

4TH A3 FORESIGHT SUMMER SCHOOL AND WORKSHOP ON SPHERICAL TORUS (ST)

Aug. 2-5, 2016

**C-Cube, Chikushi Campus
Kyushu University, Kasuga, Fukuoka, Japan**

Organized by

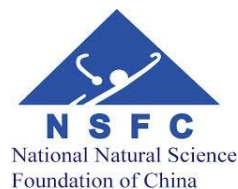
Kyushu University and University of Tokyo

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Program Committee

INOMOTO Michiaki (University of Tokyo)

HANADA Kazuaki (Kyushu University)

HWANG Yong-Seok (Seoul National University)

GAO Zhe (Tsinghua University)

Local Organizing Committee

NAKAMURA Kazuo (Kyushu University)

INOMOTO Michiaki (University of Tokyo)

TOKUNAGA Kazutoshi (Kyushu University)

HASEGAWA Makoto (Kyushu University)

FUNAKI Mika (Kyushu University)

4th A3 Foresight Summer School and Workshop on Spherical Torus (ST) Agenda

*Aug. 2-5, 2016
Kyushu University Chikushi Campus, Kasuga, Fukuoka, Japan*

DAY 1 :Aug 2 (Tuesday)

7:00 - 8:00	Breakfast	
9:30 - 9:50	Registration	
9:50 - 10:10	Welcome Speech	HANADA
	Opening	INOMOTO, HWANG, GAO
10:10 - 11:20	Lecture 1 Experiments of plasma turbulence	FUJISAWA
11:20 - 11:30	Coffee break	
11:30 - 12:40	Lecture 2 Introduction to microturbulence in Tokamaks and Spherical Torus	HAHM
12:40 - 13:00	Group Photo	
13:00 - 14:00	Lunch	
14:00 - 15:10	Lecture 3 Integrated control system of spherical tokamak	HASEGAWA
15:10 - 15:20	Coffee break	
15:20 - 16:30	Lecture 4 Daily vacuum and electronic techniques in operating tokamaks	TAN
16:30 - 18:00	QUEST Tour	
19:00 - 20:00	Dinner	

DAY 2 :Aug 3 (Wednesday)

7:00 - 8:00	Breakfast	
9:30 - 11:00	Lecture 5 RF heating and current drive	TAKASE
11:00 - 11:20	Coffee break	
11:20 - 12:50	Lecture 6 Characteristics of fusion reactor based on low aspect ratio tokamak	HONG
13:00 - 14:00	Lunch	
14:00 - 17:00	Technical Tour	
19:00 - 20:00	Dinner	

DAY 3 :Aug 4 (Thursday)

7:00 - 8:00	Breakfast	
9:30 - 11:00	Lecture 7 Developments of D-3He spherical tokamak reactor	MITARAI
11:00 - 11:20	Coffee break	
11:20 - 12:50	Lecture 8 Ion heating by nuclear elastic scattering	MATSUURA
13:00 - 14:00	Lunch	
14:00 - 15:30	Lecture 9 Spectroscopy	SHIKAMA
15:30 - 15:40	Coffee break	
15:40 - 17:30	Studentr/Young researcher Poster session	
19:00 - 21:00	Banquet	

DAY 4 :Aug 5 (Friday)

7:00 - 8:00	Breakfast	
9:30 - 11:00	Lecture 10 Plasma wall interaction	YOSHIDA
11:00 - 11:20	Coffee break	
11:20 - 12:50	Lecture 11 Probe diagnostics	NAGASHIMA
	Closing	NAKAMURA
13:00 - 14:00	Lunch	

Adjourn

4th A3 Foresight Summer School and Workshop on Spherical Torus (ST) Poster Presentations

Poster board size : 83 cm wide x 168 cm height

No	Author	Title
6	ZHAO Aihui	Isotopic effect of Parametric Instabilities during Lower Hybrid Current Drive
11	JIANG Yanzheng	Eddy current effects on magnetic diagnoses and equilibrium reconstruction in SUNIST
16	WANG Haoxi	Basic design and bench test of short-wavelength interferometer
26	LI Yang	Parallel moment transport of collisionless electromagnetic turbulence
30	LIU Zhiyuan	Electromagnetic effects on parametric instabilities of lower hybrid waves
33	ZHONG Heng	Observation of tearing instability in the early stage of discharges in SUNIST
36	LUO Yuhang	Preliminary research about the effect on helicity in Tokamak plasma
39	LIU Wenbin	An ultrafast reciprocating probe
44	GUO Xingyu	Ordinary-extraordinary mode conversion in a two dimensionally inhomogeneous geometry
46	WANG Shouzhi	Development of a high voltage power supply based on PSM technology
2	LEE Jaegon	Development of Vector Following Mesh Generator (VEGA); Improvement to Adapt Spherical Tokamak Magnetic Configuration
7	KIM Young-Gi	Development of Thomson scattering system for VEST
12	KIM JuneYoung	Non-maxwellian energy distribution in hydrogen plasmas and control of electron kinetics property in negative hydrogen ion source for NBI system
17	LEE Kihyun	Developmetn of diagnositic neutral beam injection system for VEST
22	KIM Yoosung	Electron density profile measurements from hydrogen line intensity ratio method in VEST
27	PARK Jongyoon	Preparatory work for non-inductive current drive experiments with upgraded helicity injection system in VEST
31	KIM Donghwan	Development of scintillation neutron detection system to measure fusion neutrons.
34	KIM Doyeon	Development of Fiber Holder and Laser Sync System for Tohmson Scattering Diagnostic at VEST
37	WANG Jongin	Design of Multi-chord Interferometer for VEST
40	JANG Jae-young	Design of optical probe for local emission profile direct measurements in VEST
3	NII Kuniaki	Spatially-resolved spectroscopic measurement of impurity ion toroidal rotation in QUEST
8	FUJIKAWA Akinobu	Evaluation of Balmer-alpha intensity radial distribution in QUEST
13	KAJITA Ryusuke	Magnetic activity in a overdense spherical tokamak plasma formed by electron Bernstein wave on LATE (tentative)
18	YAMASAKI Kotaro	Tomography system for turbulence observation in PANTA
23	ALAM Md Mahbub	Evaluation of Surface Averaged Current Density Distribution of Orbit-driven Current in Electron Cyclotron Heating on QUEST
4	SUGIYAMA Shota	Incident neutron spectra on the first wall and their application to energetic-ion diagnostics in beam-injected plasmas
9	KAJIMOTO Shogo	Modification of slowing down distribution function due to device-depending magnetic configuration in tokamak plasma
14	KOZAI Hideaki	X-ray shielding for hard X-ray measurement on QUEST
19	OHWADA Hiroaki	Poloidal-scanning spectroscopy for particle recycling study in long discharges on QUEST
24	LONG Hao	Investigation of hydrogen outgassing from the vessel wall after the long duration discharge in QUEST
28	KOJIMA Shinichiro	Application of AXUV detector array for soft x-ray measurement on QUEST
5	USHIKI Tomohiko	Shape reconstruction of merging spherical tokamak plasma in UTST device
10	FUKAI Yusuke	Experimental Verification of Neutral Beam Injection heating in UTST
15	TAKAHASHI Wataru	Study of ion flow in ohmic plasmas by Doppler spectroscopy on TST-2
20	YAMAZAKI Hibiki	Measurement of the current inside the current sheet of UTST merging plasma using a Rogowski probe
25	SATO Akito	Upgrade of the visible spectrometer on the TST-2 shperical tokamak
29	TAKEI Yuki	Study of antenna-plasma coupling using RF magnetic coils
32	KITAYAMA Akichika	Automation of controlling plasama with H coil in TST-2
35	MATSUMOTO Naoki	Upgrade of the TST-2 Thomson scattering system
38	KONDO Kyohei	Measurement of current sheet structure in high guide field reconnection in UTST
41	MIHARA Takumi	Development of Soft X-Ray tomography system in UTST
43	HATANNO Hironori	Properties of high-beta spherical tokamak formed by merging formation method
45	MINAMI Yusuke	Development of Reflectometry for pitch angle measurement in UTST
47	SATO Naoya	Tomographic reconstruction of ion-Doppler spectroscopy in TS-3

4th A3 Foresight Summer School and Workshop on Spherical Torus (ST) List of Participants

C01	GAO Zhe	Tsinghua University	J01	MITARAI Osamu	Tokai University
C02	WANG Wenhao	Tsinghua University	J02	SHIKAMA Taiichi	Kyoto University
C03	TAN Yi	Tsinghua University	J03	NAKAMURA Kazuo	Kyushu Univesity
C04	FENG Chunhua	Institute of Physics Chinese Academy of Sciences	J04	HANADA Kazuaki	Kyushu Univesity
C05	ZHAO Aihui	Tsinghua University	J05	IDEI Hiroshi	Kyushu Univesity
C06	JIANG Yanzheng	Tsinghua University	J06	YOSHIDA Naoaki	Kyushu Univesity
C07	WANG Haoxi	Tsinghua University	J07	FUJISAWA Akihide	Kyushu Univesity
C08	LI Yang	Tsinghua University	J08	MATSUURA Hideaki	Kyushu Univesity
C09	LIU Zhiyuan	Tsinghua University	J09	NAGASHIMA Yoshihiko	Kyushu Univesity
C10	ZHONG Heng	Tsinghua University	J10	HASEGAWA Makoto	Kyushu Univesity
C11	LUO Yuhang	Tsinghua University	J11	TAKASE Yuichi	University of Tokyo
C12	LIU Wenbin	Tsinghua University	J12	INOMOTO Michiaki	University of Tokyo
C13	GUO Xingyu	Tsinghua University	J13	NII Kuniaki	Kyoto University
C14	WANG Shouzhi	Tsinghua University	J14	FUJIKAWA Akinobu	Kyoto University
K01	HWANG Yong-seok	Seoul National University	J15	KAJITA Ryusuke	Kyoto University
K02	HAHM Taik Soo	Seoul National University	J16	YAMASAKI Kotaro	Kyushu Univesity
K03	HONG Bong Guen	Chonbuk National University	J17	ALAM Md Mahbub	Kyushu Univesity
K04	RYU Chang-Mo	POSTECH	J18	SUGIYAMA Shota	Kyushu Univesity
K05	LEE Jaegon	Seoul National University	J19	KAJIMOTO Shogo	Kyushu Univesity
K06	KIM Young-Gi	Seoul National University	J20	KOZAI Hideaki	Kyushu Univesity
K07	KIM JuneYoung	Seoul National University	J21	OHWADA Hiroaki	Kyushu Univesity
K08	LEE Kihyun	Seoul National University	J22	LONG Hao	Kyushu Univesity
K09	KIM Yoosung	Seoul National University	J23	KOJIMA Shinichiro	Kyushu Univesity
K10	PARK Jongyoon	Seoul National University	J24	USHIKI Tomohiko	University of Tokyo
K11	HONG Seulchan	Seoul National University	J25	FUKAI Yusuke	University of Tokyo
K12	KIM Donghwan	Seoul National University	J26	TAKAHASHI Wataru	University of Tokyo
K13	KIM Doyeon	Seoul National University	J27	YAMAZAKI Hibiki	University of Tokyo
K14	WANG Jongin	Seoul National University	J28	SATO Akito	University of Tokyo
K15	JANG Jae-young	Seoul National University	J29	TAKEI Yuki	University of Tokyo
			J30	KITAYAMA Akichika	University of Tokyo
			J31	MATSUMOTO Naoki	University of Tokyo
			J32	KONDO Kyohei	University of Tokyo
			J33	MIHARA Takumi	University of Tokyo
			J34	HATANNO Hironori	University of Tokyo
			J35	MINAMI Yusuke	University of Tokyo
			J36	SATO Naoya	University of Tokyo

4th A3 Foresight Summer School and Workshop on Spherical Torus (ST) Program

	Aug. 2	Aug. 3	Aug. 4	Aug. 5
A.M	Opening	Lecture 5 (80+10min) Takase (U. Tokyo)	Lecture 7 (80+10min) Mitarai (Tokai U.)	Lecture 10 (80+10min) Yoshida (Kyushu U.)
	Lecture 1 (60+10min) Fujisawa (Kyushu U.)	Lecture 6 (80+10min) Hong (Chonbuk Nat'l. U.)	Lecture 8 (80+10min) Matsuura (Kyushu U.)	Lecture 11 (80+10min) Nagashima (Kyushu U.)
	Lecture 2 (60+10min) Hahm (Seoul Nat'l U.)			Closing
	Lunch	Lunch	Lunch	Lunch
P.M	Lecture 3 (60+10min) Hasegawa (Kyushu U.)	Technical Tour	Lecture 9 (80+10min) Shikama (Kyoto U.)	
	Lecture 4 (60+10min) Tan (Tsinghua U.)		Student/Young reseracher Poster session	
	QUEST Tour			
	Dinner	Dinner	Banquet	

Notes

- Lecture 1~4 : 60min lecture + 10min question
- Lecture 5~11 : 80min lecture + 10min question
- Poster board size : 83 cm wide x 168 cm height

Lecture titles

No.	Lecture titles (tentative)	Lecturer
1	Experiments of plasma turbulence	FUJISAWA Akihideo (Kyushu University)
2	Introduction to microturbulence in Tokamaks and Spherical Torus	HAHM Taik Soo (Seoul National University)
3	Integrated control system of spherical tokamak	HASEGAWA Makoto (Kyushu University)
4	Daily vacuum and electronic techniques in operating tokamaks	TAN Yi (Tsinghua University)
5	RF heating and current drive	TAKASE Yuichi (University Tokyo)
6	Characteristics of fusion reactor based on low aspect ratio tokamak	HONG Bong Guen (Chonbuk National. University)
7	Developments of D-3He spherical tokamak reactor	MITARAI Osamu (Tokai University)
8	Ion heating by nuclear elastic scattering	MATSUURA Hideaki (Kyushu University)
9	Spectroscopy	SHIKAMA Taiichi (Kyoto University)
10	Plasma wall interaction	YOSHIDA Naoaki (Kyushu University)
11	Probe diagnostics	NAGASHIMA Yoshihiko (Kyushu University)