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THIRD TOPICAL CONFERENCE ON RADIO FREQUENCY PLASMA HEATING

Session A: Lower Hybrid Heating - I

January 11/78 - 8:30 A.M.

M. KRISTIANSEN presiding

- A1 - Theory of Plasma Heating in the Lower-Hybrid Range of Frequencies (LHRF)  
ABRAHAM BERS, Massachusetts Institute of Technology (30 min)
- A2 - A Survey of the Status of Lower Hybrid Heating Experiments  
W. M. HOOKE, Princeton University (30 min)
- A3 - Heating of Ions by Lower Hybrid in the WEGA Tokamak  
WEGA GROUP (30 min)
- A4 - Lower Hybrid Wave Heating Experiments at General Atomic  
CHARLES MOELLER and DOUBLET IIA GROUP, General Atomic Co.
- A5 - Effect of Lower Hybrid Waves on the Evolution of the Doublet IIA Plasma  
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J. LOHR, J. L. LUXON, A. MAHDAVI, C. P. MOELLER, J. C. RIORDAN, R. D.  
STAV and J. F. TOOKER, General Atomic Co.
- A6 - Demonstration of Accessibility and Inaccessibility of Slow Plasma Waves  
R. W. MOTLEY, S. BERNABEI, W. M. HOOKE, R. McWILLIAMS and L. OLSON,  
Princeton University
- A7 - Limitations on Lower Hybrid Heating of Dense, Hot Plasmas  
R. W. HARVEY, J. M. RAWLS, M. P. HACKER and V. C. CHAN, General Atomic Co.
- A8 - Simulation of Lower-Hybrid Heating in a Bounded Plasma  
V. K. DECYK, J. M. DAWSON and G. J. MORALES, U.C.L.A.

Session B: Lower Hybrid Heating - II

January 11/78 - 2:00 P.M.

G. MORALES presiding

- B1 - Electric Field Distribution Associated with Lower Hybrid Heating of  
Tokamak Plasmas  
M. BRAMBILLA, CEA Grenoble
- B2 - Coupling of Lower Hybrid Waves in the Doublet IIA High Power RF Heating  
Experiments  
V. S. CHAN, C. MOELLER and R. W. GOULD, General Atomic Co.
- B3 - Lower Hybrid Experiments in the Petula Tokamak  
C. M. SINGH, P. BRIAND and L. DUPAS, CEN Grenoble
- B4 - Lower Hybrid Wave Heating in the DC Octopole  
P. I. PETERSEN, V. S. CHAN, S. EJIMA, R. J. LA HAYE, C. P. MOELLER and  
J. C. WESLEY, General Atomic Co.
- B5 - Parametric Decay of Lower Hybrid and Ion Cyclotron Waves of Finite  
Wavenumber in a Plasma  
V. K. TRIPATHI, C. S. LIU and C. GREBOGI, University of Maryland

- B6 - Ergodic Behavior of Lower Hybrid Decay Wave Trajectories  
E. OTT, J.-M. WERSINGER and J. FINN, Cornell University
- B7 - Harmonic Generation in Lower-Hybrid Heating  
J. L. SPERLING and R. W. HARVEY, General Atomic Co.
- B8 - Effect of Convective Loss on Resonant Decay of Cold Lower Hybrid Waves  
K. L. WONG, J. R. WILSON, Princeton U. and M. PORKOLAB, M.I.T.
- B9 - RF Coupling near the Lower Hybrid Resonance  
R. B. MICHIE, M. C. CLARK and M. E. OAKES, U. of Texas, Austin
- B10 - Lower Hybrid RF Heating of the MIT Versator II and Alcator-C Tokamaks  
M. PORKOLAB, G. BEKEFI and R. PARKER, M.I.T. and S. BERNABEI, R. MOTLEY  
and W. M. HOOKE, Princeton U.
- B11 - Proposal of Lower Hybrid Heating Experiment on the Frascati Tokamak  
F. DE MARCO and F. SANTINI, CNEN Frascati.
- B12 - Ion Heating by Ion Cyclotron Parametric Instability in a Multispecies  
Plasma  
K. YATSUI, M. SHIMADA, S. OKAMOTO and M. YOKOYAMA, Osaka U.

Session C: Ion Cyclotron Heating - I

January 12/78 - 8:30 A.M.

L. SHOHET presiding

- C1 - Plasma Heating in the Ion-Cyclotron Range of Frequencies  
F. W. PERKINS, Princeton U. (30 min)
- C2 - Experimental Aspects of RF Heating of Tokamak Plasmas in the Ion  
Cyclotron Range of Frequencies (ICRF)  
J. C. HOSEA, Princeton U. (30 min)
- C3 - Ion Cyclotron Heating by Circularly Polarized RF Fields  
Y. YASAKA, S. KOMORI and R. ITATANI, Kyoto U.
- C4 - Preliminary RF Experiments on the ERASMUS Tokamak  
F. P. BHATNAGAR, G. BOSIA, M. BURES, A. M. MESSIAEN, G. TELESCA,  
P. E. VANDENPLAS, R. R. WEYNANTS, Euratom (Ecole Royale Militaire)
- C5 - Efficiency of Antenna Coupling to the Fast Alfvén Modes in Macrotor  
R. J. TAYLOR and G. J. MORALES, U.C.L.A.
- C6 - Fast Magnetosonic Modes in the Caltech Tokamak  
D. Q. HWANG and R. W. GOULD, Caltech
- C7 - Fast Wave Generation in the PLT Tokamak  
P. L. COLESTOCK, J. C. HOSEA, F. J. PAOLONI, H. R. THOMPSON and  
H. TAKAHASHI, Princeton U.
- C8 - Energy Loss and Edge Density Measurements during ICRF Experiments on ATC  
H. HSUAN, R. J. HAWRYLUK, S. SUCKEWER and H. TAKAHASHI, Princeton U.
- C9 - Modification of Plasma Edge Temperature by RF Heating  
S. SUCKEWER and R. J. HAWRYLUK, Princeton U.

Session D: Ion Cyclotron Heating - II

January 12/78 - 2:00 P.M.

A. BERS presiding

- D1 - Ion Cyclotron Heating in the Wisconsin Supported Toroidal Octupole and Quadrupole  
A. P. BIDDLE, K. J. MILLER, J. C. SPROTT, U. of Wisconsin
- D2 - The Parametric Instabilities near the Ion Cyclotron Range of Frequency in a Single and Multi-Ion Species Plasma  
M. ONO, Princeton U., M. PORKOLAB, M.I.T., R. P. H. CHANG, Bell Labs
- D3 - Alfvén Wave Heating with High-Q Eigenmodes  
C.F.F. KARNEY and F. W. PERKINS, Princeton U.
- D4 - Heating of the Various Plasma Species of a Tokamak via the Ion-Ion Hybrid Resonance  
J. JACQUINOT, EUR-CEA, Fontenay
- D5 - Mode Conversion and Absorption in a Deuterium Plasma with a Hydrogen Impurity  
D. G. SWANSON, U. So. California
- D6 - Fast Wave Heating via Mode Conversion in the Ion Cyclotron Range of Frequencies (ICRF)  
B. D. McVEY and J. E. SCHARER, U. of Wisconsin
- D7 - Scaling of Ion Cyclotron Frequency Range Heating to Reactor Size  
J. SCHARER, J. BEYER and D. T. BLACKFIELD, U. of Wisconsin

Session E: Lower Hybrid Heating - III

January 12/78 - 3:45 P.M.

W. HOOKE presiding

- E1 - Reevaluation of the Effect of Damping on Linear Mode Conversion  
P. M. BELLAN, Caltech
- E2 - Collisional Absorption of Lower Hybrid Waves near the Mode Conversion Layer  
J. J. SCHUSS, M. PORKOLAB and R. R. PARKER, M.I.T.
- E3 - Ion-Cyclotron-Harmonic Heating Using the Lower-Hybrid Wave  
S. PURI, Max-Planck, Garching
- E4 - A Lower Hybrid Heating System for a Tokamak Reactor  
J. BROOKS, S. HARKNESS, J. JUNG, B. MISRA, A. MORETTI, J. NOREN, H. STEVENS, Argonne Natl. Lab.
- E5 - A Steady State Toroidal Reactor Driven by Microwave Power in the Lower-Hybrid Range of Frequencies  
A. BERS and N. J. FISCH, M.I.T.
- E6 - Current Generation by High Power RF Fields  
N. J. FISCH and A. BERS, M.I.T.

Session F: Alfvén Wave, TTMP, and Other Heating

January 13/78 - 8:30 A.M.

T. JENSEN presiding

- F1 - Transit Time Magnetic Pumping in Hydrogen and Deuterium Discharges  
PETULA GROUP, CEN, Grenoble (30 min)
- F2 - Advances in Plasma Heating with Alfvén Waves  
J. L. SHOHEIT, U. of Wisconsin (30 min)
- F3 - Technical Aspects of Alfvén Wave Heating  
A. HASEGAWA, Bell Labs
- F4 - Non-Ideal Effects on Alfvén Wave Heating  
G. CONN, Michigan State and J. A. TATARONIS, N.Y.U.
- F5 - The Continuous MHD Spectrum for Alfvén Wave Heating in a Straight Stellarator  
J. N. TALMADGE and J. L. SHOHEIT, U. of Wisconsin
- F6 - Resonant Magnetic Pumping at Very Low Frequency  
N. CANOBBIO, CEA Grenoble
- F7 - ECR Upper-Hybrid Heating in the Culham Levitron  
A. C. RIVIERE, M. W. ALCOCK and T. N. TODD, Culham Lab
- F8 - Magnetoacoustic Oscillations of a Cylindrical Plasma Column  
B. BLACKWELL, G. COLLINS, R. CROSS and J. LEHANE, U. of Sydney
- F9 - Microwave Absorption Studies near the Plasma Frequency  
B. L. WRIGHT, M. E. BANTON, H. DREICER, J. C. INGRAHAM, Los Alamos

Session G: General Theory Relating to Heating

January 13/78 - 2:00 P.M.

P. BELLAN presiding

- G1 - Stochastic Heating of an Ion Beam by Lower Hybrid Waves  
E. LAZZARO, Lab. Fisica del Plasma, Milan
- G2 - Stochastic Plasma Heating by Localized RF Fields  
H. SUGAI and S. TAKEDA, Nagoya U.
- G3 - Whistler Cavity Eigenmodes in Tokamaks  
C. CHU and J. L. SPERLING, General Atomic Co.
- G4 - Universal Formula for Quasistatic Second-Order Density Perturbation by a Cold Magnetoplasma Wave  
A. N. KAUFMAN, J. R. CARY and N. R. PEREIRA, Lawrence-Berkeley Lab
- G5 - Ponderomotive Effects in a Magnetized Plasma  
V. KRAPCHEV and A. BERS, M.I.T.
- G6 - Three-Dimensional Effects on Nonlinear Mode-Converted Lower-Hybrid Waves  
H. H. KUEHL, U. So. California
- G7 - Complex Modified K-DV Equation and Nonlinear Propagation of Lower Hybrid Waves  
A. SEN, C.F.F. KARNEY and A. BERS, M.I.T. and N. R. PEREIRA, Lawrence-Berkeley Lab

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- G8 - Energy Flow and Tunnelling of Resonance Cones near the Lower Hybrid  
C. L. GRABBE, Caltech
- G9 - The Effect of Field Gradients on Wave Propagation in Tokamaks  
K. A. CONNOR, Rensselaer, and P. L. COLESTOCK, Princeton U.

LIST OF PARTICIPANTS