

CONTENTS

<i>Opening address</i> R S Pease, FRS President of the Institute of Physics and Director of Culham Laboratory.	179
 <i>Invited papers</i>	
The theory of a fusion reactor <i>Presented by</i> K V Roberts	185
U.S. planning for fusion energy development <i>Presented by</i> Michael Roberts	197
Disruption investigations at the Institute of Plasma Physics, Garching <i>Presented by</i> G von Gierke	211
Present state of stellarator research <i>Presented by</i> G S Voronov	223
Experimental results from the FT tokamak <i>Presented by</i> F De Marco	261
Progress in Japanese tokamak research <i>Presented by</i> N Fujisawa	277
Progress in mirror machine research <i>Presented by</i> T K Fowler	299
U.S. tokamak research <i>Presented by</i> H P Furth	309
Shaping and characteristics of doublet plasmas in DOUBLET III <i>Presented by</i> T Ohkawa	321
Review of fusion-fission (hybrid) reactor studies <i>Presented by</i> G Casini	329
ICRF heating in TFR at the ion-ion hybrid resonance <i>Presented by</i> J Adam	355
Review of DITE work <i>Presented by</i> J W M Paul	371
Tokamak studies in the USSR <i>Presented by</i> V S Strelkov	387
The physics of JET <i>Presented by</i> R J Bickerton	401
Investigation of laser fusion physical processes <i>Presented by</i> V B Rosanov	421
Progress on laser fusion research in Europe <i>Presented by</i> J-P Watteau	453
Progress in the production and energy flux concentration of the REB accelerator for ICF <i>Presented by</i> V P Smirnov	473

- D1.4** Controlled fusion research in China
Presented by Li Zhengwu
- D1.5** U.S. research in inertial confinement
Presented by J L Emmett
- E3.1** Theoretical study of toroidal systems
Presented by V D Shafranov
- E3.2** Review of fusion reactor problems
Presented by G Grieger

Additional Contributed Papers

- AP2** HF heating of plasma at $\omega \approx 2\omega_{\text{LH}}$ in tokamak TM-1-MH
J Datlov, K Jakubka, V Kopecký, Š Körbel, P Magula, J Musil, J Stöckel, F Žáček
Institute of Plasma Physics, Czechoslovak Academy of Sciences, Prague 8, Czechoslovakia
- AP5** Interaction of trapped particles in a tokamak with amplitude modulated RF fields
E Lazzaro and S Nowak
Laboratorio di Fisica del Plasma, C.N.R. Euratom Association, Milan, Italy.
- BP33** Effect of a magnetic hill on plasma equilibrium in a stellarator
M I Mikhailov and V D Shafranov
I V Kurchatov Institute of Atomic Energy, Moscow, USSR
- DP12** Dependence of interelectrode insulating system shape on the PF parameters and experimental verification of 2D snow plow code
J Nowikowski, Z Jankowicz, A Jerzykiewicz, C Pochrybniak, J Waliszewski
Institute of Nuclear Research, Swierk, Poland

Post-deadline Papers

- BP10** On the interaction of solid hydrogen pellets in contact with magnetized plasmas and the self-consistent electric field at the solid surface
S Mercurio
Department of Physics, University of Wisconsin, Madison, U.S.A.
- DP29** First results from the ETA-BETA II RFP experiment
A Buffa, S Costa, R De Angelis, J.N. Di Marco, L Giudicotti, G Malesani, G F Nalesso, S Ortolani, P Scarin
Centro di Studio sui Gas Ionizzati, Padova, Italy
- EP10** Magnetic topology near the $q = 1$ surface derived from the soft x-rays measurements in the TFR 600 tokamak
TFR Group, paper presented by D A Marty
Association Euratom-CEA sur la Fusion, Fontenay-aux-Roses, France
- ✓ **EP14** Reduction of electron heat transport anomaly in cleaner and denser TFR discharges
TFR Group
Association Euratom-CEA sur la Fusion, Fontenay-aux-Roses, France

Supplementary Papers

- Electron cyclotron plasma heating in FT-1 tokamak by the wave launched from a stronger magnetic field side**
D G Bulyginsky, V E Golant, M M Larionov, L S Levin, N V Shustova
A F Ioffe Physical-Technical Institute, Leningrad, USSR 547
- On toroidal vacuum fields and particle orbits in modified stellarators and torsatrons**
W VII-A Team and W Lotz, presented by F Rau
Max-Planck-Institut für Plasmaphysik, Garching, Federal Republic of Germany 547
- The accessibility of the resonant surfaces and the role of surface waves in RF plasma heating**
E Canobbio
Department of Physics, University of California, Los Angeles, California, U.S.A.
and
Association Euratom-CEA, Centre d'Etudes Nucleaires, Grenoble, France 548
- Polarization and millisecond spectral measurements of electron cyclotron emission from DITE tokamak**
D J Campbell⁺, W H M Clark, A E Costley*, P.J. Fielding, L C Robinson⁺, G D Tait[†] and B Walker*
Culham Laboratory, Abingdon, Oxfordshire
+University of Sydney, Sydney, Australia
**Division of Electrical Science, National Physical Laboratory, Teddington, U.K.*
†University of Maryland, College Park, Maryland, U.S.A. 548
- List of Participants*** 549