

2007 Publications

International and national journal

R Cavazzana, G Serianni, P Scarin, M Agostini, N Vianello, Y Yagi, H Koguchi, S Kiyama, H Sakakita and Y Hirano: "Investigation of plasma edge turbulence using a gas-puff imaging system in the reversed-field pinch device TPE-RX", *Plasma Phys. Control. Fusion* 49 (2007) 129-143

P. Zanca: "Self similar current decay experiment in RFX-mod", *Plasma Phys. Control. Fusion* 49 (2007) 113-118

A. Alfier, R. Pasqualotto: "New Thomson scattering diagnostic on RFX-mod", *Rev. of Scien. Instrum.* 78, 013505 (2007)

P Martin, L Marrelli, A Alfier, F Bonomo, D F Escande, P Franz, L Frassinetti, M Gobbin, R Pasqualotto, P Piovesan, D Terranova and the RFX-mod team: "A new paradigm for RFP magnetic self-organization: results and challenges", *Plasma Phys. Control. Fusion* 49 (2007) A177-A193

M. Garcia-Munoz, P. Martin, H.-U. Fahrbach, M. Gobbin, S. G"unter, M. Maraschek, L. Marrelli, H. Zohm and the ASDEX Upgrade Team: "NTM induced fast ion losses in ASDEX Upgrade", *Nucl. Fusion* 47 (2007) L10-L15

Leonardo Giudicotti and Matteo Brombin: "Data analysis for a rotating quarter-wave, far-infrared Stokes polarimeter" *APPLIED OPTICS* Vol. 46, No. 14 (2007)

P. Scarin , M. Agostini, R. Cavazzana, F. Sattin, G. Serianni, N. Vianello: "Edge turbulence in RFX-mod virtual-shell discharges", *Journal of Nuclear Materials* 363-365 (2007) 669-673

R Behn, A Alfier, S Yu Medvedev, Ge Zhuang, R Pasqualotto, P Nielsen, Y Martin and the TCV team: "Edge profiles of electron temperature and density during ELM My H-mode in ohmically heated TCV plasmas", *Plasma Phys. Control. Fusion* 49 (2007) 1289-1308

L. Frassinetti, D. Terranova, Y. Hirano, H. Koguchi, F. Auriemma, K. Yambe and H. Sakakita: "Cold Pulse propagation in a reversed-field pinch", *Nuclear Fusion* 47 (2007) 135-145

D. Terranova, L. Garzotti, B. Pégourié, H. Nehme, D. Frigione, S. Martini, E. Giovannozzi, O. Tudisco: "Pellet ablation and mass deposition in FTU: Analysis of vertical and low field side injection experiments", *Nuclear Fusion* 47 (2007) 288-296

P. Zanca, D. Terranova, M. Valisa, S. Dal Bello: "Plasma wall interactions in RFX-mod with virtual magnetic boundary", *Journal of Nucl. Mater* 363-365 (2007) 733-737

T.C. Hender, J.C Wesley, J. Bialek, A. Bondeson, A.H. Boozer, R.J. Buttery, A. Garofalo, T.P Goodman, R.S. Granetz, Y. Gribov, O. Gruber, M. Gryaznevich, G. Giruzzi, S. Günter, N. Hayashi, P. Helander, C.C. Hegna, D.F. Howell, D.A. Humphreys, G.T.A. Huysmans, A.W. Hyatt, A. Isayama, S.C. Jardin, Y. Kawano, A. Kellman, C. Kessel, H.R. Koslowski, R.J. La Haye, E. Lazzaro, Y.Q. Liu, V. Lukash, J. Manickam, S. Medvedev, V. Mertens, S.V. Mirnov, Y. Nakamura, G. Navratil, M. Okabayashi, T. Ozeki, R. Paccagnella, G. Pautasso, F. Porcelli, V.D. Pustovitov, V. Riccardo, M. Sato, O. Sauter, M.J. Schaffer, M. Shimada, P. Sonato, E.J. Strait, M. Sugihara, M. Takechi, A.D. Turnbull, E. Westerhof, D.G. Whyte, R. Yoshino, H. Zohm and the ITPA MHD, Disruption and Magnetic Control Topical Group: "Chapter 3: MHD stability, operational limits and disruptions", (PROGRESS IN THE ITER PHYSICS BASIS)

C. Angioni, L. Carraro, T. Dannert, N. Dubuit, R. Dux, C. Fuchs, X. Garbet, L. Garzotti, C. Giroud, R. Guirlet, F. Jenko, O. J. W. F. Kardaun, L. Lauro-Taroni, P. Mantica, M. Maslov, V. Naulin, R. Neu, A. G. Peeters, G. Pereverzev, M. E. Puiatti, T. Pütterich, J. Stober, M. Valovi , M. Valisa, H. Weisen, and A. Zabolotsky: "Particle and impurity transport in the Axial Symmetric Divertor Experiment Upgrade and the Joint European Torus, experimental observations and theoretical understanding", *Phys. Plasmas* 14, 055905 (2007)

G Van Oost, V V Bulanin, A J H Donné, E Z Gusakov, A Kraemer-Flecken, L I Krupnik, A Melnikov, S Nanobashvili, P Peleman, K A Razumova, J Stoeckel ,V Vershkov, J Adamek, A B Altukov, V F Andreev, L G Askinazi, I S Bondarenko, J Brotankova, A Yu Dnestrovskij, I Duran, L G Eliseev, L A Esipov, S A Grashin, A D Gurchenko, G M D Hogeweij, M Hron, C Ionita, S Jachmich, S M Khrebтов, D V Koupienko, S E Lysenko, E Martines, S V Perfilov, A V Petrov, A Yu Popov, D Reiser, R Schrittwieser, S Soldatov, M Spolaore, A Yu Stepanov, G Telesca, A O Urazbaev, G Verdoollaeghe, F Zacek and O Zimmermann: "Multi-machine studies of the role of turbulence and electric fields in the establishment of improved confinement in tokamak plasmas", *Plasma Phys. Control. Fusion* 49 (2007) A29-A44

Henry Gardner, Gabriele Manduchi "Design Patterns for e-Science", Springer Verlag (2007)

G. Serianni, R. Cavazzana, M. Agostini, Paolo Scarin: "2D Tomographic Imaging of the Edge Turbulence in RFX-Mod", *Plasma and Fusion Research: Regular Articles*, Volume 2, S1119 (2007)

G. Serianni, M. Agostini, R. Cavazzana, P. Scarin: "Application of 2D tomographic imaging techniques to edge turbulence in RFX-mod", *Plasma Phys. Control. Fusion* 49 (2007) 2075-2086

G Serianni, M Agostini, V Antoni, R Cavazzana, E Martines, F Sattin, P Scarin, E Spada, M Spolaore, N Vianello and M Zuin: "Coherent structures and transport properties in magnetized plasmas", *Plasma Phys. Control. Fusion* 49 (2007) B267-B280

D. F. Escande^{1,2} and F. Sattin: "When Can the Fokker-Planck Equation Describe Anomalous or Chaotic Transport?", *Phys. Rev. Lett.* 99, 185005 (2007)

G. Spizzo, R.B. White, S. Cappello: "Chaos generated pinch effect in toroidal confinement devices", Phys. of Plasmas 14, 102310 (2007)

M. Agostini, S.J Zweben, R. Cavazzana, P. Scarin, and G. Serianni, R. J. Maqueda, D. P. Stotler: "Study of statistical properties of edge turbulence in the National Spherical Torus Experiment with the gas puff imaging diagnostic", Phys. of Plasmas 14, 102305 (2007)

C. Angioni, L. Carraro, T. Dannert, N. Dubuit, R. Dux, C. Fuchs, X. Garbet, L. Garzotti, C. Giroud, R. Guirlet, F. Jenko, O. J. W. F. Kardaun, L. Lauro-Taroni, P. Mantica, M. Maslov, V. Naulin, R. Neu, A. G. Peeters, G. Pereverzev, M. E. Puiatti, T. Pütterich, J. Stober, M. Valovič, M. Valisa, H. Weisen, A. Zabolotsky, ASDEX Upgrade Team, and JET EFDA Contributors: "Particle and impurity transport in the Axial Symmetric Divertor Experiment Upgrade and the Joint European Torus, experimental observations and theoretical understanding", Phys. of Plasmas 14, 055905 (2007)

P. Zanca, L. Marrelli, G. Manduchi and G. Marchiori: "Beyond the intelligent shell concept: the clean-mode-control", Nuclear Fusion 47 (2007) 1425–1436

Predebon, R. Paccagnella: "Influence of slow particle dynamics on transport in stochastic plasmas", Phys. of Plasmas 14, 082310 (2007)

M Mattioli, G Mazzitelli, M Finkenthal, P Mazzotta, K B Fournier, J Kaastra and M E Puiatti: "Updating of ionization data for ionization balance evaluations of atoms and ions for the elements hydrogen to germanium", J. Phys. B: At. Mol. Opt. Phys. 40 (2007) 3569–3599

P. Innocente, A. Alfier, L. Carraro, R. Lorenzini, R. Pasqualotto, D. Terranova and the RFX Team: "Transport and confinement studies in the RFX-mod reversed-field pinch experiment", Nuclear Fusion 47 (2007) 1092–1100

D. Terranova, A. Alfier, F. Bonomo, P. Franz, P. Innocente, and R. Pasqualotto: "Enhanced Confinement and Quasi-Single-Helicity Regimes Induced by Poloidal Current Drive", Phys. Rev. Lett. 99, 095001 (2007)

R. Lorenzini, D. Terranova, F Auriemma, R. Cavazzana, P. Innocente, S. Martini, G. Serianni and M. Zuin: "Toroidally asymmetric particle transport caused by phase-locking of MHD modes in RFX-mod", Nuclear Fusion 47 (2007), No 11, 1468-1475

R. Paccagnella, D. Terranova and P. Zanca: "Modelling and interpretation of MHD active control experiments in RFX-mod", Nuclear Fusion 47 (2007) 990–996

S. Martini, M. Agostini, C. Alessi, A. Alfier, V. Antoni, L. Apolloni, F. Auriemma, P. Bettini, T. Bolzonella, D. Bonfiglio, F. Bonomo, M. Brombin, A. Buffa, A. Canton, S. Cappello, L. Carraro, R. Cavazzana, M. Cavinato, G. Chitarin, A. Cravotta, S. Dal Bello, A. De Lorenzi, L. De Pasqual, D.F. Escande, A. Fassina, P. Franz, G. Gadani, E. Gaio, L. Garzotti, E. Gazza, L. Giudicotti, F. Gnesotto, M. Gobbin, L. Grando, S.C. Guo, P. Innocente, R. Lorenzini, A. Luchetta, G. Malesani, G. Manduchi, G. Marchiori, D. Marcuzzi, L. Marrelli, P. Martin, E. Martines, A. Masiello, F. Milani, M. Moresco, A. Murari, L. Novello, S. Ortolani, R. Paccagnella, R. Pasqualotto, S. Peruzzo, R. Piovan, P. Piovesan, A. Pizzimenti, N. Pomaro, M.E. Puiatti, G. Rostagni, F. Sattin, P. Scarin, G. Serianni, P. Sonato, E. Spada, A. Soppelsa, G. Spizzo, M. Spolaore, C. Taccon, C. Taliercio, D. Terranova, V. Toigo, M. Valisa, N. Vianello, P. Zaccaria, P. Zanca, B. Zaniol, L. Zanotto, E. Zilli, G. Zollino and M. Zuin: "Active MHD control at high currents in RFX-mod", Nuclear Fusion 47 (2007) 783–791

V. Pericoli-Ridolfini, A. Alekseyev, B. Angelini, S.V. Annibaldi, M.L. Apicella, G. Apruzzese, E. Barbato, J. Berrino, A. Bertocchi, W. Bin, F. Bombarda, G. Bracco, A. Bruschi, P. Buratti, G. Calabro, A. Cardinali, L. Carraro, C. Castaldo, C. Centioli, R. Cesario, S. Cirant, V. Cocilovo, F. Crisanti, G. D'Antona, R. De Angelis, M. De Benedetti, F. De Marco, B. Esposito, D. Frigione, L. Gabellieri, F. Gandini, E. Giovannozzi, G. Granucci, F. Gravanti, G. Grossetti, G. Grossi, F. Iannone, H. Kroegler, V. Lazarev, E. Lazzaro, M. Leigheb, I.E. Lyublinski, L. Lubyako, G. Maddaluno, M. Marinucci, D. Marocco, J.R. Martin-Solis, G. Mazzitelli, C. Mazzotta, V. Mellera, F. Mirizzi, G. Monari, A. Moro, V. Muzzini, S. Nowak, F.P. Orsitto, L. Panaccione, M. Panella, L. Pieroni, S. Poddar, M.E. Puiatti, G. Ravera, G. Regnoli, F. Romanelli, M. Romanelli, A. Shalashov, A. Simonetto, P. Smeulders, C. Sozzi, E. Sternini, U. Tartari, B. Tilia, A.A. Tuccillo, O. Tudisco, M. Valisa, A. Vertkov, V. Vitale, G. Vlad, R. Zagórski and F. Zonca: "Overview of the FTU results" Nuclear Fusion 47 No 10 (2007) S608-S621

D.J. Den Hartog, J.-W. Ahn, A.F. Almagri, J.K. Anderson, A.D. Beklemishev, A.P. Blair, F. Bonomo, M.T. Borchardt, D.L. Brower, D.R. Burke, M. Cengher, B.E. Chapman, S. Choi, D.J. Clayton, W.A. Cox, S.K. Combs, D. Craig, H.D. Cummings, V.I. Davydenko, D.R. Demers, B.H. Deng, W.X. Ding, F. Ebrahimi, D.A. Ennis, G. Fiksel, C. Foust, C.B. Forest, P. Franz, L. Frassinetti, S. Gangadhara, J.A. Goetz, R.W. Harvey, D.J. Holly, B.F. Hudson, A.A. Ivanov, M.C. Kaufman, A.V. Kuritsyn, A.A. Lizunov, T.W. Lovell, R.M. Magee, L. Marrelli, P. Martin, K.J. McCollam, M.C. Miller, V.V. Mirnov, P.D. Nonn, R. O'Connell, S.P. Oliva, P. Piovesan, S.C. Prager, I. Predebon, J.A. Reusch, J.S. Sarff, V.A. Svidzinski, T.D. Tharp, M.A. Thomas, Yu.A. Tsidulko, M.D. Wyman and T. Yates: "Recent improvements in confinement and beta in the MST reversed-field pinch", Nuclear Fusion 47 No 9 (2007) L17-L20

M. Gobbin, L. Marrelli, P. Martin, R. B. White: "Ion and electron local transport inside single helicity islands in the reversed field pinch", Plasma Physics Laboratory, Princeton University, Princeton, New Jersey 08543, Phys. Plasmas 14, 072305 (2007)

R Behn, A Alfier, S Yu Medvedev, Ge Zhuang, R Pasqualotto, P Nielsen, Y Martin and the TCV team: "Edge profiles of electron temperature and density during ELM H-mode in ohmically heated TCV plasmas", Plasma Phys. Control. Fusion 49 (2007) 1289–1308

L. Marrelli, P. Zanca, M. Valisa, G. Marchiori, A. Alfier, F. Bonomo, M. Gobbin, P. Piovesan, D. Terranova, M. Agostini, C. Alessi, V. Antoni, L. Apolloni, F. Auriemma, P. Bettini, T. Bolzonella, D. Bonfiglio, M. Brombin, A. Buffa, A. Canton, S. Cappello, L. Carraro, R. Cavazzana, M. Cavinato, G. Chitarin, S. Dal Bello, A. De Lorenzi, D.F. Escande, A. Fassina, P. Franz, G. Gadani, E. Gaio, E. Gazza, L. Giudicotti, F. Gnesotto, L. Grando, S.C. Guo, P. Innocente, R. Lorenzini, A. Luchetta, G. Malesani, G. Manduchi, D. Marcuzzi, P. Martin, S. Martini, E. Martines, A. Masiello, F. Milani, M. Moresco, A. Murari, L. Novello, S. Ortolani, R. Paccagnella, R. Pasqualotto, S. Peruzzo, R. Piovan, A. Pizzimenti, N. Pomaro, M.E. Puiatti, G. Rostagni, F. Sattin, P. Scarin, G. Serianni, P. Sonato, E. Spada, A.

Soppelsa, G. Spizzo, M. Spolaore, C. Taccon, C. Taliercio, V. Toigo, N. Vianello, P. Zaccaria, B. Zaniol, L. Zanotto, E. Zilli, G. Zollino, M. Zuin: "Magnetic Self Organization, MHD Active Control and Confinement in RFX-mod", *Plasma Phys. Control. Fusion* 49 (2007) B359-B369

S. V. Annibaldi, F. Bonomo, R. Pasqualotto, G. Spizzo, A. Alfier, P. Buratti, P. Piovesan, D. Terranova: "Strong transport reduction in the helical core of the reversed-field pinch", *Phys. Plasmas* 14 (2007) 112515

S J Zweben, J A Boedo, O Grulke, C Hidalgo, B LaBombard, R J Maqueda, P Scarin and J L Terry: "Edge turbulence measurements in toroidal fusion devices", *Plasma Phys. Control. Fus.*, 49, S1 (2007)

B. Cannas, A. Fanni, P. Sonato, M.K. Zedda, and JET-EFDA contributors: "Real time prediction of disruptions at JET", *Nuclear Fusion*, 47, (2007) 1559-1569

R. Delogu, A. Fanni, A. Montisci, "Geometrical Synthesis of MLP Neural Networks," and *Neurocomputing* , Elsevier ISSN: 0925-2312. doi:10.1016/j.neucom. 2007.02.006 (in stampa.).

P. Testoni, F. Cau, P. Sonato: "Electromechanical analysis of the ITER Ion Cyclotron antenna structure and components", *Fus. Eng. and Design*, 82 (2007) 666-670

P. Testoni, F. Cau, M. Di Mauro, A. Fanni, A. Portone, P. Sonato, E. Salpietro: "Electro-mechanical analysis of the European Superconducting Dipole", *Fus. Eng. and Design*, 82 (2007) 1423-1430.

F. Cau, M. Di Mauro, A. Fanni, A. Montisci, and P. Testoni: "A Neural Networks Inversion-Based Algorithm for Multiobjective Design of a High-Field Superconducting Dipole Magnet," *IEEE Trans. on Mag.*, 43, no. 4, 1557-1560, April 2007

P. Testoni, F. Cau and P. Sonato: "Electromechanical analysis of the ITER ion cyclotron antenna structure and components", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 666

A. Masiello, A. De Lorenzi, L. Grando and L. Svensson: "Critical issues of HV dc vacuum and pressurized gas environments for the ITER NB injector", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 819

A. De Lorenzi, L. Grando, R. Gobbo, G. Pesavento, P. Bettini, R. Specogna and F. Trevisan: "The insulation structure of the 1 MV transmission line for the ITER neutral beam injector", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 836-844

P. Agostinetti, S. Dal Bello, M. Dalla Palma and P. Zaccaria: "Thermo-mechanical design of the SINGAP accelerator grids for ITER NB injectors", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 860-866

M. Bigi, V. Toigo and L. Zanotto: "Protections against grid breakdowns in the ITER neutral beam injector power supplies", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 905-911

E. Gaio, W. Kraus, C. Martens, R. Piovan, E. Speth and V. Toigo: "Studies on the radio frequency power supply system for the ITER NB injector ion source", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 912-919

S. Peruzzo, G. Anacleto, S. Dal Bello, M. Dalla Palma, R. Nocentini and P. Zaccaria: "Thermal analyses for the design of the ITER-NBI arc driven ion source", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 933-940

P. Bettini, M. Cavinato and A. De Lorenzi: "Model of the RFX-mod poloidal field circuit", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 966-973

G. Marchiori and A. Soppelsa: "Development and validation of an electromagnetic model of the active control system of MHD modes in RFX-mod", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 1015-1022

T. Bolzonella, M. Cavinato, E. Gaio, L. Grando, A. Luchetta, G. Manduchi, G. Marchiori, L. Marrelli, R. Paccagnella, A. Soppelsa and P. Zanca: "Feedback control of resistive wall modes by saddle coils in RFX-mod", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 1064-1072

L. Zabeo, G. Artaserse, A. Cenedese, F. Piccolo and F. Sartori: "A new approach to the solution of the vacuum magnetic problem in fusion machines", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 1081-1088

B. Cannas, R.S. Delogu, A. Fanni, P. Sonato and M.K. Zedda: "Support vector machines for disruption prediction and novelty detection at JET", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 1124-1130

P. Testoni, F. Cau, A. Portone, M. Di Mauro, A. Fanni, E. Salpietro and P. Sonato: "Electro-mechanical analysis of the European superconducting dipole", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 1423-1430

V. Toigo, L. Zanotto, M. Bigi, E. Gaio, J.H. Hay, R. Piovan and S.R. Shaw: "Conceptual design of the enhanced radial field amplifier for plasma vertical stabilisation in JET", *Fus. Eng. and Design*, 82, Issues 5-14 (2007) 1599-1606

A. Masiello, S. Dal Bello, M. Fincato and F. Rossetto: "Performance of modified pulse-operated piezoelectric valves for the gas inlet system of RFX", Fus. Eng. and Design, 82, Issues 15-24 (2007) 2282-2287

P. Zaccaria, S. Dal Bello and N. Pilan: "Thermo-mechanical analyses of large ceramic rings during brazing process", Fus. Eng. and Design, 82, Issues 15-24 (2007) 2588-2594

D. Marcuzzi, P. Agostinetti, M. Dalla Palma, H.D. Falter, B. Heinemann, R. Riedl: "Design of the RF ion source for the ITER NBI", Fusion Engineering and Design 82 Issues 5-14 (2007) 798-805

M Leigheb, M Romanelli, L Gabellieri, L Carraro, M Mattioli, C Mazzotta, M E Puiatti, L Lauro-Taroni, M Marinucci, S Nowak, L Panaccione, V Pericoli, P Smeulders, O Tudisco, C Sozzi, M Valisa and the FTU team: "Molybdenum transport in high density FTU plasmas with strong radio frequency electron heating" Plasma Phys. Control. Fusion, 49, No 11 (2007) 1897-1912

R. Lorenzini, D. Terranova, F. Auriemma, R. Cavazzana, P. Innocente, S. Martini, G. Serianni and M. Zuin: "Toroidally asymmetric particle transport caused by phase-locking of MHD modes in RFX-mod", Nuclear Fusion, 47 (2007), No 11, 1468-1475

J Stöckel, J Adamek, P Balan, O Bilyk, J Brotankova, R Dejarnac, P Devynck, I Duran, J P Gunn, M Hron, J Horacek, C Ionita, M Kocan, E Martines, R Panek, P Peleman, R Schriftwieser, G Van Oost and F Zacek: "Advanced probes for edge plasma diagnostics on the CASTOR tokamak", Journal of Physics: Conference Series 63 (2007) 012001

Conference proceedings

M. Brombin , A. Boboc, C. Mazzotta, L. Zabeo, A. Murari, F. Orsitto, E. Zilli, L.Giudicotti and JET EFDA contributors: "The line-integrated plasma density from both interferometry and polarimetry at JET", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P-2.144

A. Pizzimenti, R. Paccagnella: "Linear control model for m=0 modes in the RFX-mod Reversed Field Pinch", 34thEPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P1.135

D.F. Escande and F. Sattin: "Limits and potentialities of Fokker-Planck Equation in describing anomalous transport", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P4.051

B. Zaniol, L. Carraro, E. Gazza, I. Predebon, M.E. Puiatti, P. Scarin, M. Valisa: "Impurity flow studies in RFX-mod operation with reduced MHD mode activity", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P1.082

M. Agostini, R. Cavazzana, F. Sattin, P. Scarin, G. Serianni, M. Spolaore, N. Vianello: "Characterisation of the 2-dimensional edge turbulence of RFX-mod experiment", 34thEPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P2.044

M. Agostini, S.J. Zweben, R. Cavazzana, P. Scarin, G. Serianni, R.J. Maqueda, D.P. Stotler: "Comparison of L-mode and H-mode edge turbulence in NSTX with the GPI diagnostic", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P2.040

M. Zuin, N. Vianello, M. Spolaore, T. Bolzonella, R. Cavazzana, E. Martines, D. Terranova, G. Serianni, E. Spada, V. Antoni: "Relaxation event fast dynamics in RFX-mod", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P1.118

V. Igochine, P. Piovesan, A. Flaws, M. García-Muñoz, S. Guenter, , M. Marascheck, L. Marrelli, P. Martin, P. McCarty, K. Sassenberg, H. Zohm: "TAE internal structure through high-resolution soft x-ray measurements in ASDEX-Upgrade", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P1.139

M. Gobbin, L. Marrelli, F. Bonomo, P. Franz, P. Martin, R.B. White: "Implementation in the ORBIT code of radial perturbations in the RFX-mod toroidal geometry", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P1.107

F. Bonomo, P. Franz, M. Gobbin, L. Marelli, G. Spizzo, A. Alfier, P. Martin, R. Pasqualotto, P. Piovesan, D. Terranova: "Imaging of core MHD activity in RFX-mod", 34thEPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P1.130

A. Alfier, S. Annibaldi, F. Bonomo, P. Buratti, P. Franz, L. Frassinetti, L. Marrelli, R. Pasqualotto, P. Piovesan, G. Spizzo, D. Terranova: "Energy confinement in high current RFX-mod plasmas", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P1.065

P. Martin, M. Gobbin, L. Marrelli, H.-U. Fahrbach , M. Garcia-Munoz, S. Günter, V. Igochine, M. Marascheck, M. Reich, E. Strumberger , R.B. White, H. Zohm and the AUG team:: "Numerical study of fast ions transport induced by MHD instabilities in the tokamak", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P4.073

S. Martini, T. Bolzonella, L. Marrelli, R. Paccagnella, D. Terranova, P. Zanca and the RFX Team: "High current RFPs in RFX-mod with induced Locked Mode rotation", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P5.134

P. Innocente, A. Alfier, A. Canton, R. Lorenzini, E. Martines, G. Spizzo, R. Pasqualotto, D. Terranova : "Particles and Energy stochastic transport in the RFX-mod reversed field pinch experiment", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P2.051

F. Auriemma, D. Terranova, R. Lorenzini, P. Innocente, Y. Hirano, H. Koguchi H. Sakakita: "Interaction of pellets with plasma in standard and advanced regimes at TPE-RX reversed field pinch experiment", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P4.156

J Stockel, J Adamek, J Brotáková, R Dejarnac, P Devynck, I Duran, J Gunn, J Horacek, M Hron1, M Kocan, E Martines, R Panek, M Spolaore, G Van Oost: "Survey of results on plasma biasing in the CASTOR tokamak", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31F (2007) P-2.031

L. Marrelli, M. Valisa, and the RFX-mod team: "MHD active control and density regimes in RFX-mod", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) Invited

L. Carraro, M.E. Puiatti, Valisa, M. C. Angioni ,P. Buratti, R. Butterly, I. Coffey, D. Van Eester , C. Giroud, L. Lauro Taroni, K. Lawson, E. Lerche P. Mantica, M. Mattioli, V. Naulin, and JET-EFDA contributors: "Impurity profile control in JET plasmas with radio-frequency power injection", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) O4.028

G. Serianni, M. Agostini, V. Antoni, R. Cavazzana, E. Martines, F. Sattin, P. Scarin, E. Spada, M. Spolaore, N. Vianello, M. Zuin: "Coherent structures and transport properties in magnetised plasmas", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) Invited

I Nunes, G Saibene, R Sartori, P J Lomas, C P Perez, S Saarelma, A Alfier, Y. Andrew, G Arnoux, M Beurskens, A Boboc, I Coffey, K Crombe, E Giovannozzi, M. Kempenaars, K Lawson, H Leggate, E de la Luna, C McKenna, V Parail, R. Pasqualotto and the JET EFDA contributors: "Small ELMs in quasi-double null plasmas at JET", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P5.137

E. de la Luna, L. Barrera, L. Figini, A. Alfier, Y. Andrew, M. Beurskens, D. Farina, E. Giovannozzi, M. Kempenaars, A. Loarte, P. Lomas, C. McKeena, R. Pasqualotto, G. Saibene, R. Sartori, E. R. Solano and JET-EFDA contributors: "Measurements of inboard-outboard asymmetry of pedestal temperature collapse during Type I ELMs in JET", 34th EPS Conference on Plasma Physics, 2 - 6 July 2007, Europhysics Conference Abstracts Vol. 31I (2007) P5.085

F. Milani, V. Toigo, L. Zanotto: "Energy storage for power hole mitigation on the electric grid due to the ITER Neutral Beam Injector", 22nd SOFE - Albuquerque - New Mexico (USA) - 17 - 22 June 2007, Proceedings to be published

P. Agostinetti, S. Dal Bello, M. Dalla Palma ,D. Marcuzzi, P. Zaccaria, R. Nocentini, M. Froeschle, B. Heinemann, R. Riedl: "Thermo-mechanical design of the ITER NB Injector grids for Radio Frequency Ion Source and SINGAP Accelerator", 22nd SOFE - Albuquerque - New Mexico (USA) - 17 - 22 June 2007, Proceedings to be published

M. Bigi and JET EFDA Contributors: "An LC output filter with voltage clamp for the Enhanced Radial Field Amplifier", 22nd SOFE - Albuquerque - New Mexico (USA) - 17 - 22 June 2007, Proceedings to be published

R. Piovan, E. Gaio, L.Novello: "Performance analysis of a hybrid IGCTS- mechanical dc circuit breaker for SC magnet quench protection", 22nd SOFE Albuquerque - New Mexico (USA) - 17 - 22 June 2007, Proceedings to be published

M. Cavinato, A. Luchetta, G. Manduchi, G. Marchiori, A. Soppelsa, C. Taliercio: "Control of plasma parameters by the externally applied toroidal field in RFX-mod", Proceedings of Sixth IAEA Technical Meeting on Control, Data Acquisition, and Remote Participation for Fusion Research, 4 - 8 June 2007 , Inuyama, Japan

G. Marchiori, L. Marrelli, A. Soppelsa, P. Zanca: "Design of a New Controller of MHD Modes in RFX-mod", Proceedings of Sixth IAEA Technical Meeting on Control, Data Acquisition, and Remote Participation for Fusion Research, 4 - 8 June 2007, Inuyama, Japan

Barbalace, A. Luchetta*, G. Manduchi, A. Soppelsa, C. Taliercio: "Real-Time Communication for Distributed Plasma Control Systems", Proceedings of Sixth IAEA Technical Meeting on Control, Data Acquisition, and Remote Participation for Fusion Research, 4 - 8 June 2007 , Inuyama, Japan

G. Manduchi, F. Iannone , F. Imbeaux, , G. Huysmans, J. Lister: "A Universal Access Layer for the Integrated Tokamak Modeling Task Force", Proceedings of Sixth IAEA Technical Meeting on Control, Data Acquisition, and Remote Participation for Fusion Research, 4 - 8 June 2007, Inuyama, Japan

G.Manduchi, A. Luchetta, C. Taliercio, T.Fredian, J.Stillerman: "Real-Time Data Access Layer for MDSplus", Proceedings of Sixth IAEA Technical Meeting on Control, Data Acquisition, and Remote Participation for Fusion Research, 4 - 8 June 2007, Inuyama, Japan

A.Barbalace, A. Luchetta, G. Manduchi, M. Moro, A. Soppelsa, C. Taliercio: "Performance Comparison of VxWorks, Linux RTAI and Xenomai in a Hard Real-Time Application", 15 th IEEE NPSS Real Time Conference 2007 April 29- May 4, 2007, Fermilab, Batavia, IL USA, proceedings to be published

O. Barana, A. Luchetta, G. Manduchi and C. Taliercio: "New Architecture for the RFX-mode Machine Control System", 15 th IEEE NPSS Real Time Conference 2007 April 29- May 4, 2007 Fermilab, Batavia, IL USA, proceedings to be published

O. Barana, A. Murari and I. Coffey: "Artificial Neural Networks for Real-time Diagnostic of High-Z Impurities in Reactor-relevant Plasmas", Proceedings of 2007 IEEE International Symposium on Signal Processing, 3 - 5 October 2007 , Alcalà de Henares (Madrid), Spain

B. Cannas, R. S. Delogu, A. Fanni, A. Montisci, M.K.Zedda, P.Sonato: "Geometrical Kernel Machine for Prediction and Novelty Detection of Disruptive Events in TOKAMAK Machines", 2007 IEEE International Workshop on Machine Learning for Signal Processing, Proc. to be published

Adriano Luchetta, Gabriele Manduchi: "Preliminary Design Concepts for the Control and Data Acquisition Systems of the ITER Neutral Beam Injector and Associated Test Facility", proceedings of the International Conference on Accelerator and Large Experimental Physics Control Systems, 15-19 October 2007, Knoxville, USA, TPPB28

Gabriele Manduchi, Antonio Barbalace, Adriano Luchetta, Cesare Taliercio: "MDSplus Real-Time Data Access in RTAI", proceedings of the International Conference on Accelerator and Large Experimental Physics Control Systems, 15-19 October 2007, Knoxville, USA, TPPA21

Contributions to international and national conferences

N.Vianello, E.Spada, R.Cavazzana, E.Martines, G.Serianni, M.Spoloore, M.Zuin and V.Antoni: "Energy balance including turbulence effects in Reversed Field Pinch Plasmas", presented at 12th US-EU Transport Taskforce Workshop, San Diego CA USA, 17-20 April 2007

P. Innocente and the RFX Team: "Confinement enhancement with Virtual Shell in RFX-mod", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

M.E. Puiatti, M. Valisa, S. Cappello, L. Carraro, L. Frassinetti, P.Innocente, R. Lorenzini, R. Paccagnella, F. Sattin, P. Scarin, G. Spizzo, M. Spolaore, N. Vianelloand the RFX team: "High density limit in hydrogen and helium discharges in RFX-mod", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

F. Auriemma, R. Lorenzini, D. Terranova, R. Cavazzana, P. Innocente, S. Martini, G. Serianni, M. Zuin: "Toroidally asymmetric particle transport caused by phase locking of MHD modes in RFX-mod", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

F. Auriemma, H. Koguchi, D. Terranova, Y. Hirano, P. Innocente, S. Kyiama, R. Lorenzini, H. Sakakita, K. Yambe, T. Asai: "Pellet injection in TPE-RX", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

P. Martin: "Fast ion confinement in RFP and comparison with tokamak", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

P. Piovesan, A. Alfieri, F. Bonomo, P. Franz, M. Gobbin, L. Marrelli, P. Martin,R. Pasqualotto, G. Spizzo, and the RFX-mod team: "Recent results on QSH in RFX-mod and MST", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

P. Zanca, L. Marrelli, G. Manduchi, G. Marchiori: "Beyond the Intelligent-Shell concept: the Clean-Mode-Control for tearing instabilities", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

L. Marrelli, A.Alfieri,T.Bolzonella, F.Bonomo, M.Gobbin, S.C.Guo, P.Franz, A.Luchetta, G.Manduchi, G.Marchiori, P.Martin, S.Martini,S.Ortolani, P.Piovesan, R.Paccagnella, R. Pasqualotto, A.Soppelsa, G.Spizzo, D.Terranova, P.Zanca and the RFX-mod team: "Active Control of Resistive KinActive Control of Resistive Kink Instabilities and Magnetic self-Organization", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

P. Scarin, M. Agostini, R. Cavazzana, F. Sattin, G. Serianni, N. Vianello, Y. Yagi, H. Koguchi, S. Kiyama, H. Sakakita, Y. Hirano: "Intermittent turbulence study in the edge of RFP plasma with GPI diagnostic", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

V. Antoni, M. Spolaore, N. Vianello, R. Cavazzana, G. Serianni,E. Martines, E. Spada, M. Zuin: "Electrostatic transport and coherent structures in RFX-mod", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

R. Piovan, S. Cappello, D. Terranova, L. Zanotto, M. Zuin: "First results of RFX-mod test on low-q pinches", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

D. Bonfiglio, S. Cappello, R. Piovan, G. Spizzo, D. Terranova: "Preliminary results of 3D nonlinear MHD simulations for ultra-low q plasmas and OPCD RFP discharges", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

M. Zuin, N.Vianello, M. Spolaore, R. Cavazzana, E. Martines, G. Serianni, E. Spada, V. Antoni, T. Bolzonella, D. Terranova: "Current structure generation and discrete magnetic relaxation events", presented at 12th IEA/RFP Workshop, 26-28 March, 2007, Kyoto, Japan

L. Zanotto, M. Barp, M. Bigi, A. Ferro, E. Gaio, F. Milani, L. Novello, R. Piovan, M. Recchia, V. Toigo, A. Zamengo: "Tecnologie di accumulo energetico negli impianti di ricerca sulla fusione e prospettive per il reattore", Giornata di studio "Energy Storage Technologies" EST2007, 8 October 2007, Bologna

R. Paccagnella, A. Pizzimenti, "Studies on externally applied m=0 modes in the RFX-mod RFP" presented at the Workshop on Active Control of MHD 18-20 November 2007, Columbia University (New York, USA)

F. Bonomo, A. Alfier, S.V. Annibaldi, P. Buratti, R. Pasqualotto, P. Piovesan, G. Spizzo, D. Terranova: "Transport reduction and heating in the helical core of the reversed-field pinch", 49th Annual Meeting of the Division of Plasma Physics - APS, Orlando, Florida, 12 – 16 November, 2007, JP8.00147

M.E. Puiatti, S. Cappello, F. Carrara, P. Scarin, G. Spizzo, D. Terranova, M. Valisa, B. Zaniol: "Density limit, radiation and magnetic topology in the reversed-field pinch", 49th Annual Meeting of the Division of Plasma Physics - APS, Orlando, Florida, 12 – 16 November, 2007, JP8.00148

D. Terranova, A. Canton, P. Innocente, R. Lorenzini, P. Zanca, A. Alfier, F. Bonomo: "Enhanced confinement, magnetic topology and diffusion in RFX-mod for poloidal current drive and pellet injection experiment", 49th Annual Meeting of the Division of Plasma Physics - APS, Orlando, Florida, 12 – 16 November, 2007, TO4.00010

P. Scarin, M. Agostini, R. Cavazzana, G. Serianni, "Edge turbulence scaling in RFX-mod with the GPI diagnostic", 49th APS 2007, 12-16 November, Orlando

M. Agostini, S.J. Zweber, R. Cavazzana, P. Scarin, G. Serianni, R.J. Maqueda, D.P. Stotler, "Study of the statistical properties of edge turbulence in NSTX with the GPI diagnostic", 49th APS 2007, 12-16 November, Orlando

R. Piovan, S. Cappello, L. Zanotto, D. Terranova, M. Zuin, F. Auriemma, P. Scarin: "Preliminary Results from ULQ Experiments in RFX-mod", 49th Annual Meeting of the Division of Plasma Physics - APS, Orlando, Florida, 12 – 16 November, 2007, JP8.00143

P. Franz, F. Bonomo, G. Spizzo, B.E. Chapman, J.A. Goetz: "X-ray emission maps in the MST reversed Field pinch", 49th Annual Meeting of the Division of Plasma Physics - APS, Orlando, Florida, 12 – 16 November, 2007

H. Koguchi, H. Sakakita, M. Kiyama, K. Yambe, T. Asai, Y. Hirano, F. Auriemma, D. Terranova, P. Innocente: "High beta and high-density operation in TPE-RX", invited session of Japanese Society of Plasma Science and Nuclear Fusion Research Annual Meeting in Himeji, Japan (2007)

G. Agarici, P. Testoni, et al. "Mechanical design proposal of an Ions Cyclotron Resonant Heating antenna for ITER" 17th Topical Conference on Radio Frequency Power in Plasmas - 7-9 May 2007, Clearwater, Florida, USA

F. Cau, A. Fanni, A. Portone, P. Sonato and P. Testoni. "3D Electromechanical analyses of the European Superconducting Dipole" 16th International Conference on the Computation of Electromagnetic Fields (COMPUMAG), 24-28 June 2007, Aachen, Germany

P. Testoni, F. Cau, A. Fanni, A. Portone, P. Sonato: "Static and transient electromagnetic features of the EFDA dipole", 20th Conference on Magnet technology - 27-31 August 2007, Philadelphia, Pennsylvania USA

S. Cappello, D. Bonfiglio, R. Piovan: "3D nonlinear MHD simulations for ultra-low q plasmas", poster contribution for the 49th APS DPP meeting, Orlando (2007)

S. Cappello, D. Bonfiglio, G. Spizzo, D. Terranova, R. B. White: "Ordered magnetic topology in Reversed Field Pinch configurations", poster contribution for the 12th European Fusion Theory Conference, Madrid (2007)

D.F. Escande and F. Sattin: "When can Fokker-Planck equation describe anomalous transport?", poster contribution for the 12th European Fusion Theory Conference, Madrid (2007)

I. Predebon and R. Paccagnella: "Contribution of slow particle dynamics to chaotic transport in RFP plasmas", poster contribution for the 12th European Fusion Theory Conference, Madrid (2007).

G. Spizzo, R. B. White, S. Cappello, L. Marrelli and F. Sattin: "Pinch effects and chaotic motion in toroidal confinement devices", poster contribution for the 12th European Fusion Theory Conference, Madrid (2007)

A. Soppelsa, G. Marchiori: "Mimo modelling and design for MHD modes control in RFX-MOD", 12th Workshop on MHD Stability Control: Improved MHD Control Configurations, 18-20 November 2007, Columbia University, New York, USA, (oral presentation)