CONSORZIO RFX PUBLICATIONS 2018

PAPERS IN NATIONAL AND INTERNATIONAL JOURNALS

Nuclear Fusion

1. **Comparison of runaway electron generation parameters in small, medium-sized and large tokamaks—A survey of experiments in COMPASS, TCV, ASDEX-Upgrade and JET**
   V.V. Plyusnin, C. Reux, V.G. Kiptily, G. Pautasso, J. Decker, G. Papp, A. Kallenbach, V. Weinzettl, J. Mlynar, S. Coda, V. Riccardo, P. Lomas, S. Jachmich, A.E. Shevelev, B. Alper, E. Khilkevitch, Y. Martin, R. Dux, C. Fuchs, B. Duval, M. Brix, G. Tardini, M. Maraschek, W. Treutterer, L. Giannone, A. Mlynek, O. Ficker, P. Martin, S. Gerasimov, S. Potzel, R. Paprok, P. J. McCarthy, M. Imrisek, A. Boboc, K. Lackner, A. Fernandes, J. Havlicek, L. Giacomelli, M. Vlainic, M. Nocente, U. Kruezi, COMPASS team, TCV team, ASDEX-Upgrade team, EUROFusion MST1 Team and JET contributors
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2. **First observation of the depolarization of Thomson scattering radiation by a fusion plasma**
   L. Giudicotti, M. Kempenaars, O. McCormack, J. Flanagan, R. Pasqualotto and JET contributors
   Nucl. Fusion **58** (2018) 044003 (6pp) https://doi.org/10.1088/1741-4326/aab3fd Cit. 0

3. **Density and magnetic fluctuations in type III-ELM pedestal evolution in JET: experimental and numerical characterization**
   G. De Masi, I. Predebon, S. Spagnolo, L. Meneses, E. Delabie, I. Lupelli, J. C. Hillesheim, C. Maggi and JET Contributors
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4. **Adaptive predictors based on probabilistic SVM for real time disruption mitigation on JET**
   Murari, M. Lungaroni, E. Peluso, P. Gaudio, J. Vega, S. Dormido-Canto, M. Baruzzo, M. Gelfusa and JET Contributors
   Nucl. Fusion **58** (2018) 056002 (16pp) https://doi.org/10.1088/1741-4326/aaaf9c Cit. 1

5. **The new technological solution for the JT-60SA quench protection circuits**
   E. Gaio, A. Maistrello, L. Novello, M. Matsukawa, M. Perna, A. Ferro, K. Yamauchi and R. Piovan
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6. **Scenario development for the observation of alpha-driven instabilities in JET DT plasmas**
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7. **A novel approach to studying transport in plasmas with magnetic islands**
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8. **Flux-surface averaged radial transport in toroidal plasmas with magnetic islands**
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12. **First principle integrated modeling of multi-channel transport including Tungsten in JET**
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15. **Viability Assessment of a Cross- Tokamak AUG-JET Disruption Predictor**
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16. **Model Validation for Quantitative X-Ray Measurements, Fusion Science and**
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18. **Isotope effects on L-H threshold and confinement in tokamak plasmas**
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Mauro Dalla Palma, Nicola Pomaro, Etienne Delmas, Lennart Svensson, Gonzalo Micò Montava, Roberto Pasqualotto
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Leonardo Giudicotti, Roberto Pasqualottto, Oisin McCormack

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Mauro Dalla Palma, Emanuele Sartori, Matteo Zaupa, Roberto Pasqualotto

Visible tomography diagnostic in NIO1 negative ion source: development and preliminary results
Matteo Brombin, Matteo Agostini, Gianluigi Serianni, Margherita Ugoletti, Pierluigi Veltri, Roberto Pasqualotto

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MITICA Intermediate Electrostatic Shield: concept design, development and first experimental tests identification
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Thermal Characterization of the SPIDER Diagnostic Calorimeter
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Plasma Characterization of a Hall Effect Thruster for a Negative Ion Source Concept
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Complete Compensation of Criss-cross Deflection in a Negative Ion Accelerator by Magnetic Technique
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Optimization of RFX-mod2 gap configuration by estimating the magnetic error fields due to the passive structure currents
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Toward the completion of the Power Supply system for Resistive Wall Modes control in JT-60SA
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M. Baruzzo, G. Artaserse, R. Henriques, S. Gerasimov, N. Lam, M.Tsalas

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M. Pavei, D. Marcuzzi, P. Zaccaria, P. Agostinetti, D. Aprile, A. Barzon, L. Baseggio, M. Bernardi, M. Bigi, M. Boldrin, M. Brombin, V. Cervaro, G. Chitarin, S. Dal Bello, Degli Agostini, D. Fasolo, L. Franchin, G. Gambetta, A. Garbuglia, F. Geli, J. Graceffa, L. Grando, B. Laterza, A. Masiello, R. Pasqualotto, M. Recchia, A. Rizzolo, F. Rossetto, Serianni, A. Sottocornola, M. Spolaore, A. Tiso, V. Toigo, M. Tollin, A. Zamengo, L. Zanotto

Acceleration Grid Power Supply Conversion System of the MITICA Neutral Beam Injector: On Site Integration activities and tests
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Design and mock-up tests of the RING photoneutralizer concept for an efficient neutralization in DEM
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A. Luchetta, N. Pomaro, G. Manduchi, C. Taliercio, A. Rigoni, L. Svensson, F. Paolucci, C. Labate

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The fabrication and assembly of the beam source for the SPIDER experiment
A. Masiello, C. Annino, M. Busch, A. Ceracchi, G. Corniani, D. Faso, V. Forest, F. Geli , J. Graceffa, J.M. Grenier, C. Lievin, D. Marcuzzi, J. F. Moreno, M. Pavei, D. Rizzetto, B. Szcepaniak, P. Zaccaria

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A low temperature atmospheric pressure plasma source for accelerating blood coagulation
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Experimental investigation of the effects of different glow discharge cleaning techniques on high voltage vacuum insulation performance
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Diagnostics for DTT in view of DEMO
M Valisa, P Innocente, M Tardocchi , O Tudisco and the DTT team

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Extension of the operating space of high-βN fully non-inductive scenarios on TCV using Neutral Beam Injection
C. Piron, J. Garcia, T. Goodman, M. Agostini, D. Brunetti, F. Carpanese, F. Felici, M. Fontana, G. Giruzzi, M. Gobbin, Z. Huang, A. Karpushov, D. Keeling, M. Kong, M. Marini, A. Merle, J. Morales, F. Orsitto, S. Nowak, F. Pesamosca, L. Pigatto, M.E. Puiatti, O. Sauter, R. Scannel, D. Testa, M. Valisa, M.Vallar, M. Yoshida, the TCV team and the MST1 team

From RFX-mod TO RFX-mod2: perspectives of the Reversed Field Pinch configuration
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A unified model of density limit in fusion plasmas
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Resistive Wall Mode physics and control challenges in JT-60SA high βN scenarios
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Consorzio RFX contribution to the JT-60SA project in the frame of the BA agreement
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Negative ion beam source physics as a complex system: identification of main processes and key interdependence.
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On the Role of Radial Electric Fields on Turbulence Spreading in the Plasma Boundary of Fusion Devices
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Runaway Electron Beam Stability and Decay in COMPASS

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Helical plasma-wall interaction in the RFX reversed-field pinch: toroidal effects, localization and role of sidebands
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Alfvén waves in RFP plasmas: nonlinear 3D MHD modeling and comparison with RFX-mod
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Runaway electron mitigation by applied magnetic perturbations in the ASDEX Upgrade and COMPASS experiments
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Reconstruction of visible emission in AUG divertor
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Study of full impurity Shattered Pellet Injection by non-linear 3D JOREK simulation in JET plasma
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Study of transport modulation by magnetic islands in different magnetic configurations
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Negotiating with magnetic self-organization in confined plasmas (bold, 14 pt)
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Electron temperature gradient driven instabilities in helical reversed field pinch plasmas
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JET disruption mitigation and avoidance in support of DT operation and ITER
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Preliminary integrated design of a RFP fusion core and a hybrid reactor blanketPreliminary integrate
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