

# JOURNAL OF PLASMA AND FUSION RESEARCH

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

*Vol. 90, No.4, April 2014*

## Commentary

- Two- and Gyro-Fluid Models and their Application to MHD Instabilities ..... ISHIZAWA Akihiro 213  
Hydrodynamic Instabilities and Mix Studies on National Ignition Facility ..... REMINGTON Bruce A. 228

## Special Topic Articles

- Numerical Simulation of Ion Beam and Grid Sputtering for Lifetime Evaluation of Ion Thruster
1. Introduction ..... FUNAKI Ikkoh 234
  2. Outline of Lifetime Evaluation Tool of Ion Engine's Ion Acceleration Grid System ..... NAKANO Masakatsu 235
  3. Erosion of Acceleration Grids of Ion Engine Due to Low-Energy Sputtering ..... KENMOTSU Takahiro 243
  4. MD Study on Differential Sputtering Yield of Carbon by Low-Energy Xe Ion Bombardment  
..... MURAMOTO Tetsuya 249
  5. Validation and Application of a Numerical Tool for Lifetime Evaluation of Ion Thruster's Ion Optics  
..... WATANABE Hiroki and NAKANO Masakatsu 252
  6. Summary ..... FUNAKI Ikkoh 261
- Glossary ..... 262

Mourning ..... 265

PFR Abstracts ..... 266

Information ..... 267

Plasma & Fusion Calendar ..... 270

Announcement ..... 272

## Cover

Flux-tube-model simulations of kinetic ballooning mode driven turbulence in high-beta plasma. Profiles of electrostatic potential fluctuations are shown in (a) physical space and (b) field-aligned coordinates. Fluctuations have large amplitude at the bad curvature region ( $\theta = 0$ ), and elongate along the magnetic field lines. In the presence of the magnetic shear, the structures twist and create radially-fine mode structures ( $\theta = \pi/2, \pi$ ). (Shinya MAEYAMA *et al.*, Plasma and Fusion Research Vol.9, 1203020 (2014) <http://www.jspf.or.jp/PFR/>)



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/>