

fusiontechnology™

CONTENTS / MARCH 1985—VOL. 7, NO. 2

FT LETTER

- 155 Plasma Quality Criteria and Other Comments / *J. Rand McNally, Jr.*

TECHNICAL PAPERS

PLASMA ENGINEERING

- 158 Transport Code Analysis of Some Aspects of Impurity Control in Reactor Grade Tokamak Plasmas / *W. K. Terry, Jeffrey N. Brooks, Charles D. Boley*

PLASMA HEATING SYSTEMS

- 171 Extraction Electrode for a 100-kV, 40-A, 10-s Ion Source / *Hiroshi Horiike, Masato Akiba, Masanori Araki, Masaaki Kuriyama, Shinzaburo Matsuda, Mamoru Matsuoka, Yoshihiro Ohara, Yoshikazu Okumura, Kiyoshi Shibanuma, Shigeru Tanaka*

EXPERIMENTAL DEVICES

- 180 Charge Neutralization by Foils to Study Alpha Edge Flux Produced in Magnetic Fusion Reactors / *Glenn Gerdin, Donald Mueller, Bernard W. Wehring*

TECHNICAL NOTES

PLASMA ENGINEERING

- 197 Calculations to Evaluate the Use of the Attenuation of D-D Neutrons in Liquid Oxygen as a Means of Measuring Plasma Ion Temperature / *R. G. Alsmiller, Jr., R. T. Santoro, J. F. Manneschildt, J. M. Barnes*

FIRST-WALL TECHNOLOGY

- 201 Particle Bombardment of the First Wall in a Tandem Mirror Reactor / *William L. Barr, B. G. Logan*

DEPARTMENTS

- 151 Authors

(Continued)

ON THIS COVER

Projections of wave ray trajectories in a tokamak plasma taken from Fig. 18 in the overview by P. L. Colestock.

CONTENTS / MARCH 1985–VOL. 7, NO. 2

(Continued)

- 206 Book Reviews
Electrical Breakdown and Discharges in Gases – Fundamental Processes and Breakdown / reviewed by *J. G. Eden*
Fusion: An Introduction to the Physics and Technology of Magnetic Confinement Fusion / reviewed by *Robert G. Mills*

SPECIAL SECTION CONTENTS

PLASMA HEATING AND CURRENT DRIVE

- 215 Preface: Plasma Heating and Current Drive / *George H. Miley*

TECHNICAL PAPERS

- 217 Overview of Radio-Frequency Heating and Current Drive in Tokamaks / *Patrick L. Colestock*
- 236 Electron Cyclotron Resonance Heating: Principles, Engineering, and Experiments / *Z. X. Zhang, C. X. Chen*
- 250 Lower Hybrid Heating and Current Drive: Experimental Results Versus Theoretical Expectations / *Jean-Georges Wégrowe*
- 275 Electron Cyclotron Resonance Heating Experiments in the WENDELSTEIN VII-A Stellarator / *V. Erckmann, G. Janzen, W. Kasperek, G. Müller, P. G. Schüller, K. Schwörer, M. Thumm, R. Wilhelm, W VII-A Team*
- 283 Coupling to Fast Waves near the Lower Hybrid Frequency / *R. McWilliams, Y. Mok*
- 288 Nonlinear Ion Heating in Lower Hybrid Current Drive / *Vincent S. Chan, Chuan Sheng Liu*
- 296 Nonlinear Generation of Waves at Linear Resonances / *J. L. Sperling*
- 301 Excitation of Ion Cyclotron Resonance Frequency Waves in Tokamaks by Waveguide Launcher / *Kimitaka Itoh, Sanae-Inoue Itoh, Atsushi Fukuyama*
- 311 Ray Tracing in the Compact Torus / *E. C. Morse, Z. Mikic*
- 316 Neutron Emission by Plasma Cavitons / *Richard T. Schneider, Peter H. Handel*
- 320 Nature of Resonances Leading to High-Pressure Cavitons / *Peter H. Handel, Richard T. Schneider*

DEPARTMENT

- 211 Authors