas, S. Conroy, J. Källne and M. Weiszflog
 - “A Low-Cost Galvanic Isolated Fast PCI Transient Recorder with Signal Processing Capabilities”
Correia, M., A. J. N. Batista, A. Combo, N. Cruz, P. Carvalho, Carlos Correia, J. Sousa e C.A.F. Varandas
 - “A Large Memory VME Data Acquisition System for the Jet Heterodyne Radiometer Upgrade”
Cruz, N., J. Sousa, R. Pereira, A. Combo, C.A.F. Varandas, M. Beldishevski, S. Dorling, B. Alper and EFDA-JET work programme contributors.
 - “A PCI time digitizer for the new JET time-of-flight neutron spectrometer”
Sousa, J., A.J.N. Batista, A. Combo, R. Pereira, N. Cruz, P. Carvalho, C.A.F. Varandas, S. Conroy, G. Ericsson and J. Källne
- **3^o Congresso Luso Moçambicano de Engenharia, 19-21 de Agosto 2003, Maputo, Moçambique**
 - “Perspectivas do ensino em Portugal da Engenharia Física Tecnológica”
Varandas, C.A.F.
- **10th International Conference on Ion Sources, Dubna, Russia, September 8-13, 2003**
 - “High intensity alkali ion sources for plasma diagnostics”
Bondarenko, I.S., O.O. Chmuga, M.B. Dreval, S.M. Khrebtov, O.D. Komarov, O.S. Kozachok, L.I. Krupnik, I.S. Nedzelskiy
- **14th International Stellarator Workshop, September 22 - 26, 2003, Greifswald - Germany**
 - “Statistical description of transport in terms of probability distribution functions: experiments in tokamaks (JET) and stellarators (TJ-II)”
Gonçalves, B., C. Hidalgo, M.A. Pedrosa, C. Silva, K. Erents, G. F. Matthews
 - “Comparative studies of biasing improved confinement regimes in stellarators (TJ-II) and tokamaks (T-10)”
Melnikov, A.V., C. Hidalgo, A.A. Chmyga, N. Dreval, L. Eliseev, B. Gonçalves, G. Kirnev, S.M. Khrebtov, A.D. Komarov, A.S. Kozachok, L. Krupnik, M.A. Pedrosa, G. van Oost, C. Silva
- **9th IAEA Technical Meeting on H-mode Physics and Transport Barriers, San Diego, USA 24-26-September, 2003**
 - “Dimensionless pedestal identity experiments in JT-60U and JET in ELMy H-mode plasmas”
Saibene, G., T. Hatae, D.J. Campbell, J.C. Cordey, E. de la Luna, C. Giraud, K. Guenther, Y. Kamada, M.A.H. Kempenars, A. Loarte, J. Lonnroth, D. McDonald, M.F. Nave, N. Oyama, V.V. Parail, R. Sartori, J. Stober, T. Suzuki, M. Takech, K. Toi
 - “Search in JET for the Quiescent H-mode regime”
Suttrop, W., R. A. Pitts, M. Maraschek, B. Alper, P. Gohil, S. Hacquin, M. Kempenaars, H. R. Koslowski, C. J. Lasnier, P. J. Lomas, G. Maddison, M. F. Nave, S. E. Sharapov, K-D Zastrow and EFDA-JET workprogramme contributors
- **11th International Symposium on Laser-Aided Plasma Diagnostics, LAPD11, 28 Sep. - 02 Oct. 2003, Les Houches - France**
 - “The Fiber Optic Multiplexed Upgraded Thomson Scattering Diagnostic for the ISTTOK Tokamak”
Alonso, M. P., L. A. Berni
- **8th IAEA TCM on Energetic Particles in Magnetic Confinement Systems 6 - 8 October 2003, San Diego, California USA**
 - “Super-thermal and runaway electrons at reconnection events during JET disruptions”
Plyusnin, V.V., B. Alper, P. Helander, R.J. Hastie, F. Salzedas, F. Serra, R. Jaspers, T.C. Hender, V.G. Kiptily, M.F. Johnson, E de La Luna and JET EFDA contributors.
- **45th Annual Meeting of Division of Plasma Physics 27-31 October 2003, Albuquerque, N.M., USA**
 - “Modelling comparison of divertor radiation from N and Ar for heat flux mitigation in JET ELMy H-modes”

- Monier-Garbet, P., J. Hogan, Y. Corre, P. R Thomas, Ph. Andrew, D. Coster, P. Dumortier, Th. Eich, A. Huber, R. Koslowski, K. Lawson, A. Messiaen, M.F Nave, J. Ongena, J. Rapp, J. Stober and JET-EFDA contributors
- “Core and edge MHD studies in JET experiments with reversed B”
Nave, M.F.F., R. Buttery, C. Challis, S. Coda, J. Graves, R. Koslowski, A. Loarte, P. Lomas, M. Marascheck, G. Matthews, C. Perez, S. Pinches, R. Pitts, O.Sauter, M.Stamp, W. Suttrop and JET-EFDA contributors
 - “Steady state impurity seeded discharges in JET by simultaneous feedback control of confinement enhancement and radiation fraction”
Ongena, J., P. Dumortier, Y. Corre, R. Felton, E. Joffrin, J. Hardling, A. Messiaen, J. Strachan, A. Huber, H.R. Koslowski, A. Kreter, G. Maddison, P. Monier-Garbet, M.F.F. Nave, M.E. Puiatti, B. Untenberg, M. Valisa Suttrop and JET-EFDA contributors
 - “Modelling of impurity penetration through the edge and core transport barriers in JET”
Parail, V., P. Belo, G. Corrigan and JET-EFDA contributors
- **EPMESC IX – The 9th International Conference on Enhancement and Promotion of Computational Methods in Engineering and Science, 25-28 November, Macau, China**
 - “2D FDTD full-wave code for simulating the diagnostic of fusion plasmas with microwave reflectometry”
Silva, F. da, S. Heuraux, P. Varela and M.E. Manso
 - **10th Latin American Workshop On Plasma Physics (X LAWPP) and Seventh Brazilian Meeting on Plasma Physics (7th EBFP), 1 - 5 December 2003, S. Paulo, Brazil**
 - Thomson Scattering Diagnostic on the ETE Tokamak: Status and Progress
Berni, L.A., E. Del Bosco, J.G. Ferreira, R.M. Oliveira and M. P. Alonso
 - **11th European Fusion Physics Workshop, 8-10 December 2003, Heraklion, Crete**
 - “Cross-field SOL transport: the role of turbulence”
Gonçalves, B.
- **Fusion Meeting at the Department of Electrical and Computer Engineering of Kumamoto University, 19 December 2003, Kumamoto, Japan**
 - “The tokamak ISTTOK and its Thomson scattering diagnostics”
Alonso, M.P. and the ISTTOK Team
- ## 14.2. INERTIAL FUSION ENERGY
- ### 14.2.1. PhD Thesis
- “Nonlinear Dust Particle Dynamics and Collective Effects in Complex Plasmas”
Gianfranco Sorasio, Umea University, Suécia, 2003.
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