

PROGRAM
of the
FIRST TOPICAL CONFERENCE ON RF PLASMA HEATING

WEDNESDAY EVENING

7:00- 9:00 Registration, Weymouth Hall

THURSDAY MORNING

8:00- 8:45 Registration, Law School Building, Lobby
8:45- 9:00 Introduction, Law School Building, Lecture Room A
9:00-12:00 A Lecture Room A (M. O. Hagler presiding)

Ion- and Magneto-Acoustic Waves

- A1. Radio-Frequency Heating of a Collisionless Plasma, R. H. Abrams, Jr., T. Ohe and H. Lashinsky, Univ. of Maryland.
- A2. Ion Heating Following the Destruction of Large Amplitude Ion-Acoustic Waves, C. N. Judice, Bell Laboratories.
- A3. Invited Paper: A Critical Survey of Ion-Acoustic Experiments and Theory, Igor Alexeff, Dept. Elect. Eng., Univ. of Tennessee.
- A4. RF Plasma Heating by the Modified Two-Stream Instability, E. Ott and J. B. McBride, Naval Research Laboratory.
- A5. Anomalous Heating of Plasma by Magnetoacoustic Waves in the Frequency Domain, K. H. Finken, A. Stampa, and H. Tuzcek, Association Euratom/KFA Juelich.
- A6. Enhanced Energy Transfer to a Cylindrical Plasma by an Alfvén Wave, D. B. Lancaster, Jr., M. O. Hagler, and M. Kristiansen, Texas Tech University.

THURSDAY AFTERNOON

2:00- 5:00 B Lecture Room A (D. G. Swanson presiding)
Fundamental and Harmonic Ion Cyclotron Resonance Heating

- B1. Wave Generation in the ST Tokamak Near the Ion Cyclotron Frequency and Its Second Harmonic, J. C. Hosea and W. M. Hooke, Princeton University.

- B2. rf Plasma Heating in the THM-2 Mirror Machine, R. W. Clark and D. G. Swanson, The University of Texas at Austin, P. Korn, S. Robertson, and C. B. Wharton, Cornell Univ.
- B3. Cyclotron Heating of Plasmas with Finite Amplitude Waves, D. G. Swanson, I. H. Oei, and R. W. Clark, The University of Texas at Austin.
- B4. Wave Propagation and Damping at the Second Harmonic of the Ion Cyclotron Frequency, J. E. Cato, C. N. Watson-Munro, M. Kristiansen, and M. O. Hagler, Texas Tech Univ.
- B5. Operating Features of an Ion-Cyclotron-Wave Apparatus Running in the RF-Sustained Mode, C. C. Swett, NASA Lewis Research Center.
- B6. RF Heating of Magnetically Confined Arc Plasma, C. E. Nielson, Ohio State Univ.
- B7. Quadrupole Cyclotron Heating and Confinement, P. N. Arendt, Aerospace Research Laboratories, and M. L. Pool, Ohio State University.

THURSDAY EVENING

- 6:30- 7:30 Tour of Plasma Laboratory
- 8:00- Cocktail party (complimentary), place to be announced.

FRIDAY MORNING

- 9:00-12:00 C Lecture Room A (H. W. Hendel presiding)
Mostly Parametric Heating

- C1. Invited Paper: Parametric Instability and Its Induced Heating, T. K. Chu, Princeton University.
- C2. Nonlinear Theory of Plasma Heating by Parametric Instabilities, Jerome Weinstock and Bandel Bezzerides, National Oceanic and Atmospheric Administration.
- C3. Parametric Heating of Dense Plasmas with 890 GHz Radiation, D. L. Jassby, Univ. of Calif., Los Angeles.
- C4. Measurement of Effective Collision Frequency in RF Heating through Parametric Instabilities, T. K. Chu and H. W. Hendel, Princeton University.
- C5. Electromagnetic Fields in Electrodeless Discharges of Arbitrary Length, L. N. Medgyesi-Mitschang and J. H. Mullen, McDonnell Douglas Research Laboratories.

- C6. RF Seeded Plasma Diagnostics, R. A. Bennis, S. D. Thompson, J. D. Clement, J. R. Williams, Ga. Tech.
- C7. Numerical Investigation of Nonresonant RF-Supplemented Mirror Containment, Ernest P. Gray, Applied Physics Laboratory.
- C8. RF-Assisted Magnetic Mirrors, P. F. Little, L. J. van Essen, R. V. Howell, University of Texas at Austin.

FRIDAY AFTERNOON

1:30- 4:00 D Lecture Room A (M. E. Oakes presiding)
Lower Hybrid Resonance Heating

- D1. Invited Paper: Lower Hybrid Heating in Alcator, K. I. Thomassen, R. R. Parker, R. J. Briggs, and M. D. Simonutti, M.I.T.
- D2. Observation of Linear and Nonlinear Effects Near the Lower Hybrid Frequency, S. Bernabei, W. M. Hooke, Princeton Univ.
- D3. Tunneling in the Linear Mode Conversion Process, B. N. Moore and M. E. Oakes, University of Texas at Austin.
- D4. Electron-Beam Excitation of Finite-Sized Plasma Near the Lower-Hybrid Frequency, V. P. Bhatnagar, P. L. Colestock, and W. D. Getty, Univ. of Mich.
- D5. Lower-Hybrid-Resonance Heating of a Plasma in a Parallel-Plate Waveguide, S. Puri and M. Tutter, MPI fur Plasmaphysik, Germany.
- D6. RF Heating of Plasmas With Two Ion Components, J. B. McBride, E. Ott and J. H. Orens, Naval Research Laboratory.

4:00- 5:00 Panel Discussion: Hendel, Thomassen, Alexeff, Shohet, Hosea, Kristiansen (moderator), Lecture Room A

FRIDAY EVENING

7:00- 9:00 Barbeque, Museum Ranch Headquarters

SATURDAY MORNING

9:00-12:00 E Lecture Room A (A. C. England presiding)
Microwave Heating

- E1. Invited Paper: Electron Heating by Microwaves, Owen C. Eldridge, University of Tennessee.
- E2. Microwave Heating of Hot Electron Plasma in the Superconducting Levitron, O. A. Anderson, D. H. Birdsall, C. W. Hartman, E. B. Hooper, Jr., R. H. Munger, Lawrence Livermore Lab.

- E3. Plasmas in Toroidal Cavities, A. J. Hatch, S. G. Sanders, and J. Robinson, Argonne National Laboratory.
- E4. Approximate Models of Toroidal Cavities, S. G. Sanders, A. J. Hatch, and J. Robinson, Argonne National Laboratory.
- E5. Computer Simulation of Ion Heating by Pulsed Microwaves, J. C. Sprott, Oak Ridge National Laboratory.
- E6. The Velocity Distribution of R.F. Heated Electrons in a Plasma, as measured by free-free Bremsstrahlung, J. L. Shoet, The University of Wisconsin.
- E7. Self-Consistent Finite Amplitude Wave Damping, I. H. Oei and D. G. Swanson, The University of Texas at Austin.