

PUBLICATIONS 2016

NATIONAL AND INTERNATIONAL JOURNALS

1. **Evaluation of reconstruction errors and identification of artefacts for JET gamma and neutron tomography** T. Craciunescu, A. Murari, V. Kiptily, I. Lupelli, A. Fernandes, S. Sharapov, I. Tiseanu, V. Zoita and JET Contributors *Rev. Sci. Instrum.* **87**, 013502 (2016)
2. **Performance of the full size nGEM detector for the SPIDER experiment** Muraro, G. Croci, G. Albani, G. Claps, M. Cavenago, C. Cazzaniga, M. Dalla Palma, G. Grosso, F. Murtas, R. Pasqualotto, E. Perelli Cippo, M. Rebai, M. Tardocchi, M. Tollin, G. Gorini *Nucl Instrum Meth A* **813** (Jan 2016) 147–152
3. **Detailed design optimization of the MITICA negative ion accelerator in view of the ITER NBI** P. Agostinetti, D. Aprile, V. Antoni, M. Cavenago, G. Chitarin, H.P.L. de Esch, A. De Lorenzi, N. Fionnesu, G. Gambetta, R.S. Hemsworth, M. Kashiwagi, N. Marconato, D. Marcuzzi, N. Pilan, E. Sartori, G. Serianni, M. Singh, P. Sonato, E. Spada, V. Toigo, P. Veltri and P. Zaccaria *Nucl. Fusion* **56** (2016) 016015
4. **Conceptual design of a polarimetric Thomson scattering diagnostic in ITER** L. Giudicotti, M. Bassan, F.P. Orsitto, R. Pasqualotto, M. Kempenaars and J. Flanagan *Journal of Instrumentation* **11** (2016)
5. **Application of symbolic regression to the derivation of scaling laws for tokamak energy confinement time in terms of dimensionless quantities** A. Murari, E. Peluso, M. Lungaroni, M. Gelfusa and P. Gaudio *Nucl. Fusion* **56** 026005 (2016)
6. **Application of transfer entropy to causality detection and synchronization experiments in tokamaks** A. Murari, E. Peluso, M. Gelfusa, L. Garzotti, D. Frigione, M. Lungaroni, F. Pisano, P. Gaudio and JET Contributors *Nucl. Fusion* **56** (2016) 026006
7. **First hydrogen operation of NIO1: Characterization of the source plasma by means of an optical emission spectroscopy diagnostic** M. Barbisan, C. Baltador, B. Zaniol, M. Cavenago, U. Fantz, R. Pasqualotto, G. Serianni, L. Vialetto and D. Wunderlich *Rev. Sci. Instrum.* **87**, 02B319 (2016)
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10. **Simulation of diatomic gas-wall interaction and accommodation coefficients for negative ion sources and accelerators** E. Sartori, L. Brescaccin, G. Serianni *Rev. Sci. Instrum.* **87**, 02A502 (2016)
11. **Simulation of space charge compensation in a multibeamlet negative ion beam** Sartori E., Maceina T.J., Veltri P., Cavenago M., Serianni G. *Rev. Sci. Instrum.* **87** 02B917 (2016)
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27. **Analysis of diagnostic calorimeter data by the transfer function technique** R. S. Delogu, C. Poggi, A. Pimazzoni, G. Rossi and G. Serianni *Rev. Sci. Instrum.* **87**, 02B932 (2016)
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 45. **The influence of grid positioning on the beam optics in the neutral beam injectors for ITER** Veltri P., Agostinetti P., Marcuzzi D., Sartori E., Serianni G. *Fusion Eng. and Design* **107**, (June 2016) 64–69
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56. **Heating Neutral Beams for ITER : Present Status** Singh, M.J., Boilson, D., Hemsforth, R., Chareyre, J., Decamps, H., Delmas, E., Geli, F., Graceffa, J., Schunke, B., Svensson, L., Shah, D., El Ouazzani, A., Urbani, M., De Esch, H.P.L., Antoni, V., Chitarin, G., Serianni, G., Marcuzzi, D., Toigo, V., Zaccaria, P., Fantz, U., Franzen, P., Heinemann, B., Kraus, W., Kashiwagi, M., Hanada, M., Tobar, H., Kuriyama, M., Masiello, A., Bonicelli, T. *IEEE T. Plasma Sci* , **44**, 9, (Sept 2016)
57. **Interaction of external $n = 1$ magnetic fields with the sawtooth instability in low- q RFX-mod and DIII-D tokamaks** C. Piron, P. Martin, D. Bonfiglio, J. Hanson, N.C. Logan, C. Paz-Soldan, P. Piovesan, F. Turco, J. Bialek, P. Franz *Nucl. Fusion* **56** (2016) 106012
58. **Optimization of ICRH for core impurity control in JET-ILW Geodesic distance on Gaussian manifolds for the robust identification of chaotic systems** T. Craciunescu, A. Murari *Nonlinear Dynamics* **86** Issue 1, (Oct 2016) 677–693
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75. **Modelling of cyclic plasticity for austenitic stainless steels 304L, 316L, 316L(N)-IG** Mauro Dalla Palma *Fus. Eng. and Design*, **109–111, Part A**, (Nov 2016) 20–25
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82. **The Full-Size Source and Injector Prototypes for ITER Neutral Beams** G. Serianni, P. Agostinetti, V. Antoni, D. Aprile, C. Baltador, M. Cavenago, G. Chitarin, N. Marconato, D. Marcuzzi, E. Sartori, P. Sonato, V. Toigo, P. Veltri And P. Zaccaria *Plasma and Fusion Research* **11**, 2402119 (2016)
83. **Tomographic reconstruction of the beam emissivity profile in the negative ion source NIO1** N. Fonnesu, M. Agostini, R. Pasqualotto, G. Serianni and P. Veltri *Nucl. Fusion* **56** (2016) 126018
84. **Modelling plasma response to RMP fields in ASDEX Upgrade with varying edge safety factor and triangularity** L. Li, Y.Q. Liu, A. Kirk, N. Wang, Y. Liang, D. Ryan, W. Suttrop, M. Dunne, R. Fischer, J.C. Fuchs, B. Kurzan, P. Piovesan, M. Willensdorfer, F.C. Zhong, the ASDEX Upgrade Team⁹ and the EUROfusion MST1 Team *Nucl. Fusion* **56** (2016) 126007
85. **The physics and technology basis entering European system code studies for DEMO** R. Wenninger, R. Kembleton, C. Bachmann, W. Biel, T. Bolzonella, S. Ciattaglia, F. Cismondi, M. Coleman, A.J.H. Donnè, T. Eich, E. Fable, G. Federici, T. Franke, H. Lux, F. Maviglia, B. Meszaros, T. Putterich, A. Snickers, F. Villone, P. Vincenzi, D. Wol and H. Zohm *Nucl. Fusion* **57** (2017) 016011 (11pp)
86. **Runaway electron mitigation by applied magnetic perturbations in RFX-mod tokamak plasmas** M. Gobbin, M. Valisa, R.B. White, D. Cester, L. Marrelli, M. Nocente, P. Piovesan, L. Stevanato, M.E. Puiatti and M. Zuin *Nucl. Fusion* **57** (2017) 016014 (16pp)
87. **Gyrokinetic study of turbulent convection of heavy impurities in tokamak plasmas at comparable ion and electron heat fluxes** Angioni, R. Bilato, F.J. Casson, E. Fable, P. Mantica, T. Odstrcil, M. Valisa, ASDEX Upgrade Team and JET Contributors *Nucl. Fusion* **57** (2017) 022009 (11pp)
88. **Axisymmetric oscillations at L–H transitions in JET: M-mode** Emilia R. Solano, N. Vianello, E. Delabie, J.C. Hillesheim, P. Buratti, D. Réfy, I. Balboa, A. Boboc, R. Coelho, B. Sieglin, S. Silburn, P. Drewelow, S. Devaux, D. Dodt, A. Figueiredo, L. Frassinetti, S. Marsen, L. Meneses, C.F. Maggi, J. Morris, S. Gerasimov, M. Baruzzo, M. Stamp, D. Grist, I. Nunes, F. Rimini, S. Schmuck, I. Lupelli, C. Silva and JET contributors *Nucl. Fusion* **57** (2017) 022021 (12pp)
89. **Ion beam transport: modelling and experimental measurements on a large negative ion source in view of the ITER heating neutral beam** P. Veltri, E. Sartori, P. Agostinetti, D. Aprile, M. Brombin, G. Chitarin, N. Fonnesu, K. Ikeda, M. Kisaki, H. Nakano A. Pimazzoni, K. Tsumori and G. Serianni *Nucl. Fusion* **57** (2017) 016025 (14pp)
90. **Avoidance of tearing mode locking with electro-magnetic torque introduced by feedback-based mode rotation control in DIII-D and RFX-mod** M. Okabayashi, P. Zanca, E.J. Strait, A.M. Garofalo, J.M. Hanson, Y. In, R.J. La Haye, L. Marrelli, P. Martin, R. Paccagnella, C. Paz-Soldan, P. Piovesan, C. Piron, L. Piron, D. Shiraki, F.A. Volpe and The DIII-D and RFX-mod Teams *Nucl. Fusion* **57** (2017) 016035 (13pp)

91. **Sawtooth mitigation in 3D MHD tokamak modelling with applied magnetic perturbations** D Bonfiglio, M Veranda, S Cappello, L Chacón and D F Escande *Plasma Phys. Control. Fusion* **59** (2017) 014032 (10pp)
92. **Impact of ideal MHD stability limits on high-beta hybrid operation** P. Piovesan, V Igochine, F Turco, D A Ryan, M R Cianciosa, Y Q Liu, L Marrelli, D Terranova, R S Wilcox, A Wingen *Plasma Phys. Control. Fusion* **59** (2017) 014027 (13pp)

Communications to Workshops and Conferences

IPAB 2016

Status of NBI for ITER and the related test facility G. Serianni, and NBI team
IPAB 2016, INFN Legnaro, Italy May 5 – June 3 2016

PSI2016, Roma May 30 – June 2 to be published in Nuclear Materials and Energy

Electromagnetic ELM and inter-ELM filaments detected in the COMPASS Scrape Off Layer M. Spolaore, K. Kovařík, J. Stöckel, J. Adamek, R. Dejarnac, I. Đuran, M. Komm, T. Markovic, E. Martines, J. Seidl, N. Vianello and the COMPASS team

Heat flux measurements and modeling in the RFX-mod experiment P. Innocente, H. Bufferand, A. Canton, G. Ciraolo, N. Visonà

Boundary plasma response in RFX-mod to 3D magnetic field perturbations P. Scarin, M. Agostini, L. Carraro, G. Spizzo, M. Spolaore, N. Vianello

The electrostatic response to edge islands: a comparison between the RFP and the tokamak G. Spizzo, O. Schmitz, R.B. White, S.S. Abdullaev, M. Agostini, R. Cavazzana, G. DeMasi, T.E. Evans, H. Frerichs, G. Granucci, G. Pucella, P. Scarin, M. Spolaore, O. Tudisco, N. Vianello, M. Zuin

Dynamics and frequency behaviour of the MARFE instability on FTU C. Mazzotta, E. Giovannozzi, G. Pucella, G. Spizzo, O. Tudisco, W. Bin, B. Esposito and the FTU team

Changeover from Deuterium to Helium with Ion Cyclotron Wall Conditioning and diverted plasmas in ASDEX Upgrade D. Douai, T. Wauters, V. Rohde, A. Garcia-Carrasco, V. Bobkov, S. Brezinsek, D. Carralero, R. Cavazzana, A. Hakola, A. Lysoivan, S. Möller, R. Ochoukov, P. Peterson, P. Schneider, M. Spolaore, the EUROfusion MST1 Team and ASDEX Upgrade Team

The 6th Asian-Pacific Transport Working Group (APTWG) Meeting, June 21 – 25 2016, Korea

Physics of Reversed Field Pinch Relaxation S. Cappello- Invited talk

18th International Congress on Plasma Physics (ICPP 2016), 2016/6/27 ~ 2016/7/1, Taiwan

Magnetic chaos healing and transport barriers in new stimulated helical regimes of the Reversed Field S. Cappello, D. Bonfiglio¹, D. F. Escande², M. Veranda¹, A. Fassina¹, P. Franz¹, M. Gobbin¹, M. E. Puiatti

2016 IEEE Power Modulator and High Voltage Conference, S. Francisco CA, July 5-9 2016

High Voltage Radio Frequency Test Facility for the characterization of the dielectric strength in vacuum of RF drivers for Neutral Beam Injectors Ion Sources A. Maistrello, J. Palak, M. Recchia, M. Bigi, E. Gaio and V. Toigo

21st Joint EU-US Transport Task Force Meeting - Leysin (Switzerland), 5-8 September 2016

The electrostatic response to edge islands: a comparison between the RFP and the tokamak G. Spizzo, O. Schmitz, R.B. White, S. S. Abdullaev, M. Agostini, R. Cavazzana, G. De Masi, T.E. Evans, H. Frerichs, G. Granucci, C. Mazzotta, G. Pucella, P. Scarin, M. Spolaore, O. Tudisco, N. Vianello, M. Zuin Invited

Thermal gradients of QSH states in RFX-mod Y. Zhang, F. Auriemma, B. Momo, F. Sattin, R. Lorenzini, E. Martines, A. Fassina, D. Lopez-Bruna and D. Terranova

Impurity injection in RFX-mod Reversed Field Pinch for impurity transport studies L. Carraro, F. Auriemma, A. Fassina, P. Franz, I. Predebon, P. Scarin, D. Terranova

102° Congresso Nazionale Società di Fisica, Padova 26-30 settembre 2016

A polarimetric Thomson scattering diagnostic in ITER L. Giudicotti and R. Pasqualotto

High power Negative ion beams: main physics issues M. Cavenago, V. Antoni, P. Agostinetti, D. Aprile, G. Chitarin, N. Marconato, R. Pasqualotto, N. Pilan, E. Sartori, P. Veltri

Beam and ion source diagnostics for the ITER NBI system R. Pasqualotto, M. Brombin, G. Serianni, B. Zaniol, M. Spolaore, M. Dalla Palma, M. Barbisan, S. Gorini

Experimental analysis of MHD instability in a wide range of plasma equilibria for magnetic fusion confinement in RFX-mod M. Zuin and the RFX-mod Team and Collaborators

Interaction of a low-temperature plasma with pathogens and eukaryotic cells E. Martines, M. Zuin, P. Brun, R. Cavazzana, L. Cordaro, G. De Masi, A. Fassina

Plasma sustainment by Neutral Beam Injection (NBI): from current leading experiments to future nuclear fusion reactors P. Vincenzi, T. Bolzonella, M. Vallar

58th Annual Meeting of the APS Division of Plasma Physics, October 31 - November 4, 2016, San Jose, California

Electrical modeling of the Reversed Field Pinch configuration R. Cavazzana

Spectral properties of VMEC equilibria Predebon, B Momo, D Terranova, P Innocente

A polarimeter for JT-60SA: chords layout study with V3FIT for q profile reconstruction D. Terranova, A. Boboc, C. Gil, S. Soare, F.P. Orsitto

Helical self-organization in the reversed-field pinch: detection of barriers to transport M. Veranda, D. Bonfiglio, S. Cappello, D. F. Escande, F. Auriemma, D. Borgogno, L. Chacòn, D. Grasso, G. Rubino, A. Fassina, P. Franz, M. Gobbin, M.E. Puiatti

Density and magnetic fluctuations at JET: experimental observation and numerical characterization G. De Masi, I. Predebon, I. Lupelli, S. Spagnolo, J. C. Hillesheim, L. Menezes, E. Delabie, C. Maggi

APPC 2016 (joint 13th Asia Pacific Physics Conference and 22nd Australian Institute of Physics Congress), Brisbane, Australia, 4-8 Dec. 2016

Further progress on integrated transport analysis suite, TASK3D-a, and its contributions for promoting scientific understandings of LHD plasmas M. Yokoyama, R. Seki, C. Suzuki, M. Sato, M. Emoto, S. Murakami, M. Osakabe, T. Ii

Tsujimura, Y. Yoshimura, K. Ogawa, S. Satake, Y. Suzuki, T. Goto, K. Ida, N. Pablant, F. Warmer, P. Vincenzi

Conference participations

RT2016 - 20th Real Time Conference, Padova ,Italy, June 05-10 2016 to be published in IEEE Transactions on Nuclear Science

Current status of SPIDER CODAS and its evolution towards the ITER compliant NBI CODAS MANDUCHI G., Adriano Luchetta, C. Taliercio, Andrea Rigoni

Distributed continuous event – based data acquisition using FlexRIO FPGA C. Taliercio, A. Luchetta, G.Manduchi and A. Rigoni

Assessment of General Purpose GPU systems in real-time control Tj. Maceina , G. Manduchi

Real Time Control of Electron Density on RFX-mod Tokamak Discharges R. Cavazzana, C. Taliercio, G. Manduchi, L. Marrelli, P. Franz, P. Piovesan and C. Piron

Control system optimization techniques for real-time applications in fusion plasmas: the RFX-mod experience L.Pigatto, M. Baruzzo, P. Bettini, T. Bolzonella, G. Manduchi, G. Marchiori

29th SOFT 2016, Sept 5-9 2016, Prague, Czech Republic (to be published in *Fus. Eng. and Design* special Issue, except for *)

[A substantial step forward in the realization of the iter HNB system: the iter NBI test facility](http://dx.doi.org/10.1016/j.fusengdes.2016.11.007) V. Toigo, D. Boilson, T. Bonicelli, R. Piovan, M. Hanada, A. Chakraborty and NBTf Team and the contributing Staff of IO, F4E, JADA and INDA – **Invited** - In press *Fusion Eng. Des.* (2016), <http://dx.doi.org/10.1016/j.fusengdes.2016.11.007>

Design of machine upgrades for the RFX-mod experiment S. Peruzzo, P. Bettini, A. Canton, R. Cavazzana, S. Dal Bello, M. Dalla Palma, L. Grando, P. Innocente, G. Marchiori, L. Marrelli, N. Patel, M. Siragusa, A. Zamengo, P. Zanca, L. Zanotto, P. Sonato **Oral talk**

Economic assessment of different operational reactor cycle structures in a pulsed DEMO-like power plant C. Bustreo, G. Zollino, D. Maggio

Final Design of SiC-based Power Supply system for Resistive- Wall-Mode control in JT-60SA E. Gaio, A. Ferro, L. Novello, M. Matsukawa, M. Shimada

Requirements and modelling of fast particle injection in RFX-mod tokamak plasmas M. Vallar, JF. Artaud, T. Bolzonella, M. Valisa, P. Vincenzi,

Implementation of the SPIDER Central Interlock N. Pomaro, A. Luchetta, C. Taliercio, M. Moressa, L. Svensson, F. Paolucci, F. Sartori, C. Labate

3D electromagnetic analysis of the MHD control system in RFX-mod Upgrade P. Bettini, P. Alotto, T. Bolzonella, R. Cavazzana, L. Grando, G. Marchiori, L. Marrelli, L. Pigatto, R. Specogna, P. Zanca

Comparison of three methods for the solution of eddy current problems in fusion devices R. Specogna, P. Bettini

Final design of the diagnostic calorimeter for the negative ion source SPIDER A. Rizzolo, M. Tollin, M. Brombin, V. Cervaro, M. Dalla Palma, M. De Muri, D. Fasolo, L. Franchin, S. Peruzzo, A. Pimazzoni, R. Pasqualotto, G. Serianni (* **not submitted Fus. Eng. and Design**)

Final design and prototyping of the SPIDER caesium ovens A. Rizzolo, M. Froschle, B. Laterza, M. De Muri, F. Rossetto

Modeling and mitigation of the magnetic field errors in RFX-mod Upgrade L. Grando, P. Bettini, C. Finotti, G. Marchiori, R. Specogna,

Installation and site testing of the SPIDER Ion Source and Extraction Power Supplies M. Bigi, S. Carrozza, G. Corbucci, A. Luchetta, M. Moressa, L. Rinaldi, M. Simon, L. Sita, G. Taddia, A. Zamengo, H. Decamps, P. Simionato, C. Taliercio, D. Zella, V. Toigo (* not submitted *Fus. Eng. and Design*)

SPIDER Gas injection and Vacuum System: from design to site acceptance test S. Dal Bello, M. Fincato, E. Bragulat, M. Breda, F. Buffa, L. Grando, A. Luchetta, F. Paolucci, A. Principe, P. Simionato, F. Siroti, L. Svensson, P. Zaccaria

Commissioning and First Operation of the SPIDER Control and Data Acquisition System A. Luchetta, G. Manduchi, C. Taliercio, P. Barbato, R. Capobianco, S. Polato, P. Simionato, E. Zampiva, L. Svensson, F. Paolucci, F. Sartori, C. Labate

Manufacturing and assembly of the cooling plant for SPIDER experiment F. Fellin, M. Bigi, M. Breda, G. Lazzaro, A. Luchetta, M. Maniero, N. Pilan, P. Zaccaria, M. Zaupa, G. Agarici, V. Pilard, G. Cenedella, M. Tamagnone, N. Granzotto, A. Turetta

3D magnetic surfaces reconstruction in RFX-mod F. Ledda, P. Bettini, A. Chiariello, Gaetano, A. Formisano, G. Marchiori,; R. Martone, F. Pizzo, D. Terranova

Upgraded electromagnetic measure system for RFX-mod G. Marchiori, R. Cavazzana, P. Bettini, L. Grando, S. Peruzzo,

Integration of the state observer RAPTOR in the real-time MARTe framework at RFX-mod C. Piron, G. Manduchi, P. Bettini, F. Felici, G. Finotti, P. Franz, O. Kudlacek, G. Marchiori, L. Marrelli, O. Sauter, P. Piovesan, C. Taliercio

Final design of the HV deck1 and bushing for the ITER Neutral Beam Injector M. Boldrin, T. Bonicelli, H. Decamps, C. Finotti, G.E. Gomez, M. Krohn, E. Sachs, M. Simon, V. Toigo

Final design of acceleration grid power supply conversion system of MITICA neutral beam injector L. Zannotto, E. Gaio, D. Gutierrez, M. Simon, H. Decamps, M. Perna, F. Guarda, C. Panizza, C. Brocca

The design of the Residual Ion Dump Power Supply for ITER Neutral Beam Injector A. Ferro, E. Gaio, L. Sita, L. Rinaldi, G. Taddia, D. Gutierrez, M. Simon, H. Decamps

The transmission line for the SPIDER experiment: from design to installation M. Boldrin, V. Toigo, D. Gutierrez, M. Simon, G. Faoro, E. Maggiora, D. Pedron, A. Guion, H. Decamps

SPIDER High Voltage Bushings: design, development and first experimental tests N. Pilan, L. Grando, A. De Lorenzi, A. Masiello, L. Christophe

Realization of a magnetically compensated extraction grid for performance improvement of next generation NBI D. Aprile, P. Agostinetti, C. Baltador, G. Chitarin, N. Marconato, E. Sartori, G. Serianni, P. Veltri

Application of the VTTJ cold junction technique to fusion reactor relevant geometry and materials P. Agostinetti, F. Degli Agostini, P. Sonato

Multi-design innovative cooling research & optimization (MICRO): novel proposals for high performance cooling in DEMO novel proposals for high performance cooling in DEMO G. Gambetta, P. Agostinetti, P. Sonato

Inverse heat flux evaluation from thermographic measurements in SPIDER R.S. Delogu, A. Pimazzoni, G. Serianni,

EU DEMO transient phases: main constraints and heating mix studies for ramp-up and ramp-down P. Vincenzi, R. Ambrosino, J.F. Artaud, T. Bolzonella, L. Garzotti, G. Giruzzi, G. Granucci, F. Kochl, M. Mattei, M.Q. Tran, R. Wenninger

Feasibility study of a flux-gate magnetic field sensor suitable for ITER Neutral Beam Injectors G. Chitarin, D. Aprile, M. Brombin, N. Marconato, L. Svensson,

Current status of the EU DEMO Project on the inner fuel cycle systems Day, C., Butler, B., Giegerich T., B. Ploeckl, F. Cismondi, A. Frattolillo, M. Gethins, S. Hanke, A. Hollingsworth, Horstensmeyer, Y.1; Igitkhanov, P. T. Lang, R. Lawless, X. Luo, S. A. Medley, C. Moreno, S. S. Naris, Y. Ochoa, B. Pegourie, B. Peters, M. Rollig, A. Santucci, E. Sartori, M. Scannapiego, R. Shaw, P. Sonato, H. Strobel, S. Tosti, S. Varoutis, R. J. Walker, D. Whittaker, Oral -

The DTT device: systems for heating G. Granucci, P. Agostinetti, T. Bolzonella, A. Bruschi, A. Cardinali, S. Ceccuzzi, L. Figini, S. Garavaglia, G. Giruzzi, R. Maggiore, D. Milanese, F. Mirizzi, S. Nowak, G.L. Ravera, P. Sonato, C. Sozzi, A.A. Tuccillo, P. Vincenzi,

The DTT device: power supply and electrical distribution system A. Lampasi, P. Zito, F. Starace, P. Costa, G. Maffia, E. Gaio, V. Toigo, L. Zanotto, S. Minucci, S. Ciattaglia, M.C. Falvo

Experimental characterization of the MITICA neutralizer gas injection nozzles S. Hanke, V. Hauer, C. Day, E. Sartori, S. Dal Bello, P. Zaccaria, M. Zhang, M. Dalla Palma

Implementation of the soft X-ray multi-camera tomography diagnostic in the Wendelstein 7-X stellarator C. Brandt, T. Broszat, P. Franz, M. Schulke, M. Sieber, H. Thomsen, S. Weißflog, M. Marquardt,

Experimental investigation of beam-target neutron emission at the ELISE neutral beam test facility G. Croci, M. Nocente, D. Wunderlich, F. Bonomo, U. Fantz, B. Heinemann, W. Kraus, R. Pasqualotto, M. Tardocchi, G. Gorini

Heating & Current Drive Efficiencies, TBR and RAMI considerations for DEMO Franke, P. Agostinetti, K. Avramidis, A. Bader, C. Bachmann, W. BieT. I, T. Bolzonella, S. Ciattaglia, M. Coleman, F. Cismondi, G. Granucci, G. Grossetti, J. Jelonnek, I. Jenkins, M. Kalsey, R. Kempleton, N. Mantel, J.M. Noterdaeme, N. Rispoli, A. Simonin, P. Sonato, M.Q. Tran, P. Vincenzi, R. Wenninger

Advanced probe for transport measurements in mediumsize tokamaks B.S. Schneider, S. Costea, C. Ionita, R. Schrittwieser, V. Naulin, J.J. Rasmussen, N. Vianello, M. Spolaore, J. Kovacic, T. Gyergyek, R. Starz

X-mode raw data analysis of the new AUG ICRF antenna edge density profile reflectometer Aguiam, E. Diogo, A. Silva, P.J. Carvalho, P. Carvalho, R. Cavazzana, G.D. Conway, O. D'arcangelo, L. Fattorini, H. Faugel, A. Fernandes, H. Funfgelder, B. Goncalves, L. Guimaraes, G. De Masi, L. Meneses, J.M. Noterdaeme, R. Pereira, G. Rocchi, J. Santos, A. Tuccillo, O. Tudisco, Team, Asdex Upgrade

The influence of dust characteristics on re-suspension: test with tungsten and data discussion A. Malizia, I. Cacciotti, M. Gelfusa, A. Murari, L. Poggi, Antonio, Ciparisse, P. Gaudio

**5th International Symposium on Negative Ions, Beams and Sources (NIBS`16),
12th - 16th September 2016, St. Anne's College, Oxford, UK** to be published by
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Test of 1D carbon-carbon composite prototype tiles for the SPIDER diagnostic calorimeter G. Serianni, A. Pimazzoni, A. Canton, M. Dalla Palma, R. Delogu, D. Fasolo, L. Franchin, R. Pasqualotto, M. Tollin

Finite elements numerical codes as primary tool to improve beam optics and support measurements in NIO1 C. Baltador, P. Veltri, M. Cavenago, G. Serianni

Control, Interlock, Acquisition and Data Retrieval Systems for the Negative Ion Source NIO1 P. Serianni, P. Barbato, L. Baseggio, M. Cavenago, M. De Muri, B. Laterza, L. Migliorato, F. Molon, G. Moro, D. Ravarotto, R. Pasqualotto, M. Recchia, C. Taliercio, P. Veltri

Does viscous and transient effects, dissociation, heating and surface scattering play a role in the gas density distribution along SPIDER E. Sartori, G. Serianni

Preliminary studies for a beam-generated plasma neutralizer test in NIO1 E. Sartori, P. Veltri, L. Balbinot, M. Cavenago, V. Antoni, G. Serianni

Development of an energy analyzer as diagnostic of beam-generated plasma in negative ion beam system E. Sartori, G. Carozzi, P. Veltri, M. Spolaore, V. Antoni, G. Serianni

Progress on development of SPIDER diagnostics R. Pasqualotto, M. Agostini, M. Barbisan, M. Brombin, R. Cavazzana, G. Croci, M. Dalla Palma, R. S. Delogu, G. Gorini, A. Muraro, N. Pomaro, G. Serianni, S. Spagnolo, M. Spolaore, M. Zauza, B. Zaniol

Experimental validation of an innovative deflection compensation method in a multi-beamlet negative-ion accelerator G. Chitarin, A. Kojima, P. Agostinetti, D. Aprile, C. Baltador, J. Hiratsuka, M. Ichikawa, N. Marconato, E. Sartori, G. Serianni, P. Veltri, M. Yoshida, M. Kashiwagi, M. Hanada, V. Antoni

A first characterization of NIO1 particle beam by means of a diagnostic calorimeter A. Pimazzoni, M. Cavenago, V. Cervaro, D. Fasolo, G. Serianni, M. Tollin, P. Veltri

Study of electron transport across the magnetic filter of NIO Negative ion P. Veltri, M. Cavenago, E. Sartori and G. Serianni

Electron density and temperature in NIO1 RF source, operated in oxygen and argon M. Barbisan, M. Cavenago, R. Pasqualotto, G. Serianni and B. Zaniol

Influence of the magnetic filter field topology on the beam divergence at the ELISE test facility M. Barbisan, U. Fantz and D. Wunderlich

Improvements of the Versatile Multiaperture Negative Ion Source NIO1 M. Cavenago, G. Serianni, M. De Muri, P. Veltri, V. Antoni, C. Baltador, M. Barbisan, M. Brombin, A. Galatà, N. Ippolito, T. Kulevoy, R. Pasqualotto, S. Petrenko, A. Pimazzoni, M. Recchia, E. Sartori, F. Taccogna, V. Variale, B. Zaniol, P. Barbato, L. Baseggio, V. Cervaro, D. Fasolo, L. Franchin, R. Ghiraldelli, B. Laterza, M. Maniero, D. Martini, L. Migliorato, A. Minarello, F. Molon, G. Moro, T. Patton, D. Ravarotto, R. Rizzieri, A. Rizzolo, M. Sattin, F. Stivanello and S. Zucchetti

Benchmark of single beamlet analysis to predict operational parameter for ITER in Japan - Italy joint experiments M. Ichikawa, A. Kojima, G. Chitarin, P. Agostinetti, D. Aprile, C. Baltador, M. Barbisan, R. Delogu, J. Hiratsuka, N.

Marconato, R. Nishikiori, A. Pimazzoni, E. Sartori, G. Serianni, H. Tobar, N. Umeda, P. Veltri, K. Watanabe, M. Yoshida, V. Antoni and M. Kashiwagi

Energy recovery from mixed H⁻/H⁰/H⁺ beams and collector simulations V. Variale, M. Cavenago, C. Baltador, G. Serianni, P. Veltri, E. Sartori, P. Agostinetti

Particle model of a cylindrical inductively coupled ion source N. D. Ippolito, F. Taccogna, P. Minelli, M. Cavenago, P. Veltri

27th International Symposium on Discharges and Electrical Insulation in Vacuum (27th ISDEIV), Suzhou, China, Sept 18-23, 2016 To be published in IEEE Transactions on Plasma Science Special Issue

Prediction of Lightning Impulse Voltage Induced Breakdown in Vacuum Interrupters N. Marconato, A. De Lorenzi, N. Pisan, P. Bettini, A. Lawall, N. Wenzel

XXI Convegno AIPT, Reggio Emilia, 30-09-2016, Proc. to be published

Thermo-hydraulic design and monitoring of high heat flux components for the ITER NBTF Dalla Palma M., R. Pasqualotto, P. Zaccaria

FUNFI2, Enea, Frascati, 26-28 Ottobre 2016 Proc. to be published

The reversed field pinch as neutron source for fusion-fission hybrid systems: strengths and issues R. Piovan, M.E. Puiatti, M. Valisa, G. Zollino, C. Bustreo, S. Martini, D. Escande

Characterization of Neutron Production and Fast Particle Dynamics in Reversed-Field Pinch Plasmas M. Zuin, L. Stevanato, E. Martines, F. Auriemma, M. Gobbin, B. Momo, R. Cavazzana, G. De Masi, W. Gonzalez, R. Lorenzini, M.E. Puiatti, P. Scarin, S. Spagnolo, M. Spolaore, M. Valisa, N. Vianello, W. Schneider, D. Cester, G. Nebbia, L. Sajo-B

21st Workshop on MHD Stability Control – A US-Japan Workshop San Diego, CA on November 7-9, 2016 To be published in Special Issue PPCF

Model-based real-time scenario monitoring for transient event prediction with RAPTOR C. Piron, invited talk,

Effects of 3D fields on disruption generated runaway electrons in AUG, TCV and RFX-mod Marco Gobbin, invited talk

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High Temperature Plasma Diagnostics HTPD 2016, June 5-9 2016, Madison – Wisconsin USA

Study of a high power hydrogen beam diagnostic based on secondary electron emission Sartori E., Panasenkov A., Veltri P., Serianni G., Pasqualotto R

Design of in-vacuum sensors for the beamline components of the ITER neutral beam test facility M. Dalla Palma, R. Pasqualotto, E. Sartori, S. Spagnolo, M. Spolaore, and P. Veltri

Design and status of the electrostatic probe system for the SPIDER experiment M. Spolaore, M. Brombin, R. Cavazzana, G. Serianni, R. Pasqualotto, N. Pomaro, G. Taliercio

Extending the Te range of the ITER core Thomson scattering system by detection of the unpolarized scattering radiation L. Giudicotti^{1,2}, R. Pasqualotto² and O. McCormack

Final design of SPIDER thermal diagnostic system M. Brombin, M. Dalla Palma, R. Pasqualotto, and N. Pomaro

SPIDER beam dump as diagnostic of the particle beam M. Zaupa, M. Dalla Palma, R. Pasqualotto, E. Sartori

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