Lecture Note

Plasma Diagnostics with Electromagnetic Waves: Fundamentals and Frontiers

3. Advanced Technology and Recent Progress in Plasma Diagnostics

3.1 Microwave Imaging Diagnostics
NAGAYAMA Yoshio, YOSHINAGA Tomokazu and KOGI Yuichiro 339

3.2 Doppler Reflectometry
TOKUZAWA Tokihiko and EJIRI Akira 345

3.3 Scattering Measurement
KUBO Shin, TANAKA Kenji and NISHIURA Masaki 350

Contributed Paper

Development of Microwave Imaging Diagnostics in LHD

NAGAYAMA Yoshio, YOSHINAGA Tomokazu, KUWAHARA Daisuke, YAMAGUCHI Soichiro,
HAMADA Yasushi, ITO Naoki, ITO Yasuhiko, KOGI Yuichiro, MASE Atsushi, SHI Zhongbing,
SUGITO Shoji, TSUCHIYA Hayato, TSUJI-HIO Shunji and LHD Experiment Group 359

Project Review

Frontier of Plasma Physics; Research Network on Non-Equilibrium and Extreme State Plasmas

ITO Sanae-I, KODAMA Ryosuke, FUJISAWA Akhidea, SATO Motoyasu,
TANAKA Kazuo A, HATAKEYAMA Rikizo and ITOH Kimitaka 371

Project Review

History, Present Status and Future of Reversed Field Pinch Research — Review of RFP Research
at the Termination of the RFP Project in the National Institute of Advanced Industrial
Science and Technology (AIST) —
HIRANO Yoichi, SAKAKITA Hajime and KOGUCHI Haruhisa 382

Information 412

Plasma & Fusion Calendar 422

Announcement 423

Cover

Z-pinch discharge in a tapered capillary was used to form dense, high-speed plasma relevant to laboratory astrophysics. The current sheet in a tapered capillary sequentially pinches, thus radially compresses and axially accelerates the plasma. We showed that difference of pinching time in the capillary determined by initial gas density, discharge current waveform, and capillary geometry is an important indicator to control the axial velocity and density of plasma. (Koichiro ADACHI et al., Plasma and Fusion Research Vol. 6, 1201019 (2011) http://www.jspfor.jp/PFR/)