

19. PUBLICATIONS, LABORATORIAL PROTOTYPES, PRIZES AND AWARDS

19.1. MAGNETIC FUSION

19.1.1. Ph.D thesis

- “*Sistema de Multiprocessamento para Controlo em Tempo Real em Experiências de Fusão Nuclear*”
António Pinto Rodrigues
Universidade Técnica de Lisboa
- “*Turbulence Studies in the Scrape-Off Layer of Tokamak Plasmas by Three-Dimensional Gyrofluid Simulations*”
Tiago Ribeiro
Universidade Técnica de Lisboa

19.1.2. Articles in scientific journals

- “*Third-harmonic, top-launch, ECRH experiments on TCV tokamak*”
Alberti, S., G. Arnoux, L. Porte, J.-P. Hogge, B. Marletaz, P. Marmillod, Y. Martin, S. Nowak and TCV Team.
Nuclear Fusion, 45, (11), 1224, 2005
- “*Characterisation and Stability Studies of Titanium Beryllides*”
Alves, E., L.C. Alves, N. Franco, M.R. da Silva, A. Paúl, J.B. Hegeman, F. Druyts
Fusion Engineering and Design, 75-79, 759-763, 2005.
- “*Relationship between density peaking, particle thermodiffusion, Ohmic confinement and microinstabilities in ASDEX Upgrade L-mode plasmas*”
Angioni, C., A. G. Peeters, F. Ryter, F. Jenko, G. D. Conway, T. Dannert, H. U. Fahrback, L. Fattorini, M. Reich, W. Suttrop and the ASDEX Upgrade Team.
Physics of Plasmas 12, 040701, 2005
- “*JETTO simulations of Te/Ti effects on plasma confinement*”
Asp, E., J. Weiland, X. Garbet, P. Mantica, V. Parail, W. Suttrop and the EFDA-JET Contributors.
Plasma Physics and Controlled Fusion, 47, (3), 505, 2005
- “*ITER-like PAM launcher for Tore Supra’s LHCD system*”
Belo, J.H., Ph. Bibet, M. Missirlian, J. Achard, B. Beaumont, B. Bertrand, M. Chantant, Ph. Chappuis, L. Doceul, A. Durocher, L. Gargiulo, A. Saille, F. Samaille, E. Villedieu.
Fusion Engineering and Design, 74, 283, 2005
- “*Toward a LHCD system for ITER*”
Bibet, Ph., Beaumont, B. Belo, J.H., Delpech, L., Ekedahl, A., Granucci, G., Kazarian, F., Litaudon, X., Mailloux, J., Mirizzi, F., Pericoli, V., Prou, M., Rantamäki, K., Tuccillo, A.,
Fusion Engineering and Design, 74, 419-423, 2005;
- “*An n-port error model and calibration procedure for measuring the scattering matrices of lower-hybrid multijunctions*”
Bizarro, J.P.
Fusion Engineering and Design, 74, 413, 2005
- “*Application of a stratified plasma model to microwave reflectometry of density fluctuations*”
Bruskin, L.G., A. Mase, G.D. Conway, A. Silva, M.E. Manso, L. Fattorini, J. Santos, F. Serra and ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 47, (9), 1379, 2005
- “*New millimeter-wave access for JET reflectometry and ECE*”
Cupido, L., E. de la Luna, C. Antonucci, A. Guigon, F.J. van Amerongen, W.A. Bongers, A.J.H. Donné, M.F. Graswinckel, A. Bruschi, S. Cirant, A. Simonetto, C. Sozzi, D. Wagner, E. Manso, L. Meneses, F. Silva, P. Varela, N. Balshaw, J.M. Chareau, G. Conway, J. Fessey, S. Hanks, R. Pearce, V. Ricardo, D. Sands, D. Starky, T. Tisconia and JET-EFDA Contributors
Fusion Engineering and Design, 74, 707, 2005
- “*Power deposition onto plasma facing components in poloidal divertor tokamaks during type-I ELMs and disruptions*”
Eich, T., A. Herrmann, G. Pautasso, P. Andrew, N. Asakura, J.A. Boedo, Y. Corre, M.E. Fenstermacher, J.C. Fuchs, W. Fundamenski, G. Federici, E. Gauthier, B. Gonçalves, A.W. Leonard, A. Loarte, G.F. Matthews, R.A. Pitts, C. Silva,
Journal of Nuclear Materials, 337-339, 669, 2005
- “*Type-I ELM substructure on the divertor target plates in ASDEX Upgrade*”
Eich, T., A. Herrmann, J. Neuhauser, R. Dux, J.C. Fuchs, S. Günter, L.D. Horton, A. Kallenbach, P.T. Lang, C.F. Maggi, M. Maraschek, V. Rohde, W. Schneider and the ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 47, (6), 815, 2005
- “*Long distance coupling of lower hybrid waves in JET plasmas with edge and core transport barriers*”
Ekedahl, A., G. Granucci, J. Mailloux, Y. Baranov, S.K. Erents, E. Joffrin, X. Litaudon, A. Loarte, P.J. Lomas, D.C. McDonald, V. Petrzilka, K. Rantamäki, F.G. Rimini, C. Silva, M. Stamp, A.A. Tuccillo and JET EFDA Contributors.
Nuclear Fusion, 45, (5) 351, 2005
- “*The fine structure of ELMs in the scrape-off layer*”
Endler, M., I. Garcia-Cortés, C. Hidalgo, G.F. Matthews, ASDEX Team and JET Team.
Plasma Physics and Controlled Fusion, 47, (2), 219, 2005
- “*Electron internal transport barriers, rationals and quasi-coherent oscillations in the stellarator TJ-II*”
Estrada, T., A. Alonso, A.A. Chmyga, N. Dreval, L. Eliseev, C. Hidalgo, A.D. Komarov, A.S. Kozachok, L. Krupnik, A.V. Melnikov, I.S. Nedzelskiy, J.L. de Pablos, L.A. Pereira, Yu Tashev, V. Tereshin and I. Vargas
Plasma Physics and Controlled Fusion, 47, (11), L57, 2005

- "Real-time measurement and control at JET experiment control"*
 Felton, R., E. Joffrin, A. Murari, L. Zabeo, F. Sartori, F. Piccolo, J. Farthing, T. Budd, S. Dorling, P. McCullen, J. Harling, S. Dalley, A. Goodyear, A. Stephen, P. Card, M. Bright, R. Lucock, E. Jones, S. Griph, C. Hogben, M. Beldishevski, M. Buckley, J. Davis, I. Young, O. Hemming, M. Wheatley, P. Heesterman, G. Lloyd, M. Walters, R. Bridge, H. Leggate, D. Howell, K.-D Zastrow, C. Giroud, I. Coffey, N. Hawkes, M. Stamp, R. Barnsley, T. Edlington, K. Guenther, C. Gowers, S. Popovichef, A. Huber, C. Ingesson, D. Mazon, D. Moreau, D. Alves, J. Sousa, M. Riva, O. Barana, T. Bolzonella, M. Valisa, P. Innocente, M. Zerbin, K. Bosak, J. Blum, E. Vitale, F. Crisanti, E. de la Luna, J. Sanchez and EFDA-JET Contributors.
 Fusion Engineering and Design, 74, 561, 2005
- "Real-time measurements and control at JET signal processing and physics analysis for diagnostics"*
 Felton, R., E. Joffrin, A. Murari and JET EFDA Contributors
 Fusion Engineering and Design, 74, 769, 2005
- "Improved Time-Frequency Visualization of Chirping Mode Signals in Tokamak Plasmas Using the Choi-Williams Distribution"*
 Figueiredo, A. C. A., M. F. F. Nave, and EFDA-JET contributors
 IEEE Transactions on Plasma Science, 33, 2, 2005
- "Statistical description of the radial structure of turbulence in the JET plasma boundary region"*
 Gonçalves, B., C. Hidalgo, C. Silva, M.A. Pedrosa and K. Erents,
 Journal of Nuclear Materials, 337-339, 376, 2005
- "Safety factor profile requirements for electron ITB formation in TCV"*
 Goodman, T.P., R. Behn, Y. Camenen, S. Coda, E. Fable, M.A. Henderson, P. Nikkola, J. Rossel, O. Sauter, A. Scarabosio, C. Zucca, S. Alberti, P. Amorim, Y. Andrébe, K. Appert, G. Arnoux, A. Bortolon, A. Bottino, R. Chavan, I. Condea, E. Droz, B.P. Duval, P. Etienne, D. Fasel, A. Fasoli, B. Gulejová, J-P Hogge, J. Horacek, P-F Isoz, B. Joye, A. Karpushov, S.H. Kim, I. Klimanov, P. Lavanchy, J.B. Lister, X. Llobet, T. Madeira, J-C Magnin, A. Marinoni, J. Márki, B. Marlétaz, P. Marmillod, Y. Martin, An Martynov, M. Maslov, J-M Mayor, J-M Moret, A. Mück, P.J. Paris, I. Pavlov, A. Perez, R.A. Pitts, A. Pochelon, L. Porte, Ch Schlatter, K. Schombourg, H. Shidara, M. Siegrist, U. Siravo, A.V. Sushkov, G. Tonetti, M.Q. Tran, H. Weisen, M. Wischmeier, A. Zabolotsky, G. Zhuang and A. Zhuchkova.
 Plasma Physics and Controlled Fusion, 47, (12B), B107, 2005
- "Sawtooth control in fusion plasmas"*
 Graves, J.P, C. Angioni, R.V. Budny, R.J. Buttery, S. Coda, L-G Eriksson, C.G. Gimblett, T.P. Goodman, R.J. Hastie, M.A. Henderson, H.R. Koslowski, M.J. Mantsinen, An Martynov, M-L Mayoral, A. Mück, M.F.F. Nave, O. Sauter, E. Westerhof, and JET-EFDA Contributors.
 Plasma Physics and Controlled Fusion, 47, (12B), B121, 2005
- "Poloidal rotation dynamics, radial electric field, and neoclassical theory in the JET Internal-Transport-Barrier region"*
 Crombe, K., Y. Andrew, M. Brix, C. Giroud, S. Hacquin, N. Hawkes, A. Murari, F Nave, J. Ongena, V. Parail, G. Van Oost, I. Voitsekhovitch, K. Zastrow and EFDA-JET Contributors
 Physical Review Letters, 95, 155003, 2005
- "ITER operation beyond its baseline scenario"*
 Gruber, O., J. Hobirk, C.F. Maggi, M. Maraschek, Y-S Na, A.C.C. Sips, A. Staebler, J. Stober, ASDEX Upgrade Team and ITPA TG on Steady-State Operation
 Plasma Physics and Controlled Fusion, 47, (12B), B135, 2005
- "Development of an ITER relevant advanced scenario at ASDEX Upgrade"*
 Gruber, O., A.C.C. Sips, A. Staebler, R. Dux, J. Hobirk, L.D. Horton, C.F. Maggi, A. Manini, M. Maraschek, R. Neu and ASDEX Upgrade Team.
 Physics of Plasmas, 12, (5), 056127, 2005
- "Joint research using small tokamaks"*
 Gryaznevich, M.P., E. Del Bosco, A. Malaquias, G. Mank, G. Van Oost, Yexi He, H. Hegazy, A. Hirose, M. Hron, B. Kuteev, G.O. Ludwig, I.C. Nascimento, C. Silva and G.M. Vorobyev
 Nuclear Fusion, 45, (10), S245, 2005
- "Overview of ASDEX Upgrade results – development of integrated operating scenarios for ITER"*
 Günter, S., C. Angioni, M. Apostoliceanu, C. Atanasiu, M. Balden, G. Becker, W. Becker, K. Behler, K. Behringer, A. Bergmann, R. Bilato, I. Bizyukov, V. Bobkov, T. Bolzonella, D. Borba, K. Borrás, M. Brambilla, F. Braun, A. Buhler, A. Carlson, A. Chankin, J. Chen, Y. Chen, S. Cirant, G. Conway, D. Coster, T. Dannert, K. Dimova, R. Drube, R. Dux, T. Eich, K. Engelhardt, H.-U. Fahrbach, U. Fantz, L. Fattorini, M. Foley, P. Franzen, J.C. Fuchs, J. Gafert, K. Gal, G. Gantenbein, M. Garcia Munoz, O. Gehre, A. Geier, L. Giannone, O. Gruber, G. Haas, D. Hartmann, B. Heger, B. Heinemann, A. Herrmann, J. Hobirk, H. Hohenöcker, L. Horton, M. Huart, V. Igochine, A. Jacchia, M. Jakobi, F. Jenko, A. Kallenbach, S. Kalvin, O. Kardaun, M. Kaufmann, A. Keller, A. Kendl, M. Kick, J.-W. Kim, K. Kirov, S. Klose, R. Kochergov, G. Kocsis, H. Kollotzek, C. Konz, W. Kraus, K. Krieger, T. Kurki-Suonio, B. Kurzan, K. Lackner, P.T. Lang, P. Lauber, M. Laux, F. Leuterer, J. Likonen, A. Lohs, A. Lorenz, R. Lorenzini, A. Lyssoivan, C. Maggi, H. Maier, K. Mank, A. Manini, M. E. Manso, P. Mantica, M. Maraschek, P. Martin, K.F. Mast, M. Mayer, P. McCarthy, H. Meyer, D. Meisel, H. Meister, S. Menmuir, F. Meo, P. Merkel, R. Merkel, D. Merkl, V. Mertens, F. Monaco, A. Mück, H.W. Müller, M. Münich, H. Murmann, Y.-S. Na, R. Narayanan, G. Neu, R. Neu, J. Neuhauser, D. Nishijima, Y. Nishimura, J.-M. Noterdaeme, I. Nunes, M. Pocco-Düchs, G. Pautasso, A.G. Peeters, G. Pereverzev, S. Pinches, E. Poli, E. Posthumus-Wolfrum, T. Pütterich, R. Pugno, E. Quigley, I. Radivojevic, G. Raupp, M. Reich, R. Riedl, T. Ribeiro, V. Rohde, J. Roth, F. Rytter, S. Saarelma, W. Sandmann, J.

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- “*Tritium fast ion distribution in JET current hole plasmas*”
Hawkes, N.C., V.A. Yavorskij, J.M. Adams, Yu F. Baranov, L. Bertalot, C.D. Challis, S. Conroy, V. Goloborod’ko, V. Kiptily, S. Popovichev, K. Schoepf, S.E. Sharapov, D. Stork, E. Surrey and EFDA-JET contributors
Plasma Physics and Controlled Fusion, 47, (9), 1475, 2005
 - “*Rapid electron internal transport barrier formation during magnetic shear reversal in fully non-inductive TCV discharges*”
Henderson, M.A., Y. Camenen, S. Coda, E. Fable, T.P. Goodman, P. Nikkola, A. Pochelon, O. Sauter, C. Zucca and the TCV Team
Nuclear Fusion, 45, (12), 1642, 2005
 - “*Overview of TJ-II experiments*”
Hidalgo, C., C. Alejaldre, A. Alonso, J. Alonso, L. Almoguera, F. de Aragón, E. Ascasíbar, A. Baciero, R. Balbín, E. Blanco, J. Botija, B. Brañas, E. Calderón, A. Cappa, J.A. Carmona, R. Carrasco, F. Castejón, J.R. Cepero, A.A. Chmyga, J. Doncel, N.B. Dreval, S. Eguilior, L. Eliseev, T. Estrada, J.A. Ferreira, A. Fernández, J.M. Fontdecaba, C. Fuentes, A. Garcia, I. García-Cortés, B. Gonçalves, J. Guasp, J. Herranz, A. Hidalgo, R. Jiménez, J.A. Jiménez, D. Jiménez-Rey, I. Kirpichev, S.M. Khrebtov, A.D. Komarov, A.S. Kozachok, L. Krupnik, F. Lapayese, M. Liniers, D. López-Bruna, A. López-Fraguas, J. López-Rázola, A. López-Sánchez, E. de la Luna, G. Marcon, R. Martin, K.J. McCarthy, F. Medina, M. Medrano, A.V. Melnikov, P. Mendez, B. van Milligen, I.S. Nedzelskiy, M. Ochando, O. Orozco, J.L. de Pablos, L. Pacios, I. Pastor, M.A. Pedrosa, A. de la Peña, A. Pereira, A. Petrov, S. Petrov, A. Portas, D. Rapisarda, L. Rodriguez-Rodrigo, E. Rodriguez-Solano, J. Romero, A. Salas, E. Sanchez, J. Sanchez, M. Sanchez, K. Sarkisian, C. Silva, S. Schchepetov, N. Skvortsova, F. Tabarés, D. Tafalla, A. Tolkachev, V. Tribaldos, I. Vargas, J. Vega, G. Wolfers and B. Zurro
Nuclear Fusion, 45, (10), S266, 2005
 - “*Characterization of the H-mode edge barrier at ASDEX Upgrade*”
Horton, L.D., A.V. Chankin, Y.P. Chen, G.D. Conway, D.P. Coster, T. Eich, E. Kaveeva, C. Konz, B. Kurzan, J. Neuhauser, I. Nunes, M. Reich, V. Rozhansky, S. Saarelma, J. Schirmer, J. Schweinzer, S. Voskoboinikov, E. Wolftrum and the ASDEX Upgrade Team
Nuclear Fusion, 45, (8), 856, 2005
 - “*Multi-machine transport analysis of hybrid discharges from the ITPA profile database*”
Imbeaux, F., J.F. Artaud, J. Kinsey, T.J.J. Tala, C. Bourdelle, T. Fujita, C. Greenfield, E. Joffrin, Y.S. Na, V.V. Parail, Y. Sakamoto, A.C.C. Sips, I. Voitsekovitch and contributors to the EFDA-JET Workprogramme, for the ITPA Topical Group on Transport Physics and the ITB Database Working Group
Plasma Physics and Controlled Fusion, 47, (12B), B179, 2005
 - “*The ‘hybrid’ scenario in JET: towards its validation for ITER*”
Joffrin, E., A.C.C. Sips, J.F. Artaud, A. Becoulet, L. bertalot, R. Budny, P. Buratti, P. Belo, C.D. Challis, F. Crisanti, M. de Baar, P. De Vries, C. Gormezano, C. Giroud, O. Gruber, G.T.A. Huysmans, F. Imbeaux, A. Isayama, X. Litaudon, P.J. Lomas, D.C. McDonald, Y.S. Na, S.D. Pinches, A. Staebler, T. Tala, A. Tuccillo, K.-D. Zastrow and JET-EFDA Contributors to the Work Programme,
Nuclear Fusion 45, 7, 626-634, 2005
 - “*Comparison of TRANSP-evolved q-profiles with MSE constrained equilibrium fits on JET*”
Kelliher, D.J., N.C. Hawkes, P.J. Mc Carthy and contributors to the EFDA-JET Workprogramme
Plasma Physics and Controlled Fusion, 47, (9), 1459, 2005
 - “*The spatial structure of type-I ELMs at the mid-plane in ASDEX Upgrade and a comparison with data from MAST*”
Kirk, A., T. Eich, A. Herrmann, H.W. Muller, L.D. Horton, G.F. Counsell, M. Price, V. Rohde, V. Bobkov, B. Kurzan, J. Neuhauser, H. Wilson and the ASDEX Upgrade and MAST Teams
Plasma Physics and Controlled Fusion, 47, (7), 995, 2005
 - “*Observation of the palm tree mode, a new MHD mode excited by type-I ELMs on JET*”
Koslowski, H.R., B. Alper, D.N. Borba, T. Eich, S.E. Sharapov, C.P. Perez, E. Westerhof and JET-EFDA contributors.
Nuclear Fusion, 45, (3) 201, 2005
 - “*Impact of a pulsed supersonic deuterium gas jet on the ELM behaviour in ASDEX Upgrade*”
Lang, P.T., J. Neuhauser, J. Bucalossi, A. Chankin, D.P. Coster, R. Drube, R. Dux, G. Haas, L.D. Horton, S. Kalvin, G. Kocsis, M. Maraschek, V. Mertens, V. Rohde, V. Rozhansky, R. Schneider, I. Senichenkov, I. Veselova, E. Wolftrum and ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 47, (9), 1495, 2005
 - “*Integrated exhaust scenarios with actively controlled ELMs*”
Lang, P.T., A. Kallenbach, J. Bucalossi, G.D. Conway, A. Degeling, R. Dux, T. Eich, L. Fattorini, O. Gruber, S. Günter, A. Herrmann, J. Hobirk, L.D. Horton, S. Kalvin, G. Kocsis, J. Lister, M.E. Manso, Maraschek, Y. Martin, P.J. McCarthy, V. Mertens, R. Neu, J. Neuhauser, I. Nunes, T. Pütterich, V. Rozhansky, R. Schneider, W. Schneider, I. Senichenkov, A.C.C. Sips, W. Suttrop, W. Treutterer, I. Veselova, H. Zohm and the ASDEX Upgrade Team
Nuclear Fusion, 45, (6), 502, 2005

- *"The JET-enhanced performance programme: more heating power and diagnostic capabilities in preparation for ITER"*
Lioure A., A. Kaye, A. Murari, J. Sanchez, T. Todd, C. Damiani, J. Pamela and JET-EFDA Contributors.
Fusion Engineering and Design, 74, 141, 2005
- *"Fast ion distribution driven by polychromatic ICRF waves on JET"*
Mantsinen, M.J., V. Kiptily, M. Laxaback, A. Salmi, Yu Baranov, R. Barnsley, P. Beaumont, S. Conroy, P. de Vries, C. Giroud, C. Gowers, T. Hellsten, L.C. Ingesson, T. Johnson, H. Leggate, M-L Mayoral, I. Monakhov, J-M Noterdaeme, S. Podda, S. Sharapov, A.A. Tuccillo, D. Van Eester and EFDA JET Contributors
Plasma Physics and Controlled Fusion, 47, (9), 1439, 2005
- *"Active control of MHD instabilities by ECCD in ASDEX Upgrade"*
Maraschek, M., G. Gantenbein, T.P. Goodman, S. Günter, D.F. Howell, F. Leuterer, A. Mück, O. Sauter, H. Zohm, contributors to the EFDA-JET workprogramme and the ASDEX Upgrade Team
Nuclear Fusion, 45, (11), 1369, 2005
- *"Additional evidence for the universality of the probability distribution of turbulent fluctuations and fluxes in the scrape-off layer region of fusion plasmas"*
Milligen, B. Ph. Van., R. Sánchez, B.A. Carreras, V.E. Lynch, B. LaBombard, M.A. Pedrosa, C. Hidalgo, B. Gonçalves, R. Balbín and the W7-AS Team.
Physics of Plasmas, 12, (5), 052507, 2005
- *"Impurity-seeded ELMy H-modes in JET, with high density and reduced heat load"*
Monier-Garbet, P., Ph. Andrew, P. Belo, G. Bonheure, Y. Corre, K. Crombe, P. Dumortier, T. Eich, R. Felton, J. Harling, J. Hogan, A. Huber, S. Jachmich, E. Joffrin, H.R. Koslowski, A. Kreter, G. Maddison, G.F. Matthews, A. Messiaen, M.F. Nave, J. Ongena, V. Parail, M.E. Puiatti, J. Rapp, R. Sartori, J. Stober, M.Z. Tokar, B. Unterberg, M. Valisa, I. Voitsekhoitch, M. von Hellermann and JET-EFDA contributors.
Nuclear Fusion, 45, (11), 1404, 2005
- *"Sawtooth control experiments on ASDEX Upgrade"*
Mück, A., T.P. Goodman, M. Maraschek, G. Pereverzev, F. Ryter, H. Zohm and ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 47, (10), 1633, 2005
- *"New developments in JET neutron, γ -ray and particle diagnostics with relevance to ITER"*
Murari, A., L. Bertalot, S. Conroy, G. Ericsson, V. Kiptily, S. Popovichev, H. Schuhmacher, J.M. Adams, V. Afanasyev, M. Angelone, G. Bonheure, B. Esposito, J. Källne, M. Mironov, M. Pillon, M. Reginatto, D. Stork, A. Zimbal and JET-EFDA Contributors
Nuclear Fusion, 45, (10), S195, 2005
- *"Fishbones in Joint European Torus plasmas with high ion-cyclotron-resonance-heated fast ions energy content"*
Nabais, F., D. Borba, M. Mantsinen, M. F. F. Nave and S. E. Sharapov
Physics of Plasmas, 12, 10, 102509, 2005
- *"Efficiency of plasma biasing by movable localized limiter in tokamak ISTTOK"*
Nedzelskiy, I.S., C. Silva, H. Figueiredo, C.A.F. Varandas, J.A. Cabral,
Chechoslovak Journal of Physics, 55, 3, 361, 2005.
- *"Tungsten: an option for divertor and main chamber plasma facing components in future fusion devices"*
Neu, R., R. Dux, A. Kallenbach, T. Pütterich, M. Balden, J.C. Fuchs, A. Herrmann, C.F. Maggi, M.O'Mullane, R. Pugno, I. Radivojevic, V. Rohde, A.C.C. Sips, W. Sutrop, A. Whiteford and the ASDEX Upgrade team.
Nuclear Fusion, 45, (3) 209, 2005
- *"Experimental studies of toroidal momentum transport in ASDEX Upgrade"*
Nishijima, D., A. Kallenbach, S. Günter, M. Kaufmann, K. Lackner, C.F. Maggi, A.G. Peeters, G.V. Pereverzev, B. Zaniol and the ASDEX Upgrade Team.
Plasma Physics and Controlled Fusion, 47, (1), 89, 2005
- *"Matching to ELMy plasmas in the ICRF domain"*
Noterdaeme, J.-M., V.V. Bobkov, S. Brémond, A. Parisot, I. Monakhov, B. Beaumont, Ph. Lamalle, F. Durodié, M. Nightingale, the ASDEX Upgrade Team, the Tore Supra Team, and the JET-EFDA contributors.
Fusion Engineering and Design, 74, 191, 2005
- *"Density profile analysis during an ELM event in ASDEX Upgrade H-modes"*
Nunes, I., M. Manso, F. Serra, L.D. Horton, G.D. Conway, A. Loarte and the ASDEX Upgrade CFN Reflectometry Teams
Nuclear Fusion, 45, (12), 1550, 2005
- *"Overview of JET results"*
Pamela, J., J. Ongena and JET EFDA Contributors
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- *"Predictive transport simulations of real-time profile control in JET advanced tokamak plasmas"*
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- *"Edge stability of the ELM-free quiescent H-mode on DIII-D"*
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- *"A cross-tokamak neural network disruption predictor for the JET and ASDEX Upgrade tokamaks"*
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- *"Feedback and rotational stabilization of resistive wall modes in ITER"*
Yueqiang Liu, A. Bondeson, M.S. Chu, J.-Y. Favez, Y. Gribov, M Gryaznevich, T.C. Hender, D.F. Howell, R.J. La Haye, J.B. Lister, P. de Vries and EFDA JET Contributors.
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- *"Helium exhaust experiments on JET with type I ELMs in H-mode and with Type III ELMs in ITB discharges"*
Zastrow, K.-D., S.J. Cox, M.G. von Hellermann,

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Nuclear Fusion, 45, (3) 163, 2005

19.1.3. Papers in international conferences

- **Second IAEA Technical Meeting on the Theory of Plasma Instabilities: Transport, Stability and their Interaction, 2-4 de March, Trieste, Italy**

- “Effect of Sheared Equilibrium Plasma Rotation on the Stability of Tearing Modes”
Coelho, R.

- **32nd Annual IoP Plasma Physics Group Conference, 21-24 of March, Oxford, England**

- *Reflectometry for Density Profile and Turbulence Measurement in Fusion Plasmas*
Hacquin, S., on behalf of the “Electron Kinetics” Group, the JET Task Force D and the EFDA-JET Contributors

- **US-European transport task force Workshop, Napa, USA, April 6-9 2005**

- “*n=0 Energetic Particle Driven Oscillations in JET*”
Berk, H.L., C. Boswell, T. Johnson, M.F.F. Nave, S.D. Pinches, S.E. Sharapov, L. Zakharov and contributors to the EFDA-JET workprogramme
- “Recent progress in diagnostics of energetic particle driven modes: new opportunities and challenges”
Sharapov, S., B. Alper, H. Berk, D. Borba, C. Boswell, B. Breizman, E. de la Luna, J. Fessey, S. Hacquin, G. Kramer, R. Nazikian, S. Pinches, J. Rapp, D. Testa, N. Young and JET-EFDA Contributors

- **7th International Reflectometry Workshop for Fusion Plasma Diagnostics, 9-12 of May, Garching, Germany**

- “Profile Reflectometry on MAST”
Cunningham, G., T. Edlington, A. Silva and L. Meneses
- “Frequency Hopping Millimeter-wave Reflectometry in ASDEX Upgrade”
Cupido, L., S. Graça, L. Meneses, J. Santos, M. Manso and F. Serra
- “Identification of Local Alfvén Wave Resonances with Reflectometry as a Diagnostic Tool in Tokamaks”
Elfimov, A.G., R. M.O. Galvão, L. F. Ruchko, M.E.C.Manso and A.A.Ivanov
- “Fluctuation Measurements in TJ-II using a Broadband Fast Frequency Hopping Reflectometer”
Estrada, T., E. Blanco, L. Cupido, M.E. Manso and J. Sánchez
- “A New Spectral Analysis to Study Pellet Triggered ELMs from Broadband Reflectometry at ASDEX Upgrade”
Fattorini, L., M. E. Manso, P. T. Lang and the ASDEX Upgrade Team

- “Nonlinear Effects in the Doppler Reflectometry (Analytical Theory and Numerical Simulations)”
Gusakov, E.Z., S. Heurax, F. da Silva and A.V. Surkov

- “Further Development of Reflectometry Diagnostics for Measurement of Alfvén Cascades on the JET Tokamak”
Hacquin, S., S. Sharapov, B. Alper, D. Borba, C. Boswell, J. Fessey, L. Meneses, M. Walsh and the JET EFDA Contributors

- “Radial Behaviour of Density Fluctuations Deduced from FM-CW Tore Supra Reflectometry Data”
Heurax, S., L. Vermare, F. Clairet, G. Leclert and F. da Silva

- “JET Density Profile Reflectometer, New Design”
Meneses, L., L.Cupido, A.A. Ferreira, M. Manso and L. Guimarães

- “Experimental Studies of the Registration of Alfvén Wave Resonances in the TCABR Tokamak by the Frequency Scanning Reflectometry”
Ruchko, L. F., R. M. O. Galvão, A. G. Elfimov, J. I. Elizondo, E. Sanada, Yu. K. Kuznetsov, A. M. M. Fonseca, V. Bellintani Jr, A. N. Fagundes, I.C. Nascimento, W. P. de Sá, C.A.F. Varandas, M. Manso, P. Varela and A. Silva

- “Doppler Reflectometry Spectra Simulations with Velocity Shear Layer”
Silva, F. da, S. Heurax and M. Manso

- “Automatic Electron Density Measurements with Microwave Reflectometry During High-Density H-mode Discharges on ASDEX Upgrade”
Silva, A., P. Varela, L. Cupido, M. Manso, L. Meneses, L.Guimarães, G. Conway, F. Serra and the ASDEX Upgrade Team

- “Adaptive Window Calculation for Automatic Spectrogram Analysis of Broadband Reflectometry Data”
Varela, P., A. Silva, M. Manso and the ASDEX Upgrade Team

- “Status and Plans for Reflectometry in ITER”
Vayakis, G., and C. Walker for the ITER International Team and Participant Teams with contributions from F. Clairet, R. Sabot, V. Tribaldos, T. Estrada, E. Blanco, J. Sánchez, G.G. Denisov, V.I. Belousov, F. Da Silva, P. Varela, M. E. Manso, L. Cupido, João Dias, Nuno Valverde, V.A. Vershkov, D.A. Shelukhin, S.V. Soldatov, A.O. Urazbaev, E.Yu. Frolov and S. Heurax

- **14th IEEE-NPSS Real Time Conference, 4-11 of June, Stockholm, Sweden**

- “A FPGA-Based Multi-Rate Interpolator with Real-Time Rate Change for a JET Test-Bench System”
Batista, A. J. N., D. Alves, N. Cruz, J. Sousa, C. A. F. Varandas, E. Joffrin, R. Felton, J. Farthing and JET-EFDA Contributors

- “Upgrade of the Data Acquisition and Control System of the ASDEX Upgrade Microwave Reflectometer”
Combo, A., A. Silva, P. Varela, M. Manso, J. Sousa, C. Correia and C.A.F. Varandas
- “Digital Control System for the TCV Tokamak”
Duval, B.P., J-M. Moret, A.P. Rodrigues, L.A. Pereira, C.A.F. Varandas
- “A Cooperative JAVA Web-Start Environment for Shared Multi-User Remote Operation”
Neto, A., H. Fernandes, B. B. Carvalho, J. Sousa and C. A. F. Varandas
- “Real-Time Multi-DSP Based VME System for Feedback Control on the TCV Tokamak”
Rodrigues, A.P., L. Pereira, T.I. Madeira, P. Amorim, C.A.F. Varandas and B. Duval
- “Fast Feedback Control for Plasma Positioning with a PCI hybrid DSP/FPGA Board”
Valcárcel, D. F., I. S. Carvalho, B. B. Carvalho, H. Fernandes, J. Sousa and C. A. F. Varandas
- **32nd EPS Conference on Plasma Physics and Controlled Fusion, 27 of June to 1 of July of 2005, Tarragona, Spain**
- “H-mode access in the low density regime on JET”
Andrew Y, Sartori R, Righi E, de la Luna E, Hacquin S, Hawkes N C, Horton L D, Huber A, Korotkov A, O’Mullane M G, JET-EFDA contributors
- “Numerical Simulation of Impurity Screening in the SOL of JET Plasma by Localised Deuterium Gas Puffing”
Belo, P., V. Parail, G Corrigan, J Hogan, D. Heading, J. Spence, C. Giroud and JET EFDA contributors
- “Experimental Observations of $n = 0$ Mode Driven by Energetic Particles on JET”
Boswell, C., H.L. Berk, T. Johnson, M.F.F. Nave, S.D. Pinches, S.E. Sharapov, L. Zakharov and EFDA-JET contributors
- “Effect of Alfvén Resonances on the Penetration of Error Fields on a Rotating Viscous Plasma”
Coelho, R. and E. Lazzaro
- “High Spatial and Temporal Resolution FM-CW Reflectometry to Study Pellet Triggered ELMs at ASDEX Upgrade”
Fattorini, L., P. T. Lang, M. E. Manso, S. Kalvin, G. Kocsis and the ASDEX Upgrade Team
- “A tool for the Parallel Calculation and Ready Visualization of the Choi-Williams Distribution: Application to Fusion Plasma Signals”
Figueiredo, A.C.A., J.S. Ferreira, B.B. Carvalho and M.F.F. Nave
- “Study of edge flows and transport during emissive electrode biased discharges on ISTTOK”
Figueiredo, H., C. Silva, I. Nedzelsky, B. Gonçalves, H. Fernandes, C.A.F. Varandas,
- “Turbulence Experiments in Reversed and Standard-B Field Configurations in the JET Tokamak”
Gonçalves, B., C. Hidalgo, C. Silva, M.A. Pedrosa, M. Hron and JET EFDA contributors
- “Sawtooth control in fusion plasmas”
Graves, J. P., R. V. Budny, R. J. Buttery, S. Coda, L.-G. Eriksson, C. G. Gimblett, R. J. Hastie, H. R. Koslowski, M. J. Mantsinen, M.-L. Mayoral, A. Mueck, M. F. F. Nave, O. Sauter, and JET-EFDA Contributors
- “Electron transport barriers, rationals and fluctuations in the TJ-II”
Krupnik, L., J.A. Alonso, A. Cappa, A.A. Chmuga, N.B. Dreval, L. Eliseev, T. Estrada, A. Fernandez, C. Fuentes, C. Hidalgo, S.M. Khrebtov, A.D. Komarov, A.S. Kozachok, A.V. Melnikov, I.S. Nedzelskiy, M. Liniers, J.L. de Pablos, M.A. Pedrosa, Yu. Tashchev, V. Tereshin, E. Sanchez
- “ELM mitigation by externally induced ELMs - Physics and Prospects”
Lang, P.T., J.Bucalossi, L.Fattorini, K.Gal, L.D.Horton, A.Kallenbach, J.Lister, S.Kalvin, G.Kocsis, M.E.Mansoy, M.Maraschek, Y.Martin, V.Mertens, R.Neu, J.Neuhauser, T.Pütterich, A.C.C.Sips, W.Suttrop, G.Veres and ASDEX Upgrade Team
- “First Results Obtained with the Real-Time PHA Diagnostic on TCV”
Madeira, T.I., P.Amorim, B.P.Duval, A.P.Rodrigues, L.Pereira and C.A.F.Varandas
- “Spatial Asymmetries in ELM induced Pedestal Density Collapse in ASDEX Upgrade H-modes”
Nunes, I., M. Manso, F. Serra, L. D. Horton, G. D. Conway, A. Loarte and the ASDEX Upgrade and CFN Reflectometry Teams
- “Effect of the Plasmas Geometry Evolution on Runaway Electron Generation in Tokamak Disruptions”
Plyushin, V.V.
- “Gyrofluid Turbulence Computations in the Edge and SOL Regions of Tokamak Plasmas using Realistic Magnetic Field Geometry”
Ribeiro, T.T., B. Scott, D. Coster and F. Serra
- “On the Momentum Re-distribution via Fluctuations in Fusion Plasmas”
Sanchez, E., C. Silva, M.A. Pedrosa, C. Hidalgo, K. McCarthy, E. Calderón, B. Gonçalves, J. Herranz, I. Pastor and O. Orozco
- “Transport and fluctuations during electrode biasing on TJ-II”
Silva, C., M.A. Pedrosa, C. Hidalgo, K. McCarthy, E. Calderón, B. Gonçalves, J. Herranz, I. Pastor, O. Orozco,
- “Relaxation phenomena during edge plasma biasing in the CASTOR tokamak”
Spolaore, M., J. Broťanková, P. Peleman, P. Devynck, H. Figueiredo, G. Kirnev, E. Martines, J. Stöckel, G. Van

- Oost, J. Adamek, E. Dufková, I. Duran, M. Hron, V. Weinzettl
- **17th International Conference on Ion Beam Analysis, Sevilla, Spain, June 26 - July 1 2005**
 - “*Ion Beam Characterisation of ODS Steel Samples after Long Term Annealing Conditions*”
Alves, L. C., E. Alves, A. Paúl, M. R. da Silva, J. A. Odriozola
 - **8th Workshop on the Electric Field, Structures and Relaxation in Edge Plasmas, 3-4 of July of 2005, Tarragona, Spain**
 - “*Study of pellet triggered ELMs using high spatial and temporal resolution FM-CW reflectometry at ASDEX Upgrade*”
Fattorini, L., P. T. Lang, M. E. Manso, S. Kalvin, G. Kocsis and the ASDEX Upgrade Team.
 - “*Local 3D Perturbation Experiments for Probing the SLM stability*”
Lang, P.T., J. Neuhauser, J. Bucalossi, L. Fattorini, L.D. Horton, S. Kalvin, G. Kocsis, M.E. Manso, M. Maraschek, G. Veres and the ASDEX Upgrade Team
 - **5th IAEA Technical Meeting on Control, Data Acquisition and Remote Participation for Fusion Research, 12-15 of July of 2005, Budapest, Hungary**
 - “*JET Real Time Project Test-Bench Software Structure*”
Cruz, N., A.J.N. Batista, D. Alves, J. Sousa, C.A.F. Varandas, E. Joffrin, R. Felton, J.W. Farthing and JET-EFDA Contributors
 - “Efficient use of VME modules in TCABR”
Fagundes, A.N., B.B. Carvalho, M. Correia, J. Sousa
 - “*A Generic Remote Method Invocation for Intensive Data Processing*”
Neto, A., D. Alves, H. Fernandes, J. S. Ferreira and C.A.F. Varandas
 - “*Control and Data Acquisition System for the Multiple Cell Array Detector of the TJ-II Heavy Ion Beam Diagnostic*”
Pereira, L., I.S. Nedzelskiy, B. Gonçalves, J.L. de Pablos, A. Alonso, C. Hidalgo and C.A.F. Varandas
 - “*The Software for the Real-Time DSP-Based VME System for Feedback Control on TCV using a PHA X-ray Diagnostic*”
Pereira, L., A.P. Rodrigues, T.I. Madeira, P. Amorim, B. P. Duval and C.A.F. Varandas
 - “*Enhanced Neutron Diagnostics Data Acquisition System based on a Time Digitizer and Transient Recorder Hybrid Module*”
Pereira, R. C., A.Combo, N.Cruz, Jorge Sousa, C. Correia, C. Varandas, S. Conroy and J. Källne
 - “*Real-Time Data Transfer in the TCV Advanced Plasma Control System*”
Rodrigues, A.P., L. Pereira, J-M. Moret, B. P. Duval and C. A. F. Varandas
 - “*A Unified Real-Time Control and Data Acquisition Hardware Platform*”
Sousa, J., A. J. N. Batista, R. C. Pereira and C. Varandas
 - **19th International Conference On Numerical Simulation of Plasmas, 12-15 of July of 2005, Nara, Japan**
 - “*On the Computation of Tokamak Equilibria with Negative Core Toroidal Current*”
Rodrigues, Paulo and João P. S. Bizarro
 - “*Developments on Reflectometry Simulations for Fusion Plasmas: Application to ITER Position Reflectometers*”
Silva, da F. S. Heurax and M. Manso
 - **6th International Workshop “Strong Microwaves in Plasmas”, July 25 – August 1 of 2005, Nizhny Novgorod – Saint Petersburg, Russia**
 - “*JET Passive Active Multijunction Lower Hybrid Launcher*”
Bibet, Ph., Belo, J., Bertrand, B., Bizarro, J.P.S., Cesario, R., Kaye, A., Leguern, F., Lioure, A., Mailloux, J., Mirizzi, F., Portafaix, C., Testoni, P., Tuccillo, A.A., Vallet, J.C., Walton, B.,
 - **10th IAEA Technical Meeting on H-mode Physics and Transport Barriers, St. Petersburg (Russia), September 2005.**
 - “*The quiescent H-mode regime in ASDEX Upgrade*”
Suttrop, W., V. Hynönen, T. Kurki-Suonio, G. D. Conway, L. Fattorini, P. T. Lang, M. Maraschek, R. Neu, J. Schirmer, A. Stäbler and ASDEX Upgrade Team.
 - **RIVA V - 5th Iberian Vacuum Meeting, 18-21 of September of 2005, Guimarães, Portugal**
 - “*Redesign of the tokamak ISTOK hydrogen injection system*”
Correia, J. Nunes, A. Soares, H. Fernandes
 - “*Aluminium Vacuum Deposition Coatings for Dielectric Substrate Microwave Antennas Production*”
Figueiredo, J., H. Fernandes and C.A.F. Varandas
 - **21st IEEE/NPSS Symposium on Fusion Engineering, September 26-29 of 2005, Knoxville, USA.**
 - “*ITER LHCD plans and design*”
Bibet, Ph., Beaumont, B., Belo, J.H., Bizarro, J.P.S., Delpech, L., Ekedahl, A., Granucci, G., Kazarian, F., Kuzikov, S., Litaudon, X., Mailloux, J., Mirizzi, F., Pericoli, V., Prou, M., Rantamäki, K., Tuccillo, A.A
 - **47th Annual Meeting of the Division of Plasma Physics, 24-28 of October of 2005, Denver, USA**
 - “*Detection of Alfvén cascades in advanced JET plasmas*”
Alper, B., S. Sharapov, S. Hacquin, D. Borba, C. Boswell, S. Pinches and JET-EFDA Contributors
 - “*Testing the Porcelli Sawtooth Trigger Module*”
Bateman, G., A. H. Kritz, M.F.F.Nave, V. Parail

- “*Axisymmetric Phase Space Structures Driven by Fast Ions in JET*”
Berk, H. L., C. J. Boswell, Mit-PSFC, S. E. Sharapov, T. Johnson, M. F. F. Nave, S. D. Pinches
 - “*Edge Stability Analysis of JET Quiescent H-mode Experiments*”
Nave, M.F.F., G. Huysmans, J-S. Lonroth, V. Parail, M. Marascheck, W. Suttrop and EFDA-JET Contributors
 - **6th Int. Workshop Electrical Probes in Magnetized Plasmas (IWEF 2005), Seoul, Korea, 2005**
 - “*Overview of electrical probe measurements on ISTTOK*”
Varandas, C.A.F., C. Silva, I. Nedzelsky, H. Figueiredo, H. Fernandes, R. Schrittwieser, C. Ioniță, P. Balan
 - **Int. Conf. Nuclear Energy for New Europe 2005 (Bled, Slovenia, Sept. 5-8, 2005)**
 - “*Probe Diagnostics for Edge Plasmas in Fusion Experiments*”
Ioniță, C., R. Schrittwieser, P.C. Balan, J. Stöckel, J. Adámek, M. Hron, C.A.F. Varandas, H.F.C. Figueiredo, C. Silva, M. Tichý, E. Martines, G. Van Oost, J.P. Gunn, T. Klinger
 - “*Edge Plasma Fluctuations Measurements in Fusion Experiments*” *Oral presentation*
Schrittwieser, R., C. Ioniță, P.C. Balan, C.A.F. Varandas, H.F.C. Figueiredo, C. Silva, J. Stöckel, J. Adámek, M. Hron, M. Tichý, C. Hidalgo, M.A. Pedrosa, E. Calderón, E. Martines, G. Van Oost, J.P. Gunn, T. Klinger
 - **9th IAEA TCM on Energetic Particles, Takayama, Japan, November 9-11, 2005**
 - “*Axisymmetric Phase Space Structures Driven by Fast Ions in JET*”
Berk, H. L., C. J. Boswell, D. Borba, T. Johnson, M. F. F. Nave, S. D. Pinches, S. E. Sharapov, and JET EFDA contributors
 - “*Fishbones Activity in JET Low Density Plasmas*”
Nabais, F., D. N. Borba, M. J. Mantsinen, S. E. Sharapov and JET-EFDA contributors
 - “*Alfvén cascades in JET discharges with NBI-heating*”
Sharapov, S., B. Alper, Y. Baranov, H. Berk, D. Borba, C. Boswell, B. Breizman, C. Challis, M. de Baar, E. de la Luna, E. Evangelidis, S. Hacquin, N. Hawkes, V. Kiptily, S. Pinches, P. Sandquist, I. Voitsekhovitch, N. Young and JET-EFDA Contributors
 - **7th IEA Workshop International workshop on Beryllium Technology for Fusion, Santa Barbara, USA, 29 Nov. - 2 Dec. 2005**
 - “*Structural and oxidation studies of titanium beryllides*”
Alves, E., L.C. Alves, N. Franco, M.R. da Silva, A. Paúl
 - “*Beryllium breeder blankets-status of the European R&D*”
Moeslang, A., E. Alves, L.V. Bocaccini, J.B.J. Hegeman, P. Kurinsky, et al.
 - **12th International Conference on Fusion Reactor Material, Santa Barbara, USA, 5-10 December 2005**
 - “*Oxidation and stability studies of Beryllium Titanate*”
Alves, E., L. C. Alves, N. Franco, M.R. da Silva, A. Paúl
 - “*Microstructural characterisation of reduced activation EUROFER ODS alloy after long-term annealing*”
Paúl, A., L. C. Alves, E. Alves, J. A. Odrizola
 - **XI Latin-American Workshop on Plasma Physics, Mexico, 5-9 December 2005**
 - “*ELMy Studies in ITER Relevant Regimes in ASDEX Upgrade Broadband FM-CW Reflectometry Techniques*” (*Oral presentation*)
Manso, M.E., A. Silva, P. Varela, D. Borba, P. Lang, L. Cupido, I. Nunes, G. Conway and the ASDEX Upgrade Team.
 - “*Real time plasma control tools for advanced tokamak operation*” (*Invited talk*)
Varandas, C.A.F., J. Sousa, A.P. Rodrigues, B.B. Carvalho, H. Fernandes, A.J. Batista, N. Cruz, A. Combo and the CFN Control and Data Acquisition Group
 - **55th Annual Meeting of the Austrian Phys. Soc. (Vienna, Austria, 2005)**
 - “*Measurements of edge plasma fluctuations in toroidal plasmas with probes*”
Ioniță, C., P.C. Balan, R. Schrittwieser, J. Stöckel, J. Adámek, M. Hron, M. Tichý, E. Martines, G. Van Oost, C.A.F. Varandas, H.F.C. Figueiredo, C. Silva, J.J. Rasmussen, V. Naulin
 - **6th International Balkan Workshop on Applied Physics (Constanta, Romania, 2005)**
 - “*Edge plasma fluctuations in magnetized plasmas*”, *invited lecture*
Balan, P., C. Ioniță, R. Schrittwieser, J. Stöckel, J. Adámek, M. Hron, M. Tichý, E. Martines, G. Van Oost, H.F.C. Figueiredo, J.A. Cabral, C. Varandas, C. Silva, M.A. Pedrosa, C. Hidalgo
- 19.1.4. Papers in nacional conferences**
- **14^a Conferência Nacional de Física 2005, Dezembro 1-3, Porto**
 - “*Computação de turbulência na periferia de plasmas de tokamaks*”.
Ribeiro, T. T., B. Scott, D. Coster e F. Serra Druyts F and E. Alves
 - “*O papel do tokamak ISTTOK no programa europeu de fusão*”
Silva, C., H. Fernandes, B.B. Carvalho, I. Carvalho, P. Carvalho, R. Coelho, J. Ferreira, H. Figueiredo, J. Figueiredo, J. Fortunato, R. Gomes, I. Nedzelskij, A. Neto, T. Pereira, V. Plyusnin, A. Soares, D.F. Valcárcel, C.A.F. Varandas

- **As Energias do Presente e do Futuro, Lisboa, 21-22 Novembro, 2005**

- “Fusão nuclear: uma opção energética para o futuro”
Manso, M.E., (Oral presentation)
- “O Sistema de Controlo em Tempo-Real do Tokamak ISTTOK”
Valcárcel, D.F., I.S. Carvalho, A. Neto, P. Ricardo, J. Fortunato, A.S. Duarte, A.J.N. Batista, B.B. Carvalho, C. Silva, H. Fernandes, J. Sousa, C.A.F. Varandas
- “Energia nuclear: uma opção para o futuro”
Varandas, C.A.F. (Invited talk)

19.1.5. Articles in newspapers

- “Um marco importante para a energia de fusão nuclear”
Carlos Varandas
Público, 29 June 2005
- “ITER: oportunidade de trabalho para as Empresas e Unidades de Investigação Portuguesas”
Carlos Varandas
Diário Económico, 22 November 2005

19.1.6. Laboratorial Prototypes

- “Retarding Field Energy Analyzer”
Nedzelskij, I., C. Silva and H. Fernandes
- “Multi-pin array of emissive probes”
Silva, C. and H. Figueiredo
- “Real-time test facility”
Batista, A. and J. Sousa
- “PCI transient recorder module with galvanic isolation”
Correia, M. and J. Sousa

19.1.7. Prizes and Awards

- Bruno Gonçalves received the Ph.D Research Award for an outstanding Doctoral Thesis, given by the Plasma Physics Division of the European Physical Society, in June 2005
- Prof. C. Varandas was awarded the degree of “Grande Oficial da Ordem do Infante D. Henrique” for his contributions to Physics in Portugal by the President of the Portuguese Republic in November 2005

19.2. TECHNOLOGIES OF PLASMAS AND LASERS

19.2.1. Ph.D thesis

- “Coulomb explosion of large clusters”
Fabio Peano
Politecnico di Torino, March 2005

19.2.2. Book chapters

- Guerra, V., P. A. Sá, and J. Loureiro,
Kinetic modeling of the nitrogen afterglow, in V. Haubrecht e J. Bartl (editores)
16th Symposium on Physics of Switching Arc, Brno University of Technology, Brno-Letohrad, Czech Republic, 2005.

19.2.3. Articles in scientific journals

- “The effect of the gas flow-rate on the radial structure of a torch-like helium plasma”
Álvarez, R., M.C. Quintero and A. Rodero
IEEE Trans. Plas. Sci. 33(2), 422–423, 2005
- “Radial description of excitation processes of molecular and atomic species in a high-pressure helium microwave plasma torch”
Álvarez, R., M.C. Quintero and A. Rodero
J. Phys. D: App Phys. 38(20), 3768-3777, 2005
- “Thermal inequilibrium of atmospheric helium microwave plasma produced by an axial injection torch”
Álvarez, R., A. Rodero, M. C. Quintero, A. Sola, A. Gamero and D. Ortega
J. Appl. Phys. 98, 093304, 2005
- “Oxygen plasma surface interaction in treatments of polyolefines”
Belmonte, T., C.D. Pintassilgo, T. Czerwiec, G. Henrion, V. Hody, J.M. Thiebaut, and J. Loureiro
Surface and Coatings Technology 200, 26-30, 2005
- “Wave kinetic treatment of forward four-wave stimulated scattering instabilities”
Bingham, R., L. O. Silva, R. M. G. M. Trines, J. T. Mendonça, P. K. Shukla, W. B. Mori, R. A. Cairns
Journal of Plasma Physics 71, 899, 2005
- “Broadband amplification in non linear crystals using controlled angular dispersion of signal beam”
Cardoso, L., G. Figueira
Optics Communications 251, 405, 2005.
- “Bandwidth increase by controlled angular dispersion of signal beam in optical parametric amplification”
Cardoso, L., G. Figueira, N. Lopes, J. Wemans, J. T. Mendonça,
Proc. SPIE Vol. 5777, 775, 2005.
- “Exact orbital motion theory of the shielding potential around an emitting, spherical body”
Delzanno, G. L., A. Bruno, G. Sorasio, G. Lapenta,
Phys. Plasmas 12, 062102, 2005
- “Effects of Landau quantization on the equation of state (EOS) in intense laser plasma interactions with strong magnetic fields”
Eliezer, S., P. Norreys, J. T. Mendonca, K. Lancaster,
Phys. Plasmas 12, 052115, 2005
- “A new diagnostic for very high magnetic fields in expanding plasmas”
Eliezer, S., J. T. Mendonca, R. Bingham, P. Norreys
Physics Letters A 336, 390, 2005
- “Mirrorless tilted pulse front single-shot autocorrelator”
Figueira, G., L. Cardoso, N. Lopes, J. Wemans,
Journal of the Optical Society of America B 22, 2709, 2005

- *"Performance and characterization of a 2.8 TW Ti:sapphire-Nd:glass chirped pulse amplification laser system"*
Figueira, G., et al.
Proc. SPIE Vol. 5777, 636, 2005.
- *"Densities of N and O – atoms in N2-O2 flowing glow discharges by actinometry"*
Henriques, J., S. Villeger, J. Levaton, J. Nagai, S. Santana, J. Aamorin AND A. Ricard,
Surface and Coating Tech. 200, 814 (2005).
- *"Ion acoustic instability triggered by finite amplitude polarized waves in the solar wind"*
Gomberoff, L., J. Hoyos and A.L. Brinca,
J. Geophys. Res. 109, A06101, 2005;
- *"Self-confinement of a fast pulsed electron beam generated in a double discharge"*
Goktas, H., M. Udrea, G. Oke, A. Alacakir, A. Demir, and J. Loureiro,
Journal of Physics D: Applied Physics 38, 2793-2797, 2005
- *"New mechanism of vacuum radiation from non-accelerated moving boundaries"*
Guerreiro, A., J. T. Mendonça, A. M. Martins,
J. Optics B: Quantum and Semiclassical Optics 7, S69, 2005
- *"Characterization of a surface-wave sustained plasma discharge in a coaxial structure"*
Letout, S., L.L. Alves, C. Boisse-Laporte and P. Leprince,
J. Optoelectronics and Advanced Materials Vol. 7, No. 5, 2005
- *"Creation and expansion of a magnetized plasma bubble for plasma propulsion"*
Loureiro, J., J. T. Mendonça, A. L. Brinca, R. Fonseca, L. O. Silva, I. Vieira
Journal of Atmospheric and Solar-Terrestrial Physics 67, 1315, 2005
- *"Double Sheaths in RF Discharges"*
Marques, L., G. Gousset and L.L. Alves
IEEE Trans. Plasma Sci. - Special Issue on Images In Plasma Science 33, 358-359, 2005
- *"Three-dimensional wakes driven by intense relativistic beams in gas targets"*
Martins, S. F., R. A. Fonseca, L. O. Silva, F. S. Tsung, W. B. Mori, S. Deng, T. Katsouleas
IEEE Transactions on Plasma Science 33, 558, 2005
- *"Long-time evolution of magnetic fields in relativistic GRB shocks"*
Medvedev, M., M. Fiore, R. A. Fonseca, L. O. Silva and W. B. Mori
The Astrophysical Journal Letters, 618, L75, 2005
- *"Micrometeoroid flight in the upper atmosphere: Electron emission and charging"*
Mendis, D. A., Wai-Ho Wong, M. Rosenberg, and G. Sorasio,
J. Atmos. Sol.-Terr. Phys. 67, 1178, 2005
- *"Physical problems of artificial magnetospheric propulsion"*
Mendonça, J. T., A. L. Brinca, R. Fonseca, J. Loureiro, L. O. Silva, I. Vieira
Journal of Plasma Physics 71, 495, 2005
- *"A coupled two-step plasma instability in PW laser plasma interactions"*
Mendonça, J T, P Norreys, R Bingham and J R Davies
Plasma Phys. Control. Fusion 47 B799, 2005
- *"Beam Instabilities in Laser-Plasma Interaction: Relevance to Preferential Ion Heating"*
Mendonça, J. T., P. A. Norreys, R. Bingham, and J. R. Davies
Phys. Rev. Lett. 94, 245002, 2005
- *"Wakefield of Bose-Einstein condensates in a background thermal plasma"*
Mendonça, J. T., P. K. Shukla, R. Bingham,
Physics Letters A 340, 355, 2005
- *"Parametric excitation of neutrino pairs by electron plasma waves"*
Mendonça, J. T., A. Serbeto, R. Bingham, P. K. Shukla,
J. Plasma Physics 71, 119, 2005
- *"A kinetic approach to Bose-Einstein condensates: self-phase modulation and Bogoliubov oscillations"*
Mendonça, J.T., R. Bingham and P.K. Shukla,
Journal of Experimental and Theoretical Physics (JETP) 101, 942-948, 2005
- *"Time refraction and the quantum properties of vacuum"*
Mendonça, J.T. and A. Guerreiro,
Physical Review A 72, 044512, 2005
- *"Absolute Time-Resolved X-Ray Laser Gain Measurement"*
Mocek, T., S. Sebban, G. Maynard, Ph. Zeitoun, G. Faivre, S. Hallou, M. Fajardo, S. Kazamias, B. Cros, J. P. Rousseau, and J. Dubau
Phys. Rev. Lett. 95, 173902, 2005
- *"Observation of ion temperatures exceeding background electron temperatures in petawatt laser-solid experiments"*
Norreys, P. A., K. L. Lancaster, H. Habara, J. R. Davies, J. T. Mendonça, R. J. Clarke, B. Dromey, A. Gopal, S. Karsch, R. Kodama, K. Krushelnick, S. D. Moustazis, C. Stoeckl, M. Tatarakis, M. Tampo, N. Vakakis, M. S. Wei and M. Zepf
Plasma Phys. Control. Fusion 47, L49, 2005
- *"Particle Statistics in quantum information processing"*
Omar, Y.
Int. J. Quantum Information 3, 201, 2005
- *"Characterization and crystal structure of the bimetallic cyano-bridged [(eta 5-C5H5) (PPh3)(2) Ru (mu-CN) Ru (PPh3)2(eta(5)-C5H5)] [PF6], Synthesis, Inorganica Chimica"*

- Ornelas, C., C. Candum, J. Mesquita, J. Rodrigues, M. H. Garcia, N. C. Lopes, M. P. Robalo, K. Nattinen, K. Rissanen, Acta 358 (8) 2482-2488, May, 2005.
- “Dynamics and control of shock shells in the Coulomb explosion of very large deuterium clusters”
Peano, F., R. A. Fonseca, L. O. Silva,
Physical Review Letters 94, 033401, 2005; also in Virtual Journal of Ultrafast Science 4, issue 2, 2005
 - “Modelling of a N₂-O₂ flowing afterglow for plasma sterilization”
Pintassilgo, C.D., J. Loureiro, and V. Guerra,
Journal of Physics D: Applied Physics 38, 417-430, 2005
 - “Pair production by a strong wakefield excited by intense neutrino bursts in plasmas”
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 - “Wigner-Moyal description of free variable mass Klein-Gordon fields”
Santos, J. P., and L. O. Silva,
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 - “Periodic structures on an ionic-plasma-vacuum interface”
Shukla, P. K., and L. Stenflo,
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 - “Molecular Dissociation in N₂-H₂ Microwave Discharge”
Tatarova, E., F. M. Dias, B. Gordiets and C. M. Ferreira
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 - “A Large scale Ar Plasma Source Excited by a TM₃₃ mode”
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 - “A quasi-particle approach to modulational instabilities in wave-plasma interactions”
Trines, R., R. Bingham, L. O. Silva, J. T. Mendonça, P. K. Shukla, and W. B. Mori,
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 - “Quasi-particle approach to the modulational instability of drift waves coupling to zonal flows”
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Physical Review Letters 94, 165002, 2005
 - “An update of argon inelastic cross-sections for plasma discharges”
Yanguas, A., J. Cotrino and L.L. Alves
J. Phys. D: Appl. Phys. 38, 1588-1598, 2005
 - “Characterisation and optimisation of a multiterawatt CPA laser system using SPIDER”
Wemans, J., G. Figueira, N. Lopes, L. Cardoso,
Proc. SPIE Vol. 5777, 642, 2005.
- 19.2.4. Papers in conference proceedings**
- “Modelo hidrodinâmico de difusão-convexão em grelha adaptativa, para plasmas de descarga micro-ondas em geometria coaxial”
Alves, L.L.
Congreso de Métodos Numéricos en Ingeniería (CMNI-05), Granada, Spain 2005.
 - “New features on surface-wave discharges: boundary phenomena and power deposition”
Alves, L.L.
XIth Conference on Plasma Physics and Applications, Iasi, Rumania 2005.
 - “Bandwidth increase by controlled angular dispersion of signal beam in optical parametric amplification”
Cardoso, L., G. Figueira, N. Lopes, J. Wemans, J. T. Mendonça,
Proc. SPIE Vol. 5777, 775 (2005)
 - “On the possibility to restore time-averaged Langmuir probe characteristics”
Dias, F. M. Tsv. K. Popov
FLTPD VI "Frontiers in Low Temperature Plasma Diagnostics VI", Les Houches, France, 2005, 56
 - “Precise Determination of the Electron Density in Intermediate Pressure Gas Discharges Using Langmuir Probe Measurements”
Dimitrova, M., Tsv. K. Popov, F. M. Dias,
FLTPD VI "Frontiers in Low Temperature Plasma Diagnostics VI", Les Houches, France, 2005, 47
 - “Performance and characterization of a 2.8 TW Ti:sapphire-Nd:glass chirped pulse amplification laser system”
Figueira, G., N. Lopes, L. Cardoso, J. Wemans, J. Dias, M. Fajardo, C. Leitão, T. Mendonça,
Proc. SPIE Vol. 5777, 636, 2005
 - “Simulation of plasma radiation in Earth and Mars atmospheric entries”
Silva, M. Lino da, V. Guerra, J. Loureiro, and M. Dudeck,
4th International Symposium on Atmospheric Reentry Vehicles and Systems, Arcachon (France) 2005.
 - “Kinetics of Particles in Relativistic Collisionless Shocks, in Particle Acceleration in Astrophysical Plasmas: Geospace and Beyond”
Mikhail V. Medvedev, Luis O. Silva, Ricardo A. Fonseca, J. W. Tonge, and Warren B. Mori
Edited by D. Gallagher, J. Horwitz, J. Perez, R. Preece, and J. Quenby, Geophysical Monograph Series, Volume 156, 2005
 - “Experimental study and modelling of the afterglow of an N₂-O₂ microwave discharge”
Pintassilgo, C.D., M. Mrázková, P. Vašina, V. Kudrle, V. Guerra and A. Tálský,
27th International Conference on Phenomena in Ionized Gases (ICPIG), Eindhoven (The Netherlands) 2005.

- “Kinetic study of the flowing afterglow of a N₂-CH₄ microwave discharge for metal nitrocarburising”
Pintassilgo, C.D., C. Jaoul, T. Belmonte, T. Czerwiec, and J. Loureiro,
16th International Symposium on Plasma Chemistry (ISPC), Toronto (Canada) 2005.
 - “Simple techniques to restore time-averaged Langmuir probe characteristics”
Tsv. K. Popov, F. M. Dias,
IW&SSPP I “First International Workshop & Summer School on Plasma Physics”, Kiten, Bulgaria, 2005, P6
 - “Production and study of Titan’s aerosols analogues with a RF low pressure plasma discharge”
C. Szopa, G. Cernogora, J.J. Correia, L. Boufendi, A. Jolly, P. Coll, and C. Pintassilgo,
Geophysical Research Abstracts, vol.7, 08006, Proceedings General Assembly European Geosciences Union (EGU), Viena (Austria) 2005.
 - “Characterisation and optimisation of a multiterawatt CPA laser system using SPIDER”
J. Wemans, G. Figueira, N. Lopes, L. Cardoso,
Proc. SPIE Vol. 5777, 642 (2005)
- 19.2.5. Invited talks in international conferences**
- “Modelo hidrodinámico de difusión-convexão em grelha adaptativa, para plasmas de descarga micro-ondas em geometria coaxial”
Alves, L.L.
Congreso de Métodos Numéricos en Ingeniería (CMNI-05), Granada, Spain 2005.
 - “New features on surface-wave discharges: boundary phenomena and power deposition”
Alves, L.L.
XIth Conference on Plasma Physics and Applications, Iasi, Rumania 2005.
 - “Plasma laboratory simulations of Titan’s aerosols, Invited Topical Review Letters”
Cernogora, G., C. Szopa, L. Boufendi, P. Coll, J.-M. Bernard, and C. Pintassilgo,
4th International Conference in Physics of Dust Plasmas (ICPDP) 2005, Orléans–France
 - “Basic physics issues in fast ignition”
Davies, J. R.
8th International Workshop on Fast Ignition of Fusion Targets 2005, Tarragona, Spain.
 - “The Alfvén Limit Revisited”
Davies, J. R.
2nd International Conference on the Frontiers of Plasma Physics and Technology 2005, Goa, India.
 - “Plasma Physics Applications”
Fajardo, M.
Research Courses on New X-ray Science: New Science in the VUV to Soft X-ray Domain, Hamburg, Germany, March 15-17, 2005
 - “Tablettop Ultra-Intense XUV Sources, Lasernet Task 2”
Fajardo, M.
workshop: Plasma-based x-ray lasers; Prague 1-2 Sep 2005
 - “Large-scale molecular plasma sources” (Invited lecture)
Ferreira, C. M., E. Tatarova, F. M. Dias, and J. Henriques,
XXVII International Conference on Phenomena in ionized Gases, July 17-22, Eindhoven, The Netherlands, 2005
 - “Kinetic processes in molecular microwave plasmas” (Invited lecture)
Ferreira, C. M., E. Tatarova, V. Guerra, J. Henriques and F. M. Dias
XIV International Summer School on “Vacuum, Electron and Ion Technologies”, 12-16 September, Sunny Beach, Bulgaria, 2005
 - “The Laboratory for Intense Lasers at IST”
Figueira, G.
LaserLab Users Meeting, St. Catherine’s College, Oxford, UK, April 2005
 - “Computational Methods for Laser Plasma Interactions”
Fonseca, R. A.
NATO Advanced Studies Institute – Scottish Universities Summer School in Physics, SUSSP60, August 2005. [invited computational workshop organizer]
 - “Computational Challenges in Laser Plasma Interactions”
Fonseca, R. A.
NATO Advanced Studies Institute – Scottish Universities Summer School in Physics, SUSSP60, August 2005.
 - “An integrated tool for modeling astrophysical and laboratory plasmas”
Fonseca, R. A., osiris.framework:
Congreso de Métodos Numéricos en Ingeniería 2005, Granada, Spain, July 2005.
 - “Visualization and data analysis of computer simulations”
Fonseca, R. A.
7th International School Symposium for Space Simulations – ISSS 7, Kyoto, Japan, March 2005.
 - “Kinetic modeling of the nitrogen afterglow”
Guerra, V., P. A. Sá, and J. Loureiro
16th Symposium on Physics of Switching Arc, Nové Město – Moravě (Czech Republic) 2005.
 - “Mutual interactions between finite laser beams in plasmas”
Lopes, N. C.
2005 SSAAP Symposium, Las Vegas, NV- USA, August 2005
 - “Acceleration processes in the Peta-Watt regime”
Mendonça, J. T.

RAL Christmas Meeting, Abingdon, U.K., 19th to 20th December 2005.

- “*New results in photon kinetics*”
Mendonça, J. T.
Brazilian Conference on Plasma Physics, Rio de Janeiro, Brazil, 27th to 30th November 2005.
- “*Recent advances in wave kinetics*”
Mendonça, J. T.
Autumn College on Plasma Physics, International Centre for Theoretical Physics, Trieste, Italy, 5th to 30th September 2005.
- “*Acceleration of photons and quasi-particles*”
Mendonça, J. T.
Scottish Universities Summer School in Physics, St. Andrews, Scotland UK, 14th to 27th August 2005.
- “*The artificial magnetosphere concept*”
Mendonça, J. T.
IGA 2005 - 10th Scientific Assembly of the International Association of Geomagnetism and Aeronomy, Toulouse, France, 18th to 29th July 2005.
- “*Extreme states of matter*”
Mendonça, J. T.
6th International Summer School-Conference "Let's Face Chaos through Nonlinear Dynamics, Maribor, Slovenia, 26th June to 10th July 2005.
- “*Photon acceleration in plasma and gravitational fields*”
Mendonça, J. T.
The Rank Prize Funds, Mini-Symposium on High Intensity Laser Plasma Interactions, Grasmere, U.K., 4th to 7th April 2005.
- “*Photons, Gravitons and Einstein*”
Mendonça, J. T.
RAL Lecture included in the commemoration of "The World Year of Physics, 31th March 2005.
- “*Magnetic field effects in ultra-intense laser plasmas*”
Mendonça, J. T.
International Workshop on Physics of High Energy Density in Matter, Hirschegg, Austria, 30th January to 4th of February 2005.
- “*A two-step process for ion heating in IFE*”
Mendonça, J. T.
8th International Workshop on Fast Ignition of Fusion Targets 2005, Tarragona, Spain.
- “*N2-O2 afterglow for plasma sterilization*” *Topical Invited Lecture*
Pintassilgo, C.D.
18th European Conference on the Atomic and Molecular Physics of Ionised Gases (ESCAMPIG) 2006, Lecce–Italy
- “*Physical problems (microphysics) in relativistic plasma flows, Relativistic Jets: The Common Physics of AGN, Microquasars, and Gamma-Ray Bursters*”
Silva, Luís O.

Ann Arbor, Michigan, December 2005

- “*White light parametric instabilities in plasmas*”
Silva, Luís O.
Autumn College on Plasma Physics, Abdus Salam ICTP International Centre for Theoretical Physics, Trieste, Italy, September 2005.
 - “*PIC simulations of relativistic shocks, Astrophysical sources of high energy particles and radiation*”
Silva, Luís O.
Torun, Poland, June 2005
 - “*Formation of strong shocks by laser pulses*”
Silva, Luís O.
April 2005 Meeting of the American Physical Society, Tampa, Florida, April 2005
 - “*Photon kinetics, Multiscale Processes in Fusion Plasmas*”
Silva, Luís O.
IPAM/UCLA Workshop, Los Angeles, California, January 2005
 - “*Very High Mach Number Shock Waves Resulting from Collisions of Plasma Slabs*”
Sorasio, G.
Autumn College on Plasma Physics, Abdus Salam ICTP International Centre for Theoretical Physics, Trieste, Italy, September 2005.
 - “*Shielding potential around a body immersed in a plasma: effect of electron emission*”
Sorasio, G.
IGA 2005 - 10th Scientific Assembly of the International Association of Geomagnetism and Aeronomy, Toulouse, France, 18th to 29th July 2005.
 - “*Wave driven plasma sources*” (*Invited lecture*)
Tatarova, E., F. M. Dias, J. Henriques and C. M. Ferreira,
XIV International Summer School on “Vacuum, Electron and Ion Technologies” (12-16 September 2005, Sunny Beach, Bulgaria)
 - “*Large-Scale Microwave Plasma Sources Interdisciplinary*” (*Invited lecture*)
Tatarova, E.
Workshop on Electronic Materials and Interaction of Plasmas with Matter (University of Minho, Guimarães, 16 December, Portugal)
- 19.2.6. Laboratorial Prototypes**
- “*Device to measure simultaneously a laser pulse-front inhomogeneity and its intensity autocorrelation in a single-shot fashion*”
Figueira, G., L. Cardoso, N. Lopes, J. Wemans
 - “*Device to produce a plasma waveguide for intense lasers*”
Lopes, N.C, C. Clayton, F. Fang
 - “*Setup for time-resolved measures of plasma waveguide density profiles*”
Macedo, R., N.C. Lopes, C. Clayton

- “*High-voltage ultra-short pulser*”
Sampaio, J., N.C. Lopes, C. Clayton

19.2.7. Prizes and Awards

- Prof. Matos Ferreira was awarded the degree of “*Grande Oficial da Ordem do Infante D. Henrique*” for his contributions to Physics in Portugal by the President of the Portuguese Republic in November 2005
- Bruno Brandão received the prize “*Best 2nd year LEFT/IST student*”, in October 2005.
- Jorge Vieira received the Best Poster Prize at the 32nd EPS Conference Plasma Physics and Controlled Fusion 2005, Tarragona, in July 2005, with the work “*Optimizing Wave Breaking and Self Injection in the Laser Wake-field Accelerator*”
- Jorge Vieira received the Best Poster Prize at the 60th Scottish Universities Summer School in Physics Best Poster Prize, St. Andrews, Scotland, in August 2005, with the work “*Self Injection in the Laser Wake-field Accelerator*”