

Structural Design and Analysis of Forced-Flow Superconducting Inner Vertical Coils for the Large Helical Device	
<i>Yamamoto T., Kitamura K., Mizumaki S., Nakamoto K., Uchida T., Takano H., Shinohara H., Yamamoto J., Satow T., Imagawa S., Tamura H., Nishimura A., Takahata K., Motojima O.</i>	976
Construction and Testing of the Active Control Coil Cable and Connection for NET/ITER	
<i>Zacchia F., Centurioni L., Guastavino F., Guerreschi U., Malavasi G., Mei G., Ottonello G., Perrella M., Rossi S.</i>	981
Simulation of the Power Supply System for the Plasma Vertical Position Control in NET/ITER	
<i>Zama G., Portone A.</i>	986

Volume 2**Section V: Data Acquisition and Control Systems**

Data Acquisition System for Slow Variable Transients with Fiber Optic Separation	
<i>Bielik M.</i>	993
Hardware Implementation of a Neural Network to Plasma Position Control in Compass D	
<i>Bishop C.M., Haynes P.S., Roach C.M., Smith M.E.U.S., Todd T.N., Trotman D.L.</i>	997
Plasma Feedback Controls for the Modified Tokamak Textor	
<i>Brocke W.A.</i>	1002
The Thermal Instrumentation and Power Accountability of the JET Neutral Injection System	
<i>Browne A., Bickley A.J., Challis C.D., de Esch H.P.L., Ewers D.T., Hogben C.H., Jensen J.Z., Jones T.T.C., Stork D., Svensson L., Tivey R., Todd J.M., Young D., Young I.D.</i>	1007
TORE SUPRA Data Analysis Facilities	
<i>Buravand Y., Demarthe H., Balme S., Basiuk V., Becoulet A., De Gentile B., Guillermelin B., Hennion F., Le Luyer M., Masset R., Peysson Y., Rothan B., Saoutic B., Signoret J.</i>	1012
New DIII-D Tokamak Plasma Control System	
<i>Campbell G.L., Ferron J.R., McKee E., Nerem A., Smith T., Lazarus E.A., Greenfield C.M., Pinsker R.I.</i>	1017
The Global Fast Protection System of RFX	
<i>Camposrini P.P., Guarnieri M., Hood M.B., Luchetta A., Maschio A., Schmidt V., Stella A.</i>	1022

Transient Electromagnetomechanical Analysis of the In-Vessel Region During Off-normal Conditions	
<i>Crutzen Y., Farfaletti-Casali F., Inzaghi A., Papadopoulos S., Schneider J., Richard N.</i>	1027
The Data Acquisition and Management System for the TdeV Tokamak	
<i>De Villers P., Larsen J.M., Pronovost B., Caumartin J.</i>	1032
The Operation Parameter Setting Software Package for the RFX Experiment	
<i>Flor G., Ortolani S., Schmidt V.</i>	1037
Position and Shape Control on ASDEX-Upgrade	
<i>Gruber O., Gernhardt J., McCarthy P., Lackner K., Seidel U., Schneider W., Woyke W., Zehrfeld H.P.</i>	1042
Acquisition of Technical Data and Matching Procedures for the ICRH System on ASDEX Upgrade	
<i>Hofmeister F., Braun F., Grimm R., Wesner F., ICRH Team</i>	1047
Control and Data Acquisition for the Nine-Shot Tector Pellet Injector System	
<i>Korten M., Lerch J., Meier H., Müller K.H., Wegener H.P.</i>	1052
Application of Neural Networks for Real-Time Calculations of Plasma Equilibrium Parameters for PBX-M	
<i>Lagin L., Bell R., Davis S., Eck T., Jardin S., Kessel C., McEnerney J., Okabayashi M., Popyack J., Sauthoff N.</i>	1057
Control of the TCV Tokamak Plant	
<i>Lister J.B., Marmillod Ph., Bernel, S., Isoz P.-F., Marletaz B.</i>	1062
Experimental Results and Upgrading of the Plasma Current and Position Control in FTU	
<i>Fermani G., Neri C., Riva M., Apruzzese G., Buceti G., Crisanti F., Frigione D., Kroegler H., Lovisetto L., Mazzitelli G., Podda S., Santinelli M.</i>	1067
ASDEX-Upgrade Discharge Control and Shot Management	
<i>Raupp G., Bruhns H., Förster K., Hertweck F., Huber R., Jülich A., Neu G., Richter H., Schneider U., Streibl B., Woyke W., Zasche D., Zehetbauer T.</i>	1072
Overview of the ASDEX-Upgrade Experiment Management Software	
<i>Richter H., Cole R., Fitzek M., Förster K., Lüddecke K., Neu G., Raupp G., Woyke W., Zasche D., Zehetbauer T.</i>	1077
The ASDEX Upgrade Shot Program Editor	
<i>Schneider U., Förster K.</i>	1082
Upgrade of the Control System for TEXTOR	
<i>Tenten W., Dohms U., Fuss L., Görg B., Hilgers S., Huppertz H., Lerch J., Müller K.D., Reinhart P., Rongen F.</i>	1086

Real Time Plasma Boundary Determination for Display and Control Using Transputers <i>van der Goot E., Ellis J.J., O'Brien D.P.</i>	1091
The Istitok Control and Data Acquisition System <i>Varandas C.A.F., Fernandes H., Sousa J., Carvalho B., Correia C., Freitas C., Pires J., César P., Armanda M., Morgado M., Simões B., Domingues J., Martins J.C., Cabral J.A.C.</i>	1096
Integration and First Operation of the RFX Control and Data Acquisition System <i>Vitturi S., Flor G., Hemming O.N., Luchetta A., Manduchi G., Schmidt V.</i>	1101
Control and Data Acquisition of the Neutral Beam Injection for ASDEX-Upgrade <i>Vollmer O., Stäbler A., Feist J.H., Klaster K., Obermayer S., Speth E., Wittenbecher K.</i>	1106
 Section VI: Fuel Cycle and Tritium Processing Systems	
Tritium Technology Development under 5-Year U.S.-Japan Collaboration at TSTA <i>Anderson J.L., Bartlit J.R., Naruse Y.</i>	1113
Tritium Accountancy under Recycling Conditions <i>Avenhaus R., Spannagel G.</i>	1118
On the Way to Commissioning the Tritium Laboratory Karlsruhe (TLK) <i>Besserer U., Jourdan G., Hutter E.</i>	1123
Design Procedure for Minimum Tritium Inventory in an Isotope Distillation Unit <i>Boisset-Baticle L., Latge C., Pibouleau L., Joulia X., Domenech S.</i>	1128
Capillary Electrolysis and Tritium Enrichment <i>Bruggeman A., Rahier A., Cornelissen R., Miller J.M.</i>	1133
Development of the Rate-Based Approach for Simulating Hydrogen Isotope Separation by Cryogenic Distillation <i>Buvat J.C., Latge C., Joulia X., Pautrot P.</i>	1137
The Design and Performance of the JET Ionisation Chambers for Use with Tritium <i>Caldwell-Nichols C.J., Hemmerich J.L., Lässer R., Milverton P.</i>	1142
Experimental Validation of Pd-Ag Diffuser Modeling <i>Chabot J., Sannier J.</i>	1147
An Advanced Fuel Cycle Design for Fusion Power Reactors <i>Dinner P.J., Iseli M., the NET Team</i>	1152

Low Pressure Dissociation Studies of Uranium Tritide <i>Heics A.G., Shmayda W.T.</i>	1157
Tritium Activities for Fusion Inside the Bruyères-le-Chatel Center of the French Atomic Energy Commission <i>Hircq B., Blet V.</i>	1162
Lithium Tritide: Micropower Source and Fusion Fuel <i>Kherani N.P., Shmayda W.T.</i>	1167
Contamination of the Vacuum Pumping Lines of the Tokamak Fusion Test Reactor <i>LaMarche P.H., Ladd P., Umbagh L., Lewis M., Cropper M., Gilbert J., Collins J., Winston J., Crook D.</i>	1172
Conceptual Design of an Efficient and Reliable Fuel Clean-Up System Based on Permeation-Oxidation-Electrolysis <i>Latge C., Hircq B., Leger D., Murdoch D.</i>	1176
Pumping and Recycling of Hydrogen Isotopes by Superpermeable Membranes in Fusion Devices <i>Livshits A.I., Notkin M.E., Samartsev A.A., Busnyuk A.O., Pistunovich V.I.</i>	1181
Vacuum System Development for NET Torus Exhaust <i>Murdoch D.K., Perinic D., Dinner P.J.</i>	1186
Regeneration and Tritium Recovery from the Large JET Neutral Injection Cryopump System after the FTE <i>Obert W., Bell A., Davies J., Mayaux C., Perinić G., Saibene G., Sartori R., Thompson E.</i>	1191
Research and Development on Tritium Technology at the Tritium Process Laboratory of JAERI <i>Okuno K., Matuda Y., Konishi S., Yamanishi T., Hayashi T., Naruse Y.</i>	1196
Tritium Permeation Through Engineering Components: JET Bellows Experiment <i>Perajo A., Douglas K., Agostini P., Caldwell-Nichols C.J.</i>	1201
The Adsorption of Gas Mixtures in Zeolites: Experimental Determination and Theoretical Prediction of Equilibria <i>Ricapito I., Malara C., Pierini G., Facchini A., Mencarelli T., Spelta B., Toci F., Viola A.</i>	1206
Tritium Process Modelling: a Systems Approach <i>Sarigiannis D.A., Fowler T.K., Ho S.K., Holdren J.P.</i>	1211
Decontamination of the JET Vacuum Vessel from Beryllium and Tritium <i>Scott S.M., Buttgereit H.F., Celentano G., Malone K.</i>	1216
Tritiated Water Reduction Over St737 <i>Shmayda W.T., Venkataramani N., Ghezzi F., Bonizzoni G.</i>	1220

Optimized Fuel Processing System for ITER <i>Sood S.K., Kveton O.K., Kalyanam K.M., Woodall K.B., Robins J.R., Busigin A.</i>	1225
The Gas Introduction System Used for Tritium Neutral Beam Injection into JET <i>Svensson L., Martin D., Browne A., Cooper D., Davies J.F., Falter H.D., Jones T.T.C., Thompson E.</i>	1230
Experiments on the Oxidation and Air Ingress into Uranium Beds <i>Tamm U., Hutter E., Neffe G., Schira P.</i>	1235
Integrated Membrane Water Shift Reactor/Separator for Tritium Recovery in the Fusion Fuel Cycle <i>Violante V.</i>	1240
Simplified Analysis of a "Plug-Flow" Palladium Permeator <i>Willms R.S., Glugla M., Penzhorn R.D.</i>	1244
Migration of Tritium in the JET Vacuum System Following the First Tritium Experiment <i>Winkel T., Haigh A.D., Holland D.</i>	1249
 Section VII: Blanket Technology and Materials	
Thermo-Mechanical Stability of Lithium Silicates <i>Abramenkovs A., Tiliks J., Tamuzhs V.</i>	1257
Tritium Release from Lithium Silicates <i>Abramenkovs A., Tiliks J., Werle H.</i>	1261
Tritium Removal from LiAlO₂ and Li₂ZrO₃ <i>Alvani C., Carconi P.L., Casadio S., Mancini M.R., Moauro A.</i>	1266
Irradiation Behaviour of LiAlO₂ Breeder Pellets <i>Alvani C., Casadio S., Cosoli G., De Luca A., Filacchioni G., Miliozzi A.</i>	1271
Investigations of Liquid Metal Flow through a Right Angle Bend under Fusion Relevant Conditions <i>Barleon L., Bühler L., Mack K.J., Molokov S., Stieglitz R., Picologlou B.F., Hua T.Q., Reed C.B.</i>	1276
3-D Neutron Transport Calculations for Activation and Dose Assessment for Ignitor <i>Batistoni P., Ciattaglia S., Rollet S., Zucchetti M.</i>	1281
AISI 316L Corrosion Fatigue Tests in Pb-17Li Environment, First Results <i>Benamati G., Storai S., Alessandrini I.</i>	1286

Calculation of Electromagnetic Forces and Stresses Caused by a Major Plasma Disruption in the Karlsruhe Solid Breeder Blanket Design for the DEMO Reactor	1291
<i>Boccaccini L.V.</i>	
Activation and Afterheat of Tungsten as a Protective Layer on First Wall and Divertor of ITER	1296
<i>Bufalino D., Cerullo N., Daenner W., Fratangelo P., Riscossa P.</i>	
Additional Magnetohydrodynamic Pressure Drop at Junctions of Flow Channel Inserts	1301
<i>Bühler L.</i>	
Plasma Facing Component Activation in NET-II Initial D-T Pulsed Operations	1306
<i>Cambi G., Cepraga D.G., Cavallone G., Menapace E., Petrizzi L., Vanossi A., Zucchetti M.</i>	
Tempering Structures and Related Ductile to Brittle Transition in MANET Steel Pb17Li Blanket	1311
<i>Capotorto C., Coppola R., Gondi P., Montanari R., Tata M.E.</i>	
Tritium Breeding Self-Sufficiency of DEMO Reactors with a Water-Cooled Pb17Li Blanket	1316
<i>Casini G., Petrizzi L., Rado V., Zucchetti M.</i>	
On the Optimization of Fusion Reactor Blanket for Long Lived Nuclear Waste Incineration	1321
<i>Cetnar J., Iguchi T., Nakazawa M.</i>	
Conceptual Design of a Helium Cooled Solid Breeder Blanket Based on the Use of a Mixed Bed of Beryllium and Li₄SiO₄ Pebbles	1326
<i>Dalle Donne M., Bojarsky E., Fischer U., Goraieb A., Norajitra P., Reimann G., Reiser H., Sordon G.</i>	
Out of Pile Thermal Test Activity for the European Ceramic BIT DEMO Blanket	1331
<i>Dell'Orco G., Anzidei L., Bertacci G.C., Cevolani S., Polazzi G., Proust E., Bielak, B., Sanchez A., Szczepanski J.</i>	
Ductility of Irradiated 316 Welds	1336
<i>Elen J.D., Fenici P., Tartaglia G.P.</i>	
Shield Penetration Experiment	1341
<i>Elfruth T., Hanke J., Seidel K., Unholzer S.</i>	
Tritium Production Rate of a LiAl Blanket Mock-Up	1345
<i>Elfruth T., Hebert D., Klose J., Markovskij D., Seidel K., Shatalov G., Stolz W., Unholzer S.</i>	
Tritium Release from Ceramic Breeders: Key Issues and Implications for Modeling and Interpreting Fusion Testing Results	1349
<i>Federici G., Wu C.H., Raffray A.R., Billone M.C.</i>	

Feasibility Analysis of the Tritium Batch Recovery for the ITER Driver Blanket <i>Ferrari M., Caira M., Cumo F., Mazzone G., Sorabella L., Simbolotti G., Violante V., Zampaglione V.</i>	1354
Thermal Behaviour of the Water-Cooled Lithium-Lead Box-Shaped DEMO Blanket During a Loss-of-Coolant Accident <i>Giancarli L., Proust E., Mouquet N., Salavy J.F., Hernot M., Franenberg H.W.</i>	1359
The Effects of Irradiation on Corrosion of the 10-12% Cr-Mo-V-Nb Martensitic Steel "MANET" <i>Gott K., Lind A., Low J.,</i>	1364
Aspect Ratio Effects on Heat Transfer in Non-MHD Laminar Flow through Rectangular Channels in the Plasma-Facing Components of Fusion Reactors <i>Hasan M.Z., Takase K.</i>	1368
Chemical Compatibility of Oxide Breeder Materials with Cladding Steels <i>Hofmann P., Dienst W.</i>	1373
New Sources of Uncertainties in Sensitivity/Uncertainty Studies <i>Hogenbirk A.</i>	1379
Calculation of Radiation Fields Inside and Outside the NET Cryostat/Biological Shield during Operation <i>Hogenbirk A., Verschuur K.A.</i>	1384
Thermodynamic Study of Gas/Solid Reactions at the Surface of Lithium Orthosilicate in View of Blanket Sweep Gas Chemistry <i>Ihle H.R., Penzhorn R.-D., Schuster P.</i>	1389
A Plasma-Type Neutron Source for Fusion Materials Irradiation Testing <i>Ivanov A.A., Kotelnikov I.A., Kruglyakov Eh.P., Kudriavtsev A.M., Volosov V.I., Mirnov V.V., Ryutov D.D., Tsidulko Yu.A., Yudin Yu.N., Astapkovich A.M., Krasnoperov V.G.</i>	1394
Reliability Investigations and Improvements of the Cooling System of a Self-Cooled Liquid Metal Breeder Blanket <i>John H., Schnauder H., Bogusch E., Wehling J.</i>	1399
Beatrix-II, Phase II: In Situ Tritium Recovery from a Thin-Walled Li₂O Ring Irradiated in a Fast Neutron Flux <i>Kurasawa T., Slagle O.D., Hollenberg G.W., Verrall R.A.</i>	1404
The Effect of Purge Gas Composition on the Release of Tritium from Ceramic Breeder Materials Irradiated in EXOTIC – 6 <i>Kwast H., Conrad R., May R., Casadio S., Roux N., Werle H.</i>	1409
A Driver Blanket for NET <i>Lorenzetto P., Gierszewski P., Chiocchio S., Daenner W., Federici G., Gorenflo H., Iseli M., McIlwain H., Salpietro E., Williams G.</i>	1414

Importance of Self-Shielding Effect on Shielding Design of Fusion Devices	1419
<i>Maekawa F., Konno C., Kosako K., Oyama Y., Ikeda Y., Maekawa H.</i>	
Dual Coolant Liquid Metal Breeder Blanket	1424
<i>Malang S., Bojarsky E., Bühler L., Deckers H., Fischer U., Norajitra P., Reiser H.</i>	
The Feasibility of Tritium Extraction Units from Blanket of Fusion Reactors in the Light of Recent Experimental Data	1429
<i>Malara C., Pierini G., Viola A.</i>	
A Comparison of Production Behaviour of Irradiation Defects in Lithium Ceramics	1434
<i>Moriyama H., Nagae T., Moritani, K., Ito Y.</i>	
In-Situ-Fatigue Experiments on the Karlsruhe Dual Beam Facility: Capabilities and First Results	1439
<i>Möslang A., Baumgärtner S., Bürkle G., Lindau R., Przykutta G., Ehrlich K.</i>	
Structural Analysis of Ion Irradiated Pure and Al-Doped Li₄SiO₄	1444
<i>Nakazawa T., Noda K., Ishii Y., Matsui H., Igawa N., Vollath D., Ohno H., Watanabe H.</i>	
Further Neutronic Analyses of the European Ceramic B.I.T. Blanket for DEMO	1449
<i>Petrizzi L., Giancarli L., Rado V., Diop C.</i>	
MHD-Flow in Multichannel U-bends: Screening Experiments and Theoretical Analysis	1454
<i>Reimann J., Molokov S., Platnieks I., Platacis E.</i>	
Lithium Aluminate Sol-Gel Ceramics	1459
<i>Renoult O., Boilot J.P., Boncoeur M.</i>	
First Calculation of the Electromagnetic Forces Caused by a Disruption in a Solid Breeder Blanket with a Ferromagnetic Structural Material	1464
<i>Ruatto P.</i>	
Liquid Metal Embrittlement (LME) Susceptibility of the Low Activation Martensitic Steels LA7TaLN, LA12TaLN, LA12TaLC, LA13Ta and their Simulated Welded Structures in Liquid Pb-17Li	1469
<i>Sample T., Kolbe H., Orecchia L.</i>	
The Effects of Neutron Irradiation on Beryllium	1474
<i>Sannen L., De Raedt Ch.</i>	
Mechanical Properties and Dehydration of Li₄SiO₄ Pebbles	1479
<i>Schauer V., Dalle Donne M., Huber R., Schmitt B., Schumacher G., Werle H.</i>	
Water-Cooled Lithium-Lead Box-Shaped Blanket Concept for DEMO: Thermo-Mechanical Optimisation and Manufacturing Sequence Proposal	1484
<i>Severi Y., Baraer L., Dinot N., Giancarli L., Proust E., Quintric-Bossy J., Salavy J.F.</i>	

Neutron Leakage Spectra From Be, Al, Fe, Ni, Pb, LiPb, Bi, U and Th Spheres with T(d, n) and ^{252}Cf Neutron Sources <i>Simakov S.P., Androsenko A.A., Androsenko P.A., Devkin B.V., Dubrovina S.I., Kobozev M.G., Lychagin A.A., Talalaev V.A., Chuvilin D.Yu., Zagryadskij V.A.</i>	1489
Determination of the Diffusion Coefficients of Iron and Chromium in Pb17Li at 500°C <i>Simon N., Flament T., Terlain A.</i>	1494
Beatrix-II: In Situ Tritium Recovery from Li_2O and Li_2ZrO_3 Irradiated in a Fast Neutron Flux <i>Slagle O.D., Kurasawa T., Hollenberg G.W., Verrall R.A.</i>	1499
Layered Pebble Bed Concept for ITER Breeding Blanket <i>Takatsu H., Mori S., Yoshida H., Hashimoto T., Kurasawa T., Koizumi K., Enoeda M., Satoh S., Kuroda T., Suzuki T., Ioki K., Kanzawa T.</i>	1504
Helium Cooled Liquid Lithium Blanket Concept: A Scoping Study <i>Talarico C., Cerullo N., Forasassi G., Manfredi E., Simbolotti G., Zampaglione V.</i>	1509
Hydrogen Transport through Gas/$\text{Li}_{17}\text{Pb}_{83}$ Interface and Effect of Isotopic Swamping <i>Tanaka S., Yamawaki M.</i>	1513
Surface Oxide Layer as a Barrier to Tritium Permeation Through Structural Materials Facing 17Li-83Pb Molten Alloy <i>Terai T., Uozumi K., Takahashi Y.</i>	1518
Radiolysis of Solid Blanket Materials <i>Tiliks J., Kizane G., Abramenkovs A., Supe A., Tiliks J., Jr., Vasiljev V., Werle H.</i>	1523
Influence of Magnetic Field on the Physico-Chemical Processes in Lithium Ceramic Materials of Blanket Zone <i>Tiliks J., Kizane G., Abramenkovs A., Tiliks J., Jr., Grischmanovs V., Ozols A., Vasiljev V.</i>	1528
Technological Features of Some ISTTOK Diagnostics <i>Varandas C.A.F., Cabral J.A.C., Alonso M., Conde R., Cupido, L., Dias, J.M., Forrest M.J., Hancock, O.J., Hanks S., Holmes A.J.T., Inman M., Mahoney C.M.O., Malaquias A., Manso M.E., Pinto J.L., Praxedes A., Serra F., Silva A., Sousa, J., van Toledo W., Varela P., Vergamota S., Wilcock P.D.</i>	1532
Measurement and Analysis of Neutron Leakage Spectra from Beryllium Spherical Shells <i>Von Möllendorff U., Fischer U., Fries H., Giese H., Kappler F., Tayama R., Tsukiyama T., Wiegner E.</i>	1537
Tritium Release from Beryllium Irradiated in the Sibelius Experiment <i>Werle H.</i>	1542

Blanket Materials R&D from Engineering Aspects of Lithium Ceramic-Beryllium-Steel Systems in ITER Blanket	Yoshida H., Enoeda M., Nagakura M., Kobayashi S., Ozawa Y.	1547
 Section VIII: Remote Handling		
NET Mechanical Fasteners - Measurement of the Tensile Properties of Materials at 4 K Temperature and Evaluation of Antiseizure Behaviour of Coatings and Lubricants		
<i>Alessandrini C., Bettinelli L., Di Pietro E.</i>		1555
An Approach to Remote Welding and Cutting Operations Applied to the NET Vacuum Vessel Secondary Sealing		
<i>Bitti G., Cassandro L., Cecchini A., Di Pietro E., Harrison R.M., Cerri W., Mor G.</i>		1560
Sensor Controlled Remote Handling in Fusion Reactor Environment		
<i>Decreton M., Coenen S.</i>		1565
Construction and Testing of the RFX Remote Handling System		
<i>Doria A., Finotello R., Gnesotto F., Marchiori G., Perfumo A.</i>		1569
Development and Testing of Tools for the Remote Replacement of NET/ITER Cryolines		
<i>Gaa R., Gumb L., Katheder H., Neumann K., Schäf A., Selig M., Sironi M.</i>		1574
KISMET Based Multimedia Workstation for Operational Support in Fusion Plant Remote Maintenance		
<i>Leinemann K., Kühnapfel U., Katz F., Knüppel H., Krumm H.G., Olbrich W.</i>		1579
Feasibility Study of Blanket Handling System for Fusion Experimental Reactor		
<i>Shibanuma K., Kakudate S., Kanamori N., Terakado T., Kondoh M., Oka K., Mizoguchi T., Hotta M., Obara K., Shimamoto S.</i>		1584
Remote Handling of Shield/Blanket Segments		
<i>Sironi M., Chiocchio S., Hubert P., Maisonnier D., Malavasi G., Blight J., Dagenais J.-F., Amelotti F., Turroni P., Vecchi M., Becquet M., Biggio M., Castillo E., Farfalletti-Casali F.</i>		1589
Maintenance of Large Gate Valves in Torus Vacuum Pumping Systems		
<i>Stringer J.D., Blevins J.D.</i>		1594
EDITH-A Prototypical Articulated Boom System for NET/ITER		
<i>Suppan A., Hübener J., Reim J., Woll J., Maisonnier D., Reeve T.J.</i>		1599
Divertor Plate Supporting System for Fusion Experimental Reactor		
<i>Tada E., Nishio S., Shibui M., Okazaki T., Kakudate S., Koizumi K., Kondo M., Nakahira M., Sasaki T., Sawa M., Shimizu K., Nomura, Y., Shimamoto S.</i>		1604

Section IX: Future Machines

DIOSCUR: A Tokamak to Attain Reactor Relevant Steady State Operation <i>Alladio F., Andreani R., Barbato E., Bartiromo R., Cardinali A., De Marco F., Ferro C., Gasparotto M., Lovisetto L., Mancuso A., Micozzi P., Orsitto F.P., Pieroni L., Pizzuto A., Roccella M., Romanelli F., Salpietro E., Tanga A.</i>	1611
Engineering Feasibility Study of the OMITRON Device <i>Barberis U., Lanza vecchia L., Palmieri R., Pirozzi M., Pizzuto A., Sestero A.</i>	1616
Physics Criteria and Design Solutions for an Advanced Ignition Experiment <i>Coppi B., Nassi M., Ignitor Project Group</i>	1621
Derivation of Parameter Sets for Next Step Tokamaks <i>Mitchell N., Basecq J., Bottura L., Portone A.</i>	1626
Conceptual Design Study of a Steady State Tokamak Device <i>Nagami M., Miya N., Nakajima S., Ushigusa K., Oikawa A., Nishitani T., Toyoshima N., Kinoshita S., Nakagawa S., Saito R.</i>	1631
Design of a Superconducting Steady State Advanced Tokamak <i>Neilson G.H., Brown T.G., Goldston R.J., Haines J.R., Hill D.N., Jardin S.C., Lang D.D., Medley S.S., Nevin W.M., Porkolab M., Schmidt J.A., Schultz J.H., Sinnis J.C., Thomassen K.I., Ulrickson M. and the TPX Design Team</i>	1636
Small Steady-State Tokamak (TST) for Divertor Testing <i>Peng Y.M., Colchin R.J., Swain D.W., Nelson B.E., Monday J.F., Blevins J., Bonoli P., Delisle M., Luckhardt S., Pauletti R., Stringer J.</i>	1641
Design and Performance of HARD: a High-Aspect-Ratio ITER Design <i>Wesley J.C., Barr W., Bobrov E., Brooks J., Bulmer R., Cohen S., Cooper W., Doggett J., Ehst D., Fenstermacher M., Galambos J., Gohar Y., Haney S., Hassanein A., Hogan J., Leuer J., Lindquist W., Lousteau D., Myatt R., Nelson B., Nevin W., Pearlstein L.D., Perkins L.J., Piet S., Post D., Rensink M., Ruzic D., Schultz J., Shen S., Sigmar D., Smith G., Uckan N., Werley K., White R., Williamson D.</i>	1646

Section X: Reactor Studies

Prometheus Designs for Laser-Driven and Heavy-Ion Driven Fusion Reactors <i>Abdou M.A., Waganer L.</i>	1653
A Systems Analysis of the ARIES Tokamak Reactors <i>Bathke C.G., ARIES Research Team</i>	1658
A Need for Non-Tokamak Approaches to Magnetic Fusion Energy <i>Bathke C.G., Krakowski R.A., Miller R.L.</i>	1663

Design and Safety Criteria for Reactor Relevant Heat Transport Systems	1668
<i>Iseli M., Bartels H-W.</i>	
 Section XI: Safety and Environment	
Quantification and Final Disposal of Radioactive Waste from ITER Operation and Decommissioning	1675
<i>Aggeryd I., Devell L., Olsson G.</i>	
Plasma Driven Decontamination of Tritiated Stainless Steel	1680
<i>Antoniazzi A.B., Shmayda W.T.</i>	
Containment of a Water-Cooled Tokamak Fusion Power Reactor	1685
<i>Blomquist R., Johansson K.</i>	
Radioactive Waste Management at JET	1690
<i>Booth S.J., Collins D., Newbert G.</i>	
Magnet Initiating Events for ITER Risk Assessment	1695
<i>Cadwallader L.C.</i>	
Characterization of Erosion Dust and Tritiated Products Inside the JET Vessel After the First Tritium Experiment	1700
<i>Charau J., Belot Y., Cetier Ph., Drezet L., Grivaud L., Peacock A.T., Wu C.H.</i>	
Preliminary Occupational Radiation Dose Assessment for NET/ITER Plant	1704
<i>Ciattaglia S., Sandri S., Cambi G., Cavallone G., Cepraga D.G.</i>	
An Assessment on Fusion Radioactive Waste Environmental Impact with Reference to Thermal Power Plants	1709
<i>Donato A., Petrizzi L.</i>	
Radioactivity Confinement for Loss of Coolant Accidents in NET	1714
<i>Ebert E., Fauser F., Iseli M.</i>	
Production of ^{210}Po in Pb-17Li: Assessment of Methodological and Data Related Uncertainties	1719
<i>Fischer U., Wiegner E.</i>	
Tritium Inventories Used for NET Safety Analysis	1724
<i>Gulden W., Leger D., Dinner P.</i>	
Fast, Approximate Scheme of Activation-Induced Radioactivity Evaluation for Fusion Reactor Systems Studies	1729
<i>Ho S.K., Fowler T.K.</i>	
Passive Removal of Afterheat in the Next Step Fusion Device	1734
<i>Konrad Ch., Bartels H-W., Andritsos F.</i>	

Safety Analysis of the Magnet System for NET and ITER <i>Mitchell N., Bottura L., Chiocchio S.</i>	1739
Safety Considerations for Divertor of Fusion Experimental Reactor <i>Okazaki T., Nishio S., Shibui M., Saji G., Takatsu H., Tada E., Aoki I., Seki Y.</i>	1744
Radioactive Releases and Dose Evaluation for Fusion Power Reactor Accidents <i>Palma T., Tarisciotti F.</i>	1749
Investigations Concerning the Mechanical Integrity of the NET/ITER Coil Structure Under Fault Conditions <i>Raff S., Hoang Y.S., Krieg R.</i>	1754
Doses Due to Accidental Releases of Tritium and Activation Products into the Atmosphere and the Aquatic Environment <i>Raskob W., Edlund O., Gulden W.</i>	1759
NET-ITER Hydrogen Isotope Separation System Safety Assessment <i>Rizzello C., Cambi G., Cavallone G., Ciattaglia S., Costa M.</i>	1764
Health Physics and Environmental Implications of JET's First Tritium Experiment <i>Russ R.M., Bell A.C., Caldwell-Nichols C.J., Haigh A.D., Patel B., Serio L.</i>	1769
The Influence of Neutron Spectrum, Flux and Irradiation Time on the Activation Behaviour of First Wall Materials <i>Sublet J.-Ch., Butterworth G.J.</i>	1774
The Mobilisation of Activation Products in an Accidental Temperature Transient in a Tokamak Reactor <i>Taylor N.P., Han W.E.</i>	1779
Containment Pressure Calculations Following a LOCA in a High Pressure/Temperature Fusion Reactor Cooling System <i>Wright M.A., Natalizio A., Nguyen T.H.</i>	1784
A Glimpse at SOFT 17	1791