

JOURNAL OF PLASMA AND FUSION RESEARCH

The Journal of the Japan Society of Plasma Science and Nuclear Fusion Research

Vol. 95, No. 7, July 2019

Commentary

Plasma-Driven Catalysis for Environmental and Energy Applications KIM Hyun-Ha 309

Lecture Note

Explore the Frontier of High Energy Density Plasma Science with Picosecond Relativistic Laser

3. Superthermal Electron Acceleration Triggered by Change of Plasma Structure

due to Picosecond Laser Irradiation HATA Masayasu 317

4. Creation of keV Temperature Solid-Density Plasmas by Picosecond Laser Light

..... HIGASHI Naoki, IWATA Natsumi and SENTOKU Yasuhiko 322

Front Runner

Negative Ion Source was Not Made in a Day, Expansion of Studies for Negative Ion Beam and Source

1. Introduction IKEDA Katsunori, MIYAMOTO Kenji, OGURI Hidetomo and KASHIWAGI Mieko 327

2. Progress of Negative Ion Measurements and Understanding of Negative Ion Transport IKEDA Katsunori 329

3. Development of the Simulations of Negative Ion Physics (Development of the Physical Modellings

by Using the PIC Simulation Code and so on) MIYAMOTO Kenji 335

4. Progress of Long-Time Operation and Industrial Use of Negative Ion Source

for Particle Accelerator OGURI Hidetomo 340

5. Present Status and Prospective View of Negative Ion Source for Plasma Heating

(Status in the World, and Subjects from ITER to DEMO) KASHIWAGI Mieko 345

PFR Abstracts 350

Information 352

Announcement 361

Cover

Application results of a tomographic reconstruction method using a conditional Generative Adversarial Network (GAN) for the model cases. We applied this reconstruction technique for the Coherence Imaging Spectroscopy of RT-1 to obtain the local He II-emissivity. The network was trained by pairs of local-emissivity and line-integrated images that simulate the experimental system including the reflections from the chamber walls. The figure shows the input (line-integrated image), output (reconstructed local emissivity), and ground truth (target image) for the trained network. (Naoki KENMOCHI *et al.*, Plasma and Fusion Research, Vol. 14, 1202117 (2019) <http://www.jspf.or.jp/>)

Published Monthly by

The Japan Society of Plasma Science and Nuclear Fusion Research

3-1-1 Uchiyama, Chikusa-ku, Nagoya 464-0075, Japan

Tel (052)735-3185, Fax (052)735-3485, E-mail: plasma@jsof.or.jp, URL: <http://www.jspf.or.jp/>