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Tuesday, October 27, 1981

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<i>Conceptual Design Studies of the Modular Stellarator Reactor (MSR)</i> , R. L. Miller, R. A. Krakowski (LANL) . . . . .	1863
<i>The Prototype Moving-Ring Reactor</i> , A. C. Smith, Jr., C. P. Ashworth, K. E. Abreu, D. M. Woodall (PG&E); G. A. Carlson, W. S. Neef, Jr. (LLNL); H. H. Fleischmann, W. Grossman, Jr., T. Kamash (Cornell U.); K. R. Schultz, C. P. C. Wong, D. K. Bhadra, R. L. Creedon, E. T. Cheng, G. R. Hopkins (GA) . . . . .	1867
<i>The Prospects of Low Activation Fusion Reactor Design</i> , G. R. Hopkins, E. T. Cheng, I. Maya, C. P. C. Wong, K. R. Schultz (GA) . . . . .	1871
<i>An Advanced-Fuel Reversed-Field Pinch Reactor (RFPR)</i> , R. L. Hagenson, R. A. Krakowski (LANL) . . . . .	1875
<i>The Impact of Engineering Constraints on the Feasibility of Advanced Fuel Fusion Reactors</i> , J. R. Roth (U. Tenn.) . . . . .	1879
<i>The Sensitivity Study Code for Tokamak Devices</i> , M. Kasai, M. Nishikawa, A. Kameari, I. Yanagisawa, N. Ueda (Mitsubishi Atomic); T. Tone, T. Hiraoka (JAERI) . . . . .	1880
<i>A Methodology For Investigating Subsystem Interactions in a Tokamak Fusion Reactor</i> , J. D. Reierson, J. L. Menke, (MITRE) . . . . .	1884
<i>Electric Power From Near-Term Fusion Reactors</i> , G. R. Longhurst, G. A. Deis, L. G. Miller (EG&G) . . . . .	1888
<i>Engineering Challenges of Underground Contained Fusion</i> , R. P. Hammond, J. L. Dooley (R & D Assoc.) . . . . .	1892
<i>UWTO-M, A Conceptual Design Study of a Modular Stellarator Power Reactor</i> , I. N. Sviatoslavsky, S. W. Van Sciver, G. L. Kulcinski, A. W. Bailey, J. D. Callen, G. A. Emmert, L. El-Guebaly, A. Khalil, D. K. Sze, R. C. Sanders, K. Yuan, D. T. Anderson, J. A. Derr, J. L. Shohet, J. Tataronis (U. Wisconsin) . . . . .	1894
<i>The Spheromak Approach to High Power Density Reactors</i> , R. E. Olson, J. G. Gilligan, E. Greenspan, G. H. Miley (U. Illinois) . . . . .	1898
<i>Liquid Jet Experiments: Relevance to Inertial Confinement Fusion Reactors</i> , M. A. Hoffman (U. of Cal.-Davis) . . . . .	1901
<i>Production of Hollow Gas Cylinder and Pulsed Gas Insulated Discharge</i> , T. Miyamoto, N. Yoshioka, N. Sogo, M. Sato (Nihon U.); T. Kobata (U. Tokyo) . . . . .	1905

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<i>Effect of Curing Condition on the Concrete Moisture Retention and Its Shielding Implication For The Design of Fusion Facilities</i> , S. Huang, J. Chang, S. Amin (Parsons); S. Palmrose (Jones); J. Paxton (Corps. Engr.) . . . . .	1909
<i>Design of the FMIT Lithium Target</i> , J. A. Hassberger, C. E. Annese, R. K. Greenwell, J. G. Ingham, R. R. Miles, W. C. Miller (HEDL) . . . . .	1912
<i>Radiation Shielding Issues on the FMIT</i> , R. J. Burke, A. A. Davis, R. J. Morford (HEDL); S. T. Huang (Parsons) . . . . .	1916
<i>Calculation of Tritium Inventory and Permeation in an INTOR Like Tokamak Device and of Its Release After Shut Down</i> , P. Weinhold, F. Waelbroek, J. Winter (IPP-Jülich) . . . . .	1920

<i>Non-Adiabatic Motion of Hot Annulus Electrons in an Axisymmetric Mirror,</i> C. B. Wallace, M. A. Prelas (U. Missouri); R. E. Juhalla, D. E. Driemeyer (MDAC) . . . . .	1921
<i>A Small Scale Low Frequency Heating Experiment for Collisional Plasmas,</i> C. B. Wallace, M. A. Prelas (U. Missouri) . . . . .	1922
<i>A Possible Steady State Current Drive For Reversed Field Pinch Discharges,</i> K. F. Schoenberg, R. F. Gribble (LANL) . . . . .	1923
<i>Sensitivity of Commercial Ion Gage Tubes,</i> C. R. Tilford (NBS) . . . . .	1924
<i>Suitability of Hot-Ion Mode Tokamaks for Commercial Power,</i> J. S. Meachum (U. Missouri-Rolla) . . . . .	1928

#### SESSION 7A. EXPERIMENTAL SYSTEMS DESIGN

Thursday, October 29, 1981

Chairman: R. Martin (ANL)

<i>An Overview of the Tandem Mirror Experiment-Upgrade,</i> A. K. Chargin, M. O. Calderon, T. Wieskamp (LLNL) . . . . .	1929
<i>Engineering Design of TFTR and It's Impact on Future Tokamaks,</i> M. Sabado (Ebasco) . . . . .	1930
<i>Operational Experience With the ASDEX Divertor Tokamak,</i> F. Wesner, H. Rapp, F. Schneider (IPP-Garching) . . . . .	1931
<i>Start-Up and Operation of the Texas Experimental Tokamak,</i> D. Brower, K. Gentle, W. Harris, S. Hutchins, D. Terry, K. Nelin, P. Wildi (U. Texas) . . . . .	1935
<i>Modification of Doublet III to a Large Dee Facility,</i> L. G. Davis, J. M. Rawls (GA) . . . . .	1939
<i>Engineering Tests and Performances of Screw Pinch Device TPE-2, With Non-Circular Cross-Section,</i> N. Ikeda, S. Kiyama, S. Takeda, I. Hirota, Y. Sato, H. Kiyama, K. Hayase, Y. Maejima, K. Hakoda, E. Yahagi, M. Kito, T. Tamari (Electrotech.) . . . . .	1943
<i>Design Principles for a Large RFP Experiment,</i> J. Phillpott (Culham Lab.); G. Rostagni (EURATOM-CNR); J. Di Marco (LANL) . . . . .	1947
<i>TPE-1R(M) Reversed Field Pinch Experiment,</i> T. Shimada, Y. Hirano, Y. Maejima, K. Ogawa (Electrotech.) . . . . .	1951
<i>Comparison of Numerical Solutions of the Shell Stress Analysis for a Large RFP Experiment,</i> B. A. Schrefler, C. E. Majorana (U. Padova) . . . . .	1955

#### SESSION 7B. ENGINEERING PROBLEMS OF FUSION REACTORS

Thursday, October 29, 1981

Chairman: C. Baker (ANL)

<i>The Challenges of Designing Fusion Reactors for Remote Maintainability,</i> L. S. Masson (EG&G) . . . . .	1959
<i>Some New Ideas for Tandem Mirror Blankets,</i> W. S. Neef, Jr. (LLNL) . . . . .	1963
<i>Engineering Problems in Tandem Mirror Reactors,</i> R. W. Moir, W. L. Barr, B. M. Boghosian, G. A. Carlson, R. S. Devoto, J. N. Doggett, G. W. Hamilton, B. M. Johnston, W. N. Kumai, J. D. Lee, B. G. Logan, W. S. Neef (LLNL); R. B. Campbell (TRW, Inc.) . . . . .	1967
<i>Conceptual Design of a Technology Development Facility (TDF),</i> J. N. Doggett, C. C. Damm (LLNL) . . . . .	1972
<i>Engineering Aspects of a D-D Commercial Tokamak Reactor,</i> K. Evans, Jr., C. C. Baker, J. N. Brooks, R. G. Clemmer, D. A. Ehst, J. Jung, R. F. Mattas, B. Misra, D. L. Smith, H. C. Stevens, L. R. Turner (ANL) . . . . .	1976
<i>Tokamaks with High Performance Resistive Magnets: Advanced Test Reactors and Prospects for Commercial Applications,</i> L. Bromberg, D. R. Cohn, J. E. C. Williams, H. Becker, R. Leclaire, T. Yang (MIT) . . . . .	1980

<i>Engineering Needs of a Tract Fusion Reactor Program,</i> H. J. Willenberg, T. L. Churchill, A. L. Hoffman (Math Sciences) . . . . .	1984
<i>Design of a Lithium Blanket Module for Testing in the TFTR,</i> W. G. Homeyer, R. L. Creedon, L. Yang (GA) . . . . .	1988
<i>Helium-Cooled, Solid Breeder Blanket Design for a Tokamak Fusion Reactor,</i> M. Huggenberger, K. R. Schultz (GA) . . . . .	1992

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<i>Design Features of the Solenoid Magnets for the Central Cell of the MFTF-B,</i> J. W. Wohlwend, R. E. Tatro (General Dynamics); D. S. Ring (LLNL) . . . . .	2000
<i>Design Features of the A-Cell and Transition Coils of MFTF-B,</i> R. E. Tatro, J. W. Wohlwend (General Dynamics); D. S. Ring (LLNL) . . . . .	2004
<i>Manufacturing Plan for the Westinghouse Nb<sub>3</sub>Sn Large Coil,</i> J. L. Young, D. T. Hackworth, C. J. Heyne, T. E. Hampton, P. Merritt, J. Tobias, T. D. Hordubay (W) . . . . .	2008
<i>Tests of the First Development Coils for EBT-P,</i> J. R. Miller, J. W. Lue, S. S. Shen (ORNL) . . . . .	2012
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<i>Latest Status of the Japanese LCT Coil and the Domestic Test Facility,</i> S. Shimamoto, T. Ando, T. Hiyama, H. Tsuji, T. Takahashi, K. Yoshida, E. Tada, M. F. Nishi, K. Okuno, K. Koizumi, T. Kato, H. Nakajima, O. Takahashi, K. Yasukochi (JAERI); L. Dresner (ORNL); R. S. Kensley (JAERI); K. Oka (Hitachi Cable); M. Shimada (Kobe Steel); Y. Sanada (Toshiba) . . . . .	2019
<i>Results of the Cooldown Analysis of the Swiss LCT Coil,</i> C. Marinucci, P. Weymuth, G. Vécsey (Swiss Inst.) . . . . .	2023
<i>Progress Report on the European Contribution to the IEA Large Coil Task,</i> H. Krauth, A. Nyilas, A. Ulbricht, H. Zehlein (KfK); C. Albrecht (Siemens) . . . . .	2027
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<i>Large-Current Conductor Development for Superconducting Poloidal Coils,</i> H. Tsuji, Y. Takahashi, K. Okuno, E. Tada, T. Ando, S. Shimamoto, K. Yasukochi (JAERI); L. Dresner (ORNL); R. S. Kensley (JAERI); T. Ogasawara (Nihon U.); K. Kuroda (Hitachi); T. Sato (Mitsubishi Elec.); T. Hamajima (Toshiba) . . . . .	2035

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