

# US-Japan Workshop on Compact Tori 2017

## Improved Confinement and Novel Applications of Compact Tori (CT2017)

November 7 - 9, 2017

Hotel Yokohama Camelot Japan, Yokohama, Japan

### November 7

9:00 Registration / Opening remarks / Announcements

Session 1 : Chair: Tomohiko Asai

9:30 **STEINHAEUER, Loren** **Tri Alpha Energy**  
*Coupled transport in field-reversed configurations*

10:00 **LEE, Kiyong** **National Fusion Research Institute**  
*1-D equilibrium (radial) profile to simulate a hollow current profile in an FRC plasma by using symmetry*

10:30 Break

Session 2 : Chair : Michiaki Inomoto

11:00 **TAKAHASHI, Toshiki** **Gunma University**  
*Simulation of a field-reversed configuration plasma controlled by external magnetic field*

11:30 **SEKIGUCHI, Junichi** **Nihon University**  
*Initial results of collisional merging experiments in FAT-CM device*

12:00-14:00 Lunch

Session 3 : Chair : Toshiki Takahashi

14:00 **GOTA, Hiroshi** **Tri Alpha Energy**  
*Initial Results of C-2W Field-Reversed Configuration Experiment*

14:30 **ROCHE, Thomas** **Tri Alpha Energy**  
*Magnetic diagnostic suite and initial data from translating CTs in C-2W*

15:00 **MATSUMOTO, Tadafumi** **Tri Alpha Energy**  
*Behavior of CTs injected into C-2U FRC*

15:30 Break

16:00-17:45 **Poster session I**

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### November 8

Session 4 : Chair : Loren Steinhauer

9:00 **KANKI, Takashi** **Japan Coast Guard Academy**  
*Development of high accuracy and high speed code for flowing two-fluid equilibrium*

9:30 **KAUR, Manjit** **Swarthmore College**  
*Magnetothermodynamics : Measuring the equations of state in a relaxed MHD plasma*

10:00 **MORGAN, Kyle** **University of Washington**  
*Recent results of the HIT-SI experiment*

10:30 Break

Session 5 :

Chair : Hiroshi Gota

- 11:00 **FROESE, Aaron** **General Fusion**  
*Progress towards liquid metal plasma compression in General Fusion*
- 11:30 **HIRANO, Yoichi** **AIST (Nihon University)**  
*A design of DT fusion reactor in the field-reversed configuration by using normal conductive coils*
- 12:00-14:00 Lunch

Session 6 :

Chair : Takashi Kanki

- 14:00 **NAGATA, Masayoshi** **University of Hyogo**  
*Studies of two-fluid relaxation and plasmoid reconnection in CHI-driven plasma on HIST*
- 14:30 **YOU, Setthivoine** **University of Washington and University of Tokyo**  
*Stabilization of a classically-unstable current-carrying magnetic flux tube by helical flows*
- 15:00 **ONO, Yasushi** **The University of Tokyo**  
*FRC Merging Formation in TS-3, TS-4 and TS-U Experiments*
- 15:30 Break
- 16:00-17:45 **Poster session II**
- 18:00 Banquet

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## **November 9**

Session 7 :

Chair : Masayoshi Nagata

- 9:00 **INOMOTO, Michiaki** **The University of Tokyo**  
*Center-solenoid free start-up of spherical tokamak plasma in UTST*
- 9:30 **YANAI, Ryoma** **The University of Tokyo**  
*Development of new experimental device focusing on weakly ionized magnetic reconnection using rotating magnetic field*
- 10:00 **SANPEI, Akio** **Kyoto Institute of Technology**  
*MHD studies in low-A RFP with SXR imaging diagnostic*
- 10:30 Discussion / Closing

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## **Posters**

- ISHIWATA, Junpei** **Nihon University**  
*Excitation of low-frequency wave in FAT-FRC plasmas*
- TANAKA, Fumiyuki** **Nihon University**  
*Collisional merging process of field-reversed configuration plasmas in FAT-CM device*
- YAMADA Shodai** **Nihon University**  
*Application of pre-ionization technique onto a magnetized coaxial plasma gun*
- URANO, Takahiro** **Gunma University**  
*Structure of electron-fluid fluctuation in a field-reversed configuration*
- KAWAI Shizuka** **Nihon University**  
*Development of compact static plasma source by rotating magnetic field*
- TAKAHATA, Yoshifumi** **The University of Tokyo**  
*Measurement of electron energy distribution function in rotating magnetic field plasma source*
- ADACHI, Daigo** **Gunma University**  
*Adiabaticity-breaking process and its application to particle separation by using Helmholtz coil*
- IWATA, Shuya** **Gunma University**  
*Design of ion source electrode for BNCT*
- KOIKE, Shintaro** **Gunma University**  
*Feasibility of fueling method by smaller-torus plasma translation to ST*
- MATSUI, Takaya** **Gunma University**  
*Full particle simulation on beam ion plasma in linear confinement system*