25th 3rd week(03/25/24 - 03/29/24) schedule for LHD experiment

Weekly report :

Date	Day of the week	Bt direction	Schedule of the day Morning (~ 12:15) / Afternoon (12:15 ~ 16:45)	Wall	Gas	Experiment implementation system	Remark
3/25	Mo.			Sat: None Sun: None Mon: None			
3/26	Tu.	CCW	[IA](10:30 ~ 16:45)ECH, NBI Energetic particle distribution in EIC, Degradation of fast-ion confinement, Interplay of fast ions and impurities, Anomaly detection of radiation profile # Opt. Pol. Rax Bax gamma Bq SC 1 CCW 3.6 2.75 1.2538 100.0 2 CCW 3.75 2.64 1.2538 100.0	He GD Div Cryo	H2	【Responsible person】N.Tamura / H.Hayashi 【Coordinator#1】M.Goto 【Coordinator#2】R.Seki 【ECH】H.Igami 【Gas・vacuum・shutter】A/B 【Low temp.】noguchi.hiroki 【LID power】M.Kawai/K.Nagahara 【Coil power】takami.shigeyuki 【central ctrl.】nonomura.miki 【data proc.】M.Ohsuna 【EXP LAN】inoue.tomoyuki	(IA)TESPEL, CXS (Ti, nC), FIDA, ICE, MSE, FILD, BES (id:723) Impurity pellet/TESPEL
3/27	We.	CW	[MAP](10:30 ~ 16:45)ECH, NBI Impurity shielding performance, boron deposition on the divertor plates, spectroscopy of boron hydrides using IPD # Opt. Pol. Rax Bax gamma Bq SC 1 CW 3.75 2.64 1.2538 100.0 2 CW 3.6 2.75 1.2538 100.0	None	H2, Ar	【Responsible person】M.Osakabe / H.Hayashi 【Coordinator#1】C.Suzuki 【Coordinator#2】G.Motojima 【ECH】H.Takahashi 【Gas・vacuum・shutter】C/A 【Low temp.】noguchi.hiroki 【LID power】M.Kawai/K.Nagahara 【Coil power】tanoue.hiroyuki 【central ctrl.】nonomura.miki 【data proc.】M.Ohsuna 【EXP LAN】nakamura.osamu	(MAP)IPD (B, Li, Si), Fast camera (2.5-U), Spectroscopy, CXS, Sample manipulator (4.5-U, 10.5-U) (id:724) Impurity gas puff (id:725) Impurity powder dropper (id:760) Insertion of sample, etc: Exposure of a material sample to divertor plasma by the manipulators
3/28	Th.	CW	[MAP](10:30 ~ 16:45)ECH, NBI Study of edge impurity transport with spectroscopy, Impurity behaviour study in LHD plasmas with W-TESPEL injections # Opt. Pol. Rax Bax gamma Bq SC 1 CW 3.6 2.75 1.2538 100.0	None Div Cryo	H2, N2, Ne, Ar	【Responsible person】T.Seki / H.Hayashi 【Coordinator#1】M.Kobayashi 【Coordinator#2】K.Mukai 【ECH】N.Kenmochi 【Gas・vacuum・shutter】B/C 【Low temp.】ohba.kouki 【LID power】M.Kawai/K.Nagahara 【Coil power】takami.shigeyuki 【central ctrl.】nonomura.miki 【data proc.】M.Ohsuna 【EXP LAN】inoue.tomoyuki	(MAP)CXS, Visible and VUV/EUV Spectrometers, TESPEL, SOXMOS (id:723) Impurity pellet/TESPEL (id:724) Impurity gas puff
3/29	Fr.	CW	[IA](10:30 ~ 13:15)ECH, NBI disturbance triggered by neon doped hydrogen pellet injection, pellet fuelling efficiency, Energetic Particle Distribution during EIC # Opt. Pol. Rax Bax gamma Bq SC 1 CW 3.6 2.75 1.2538 100.0 [TC](13:15 ~ 15:30) Demonstration of real-time ECH plasma control by the data assimilation system ASTI # Opt. Pol. Rax Bax gamma Bq SC 1 CW 3.6 2.75 1.2538 100.0 [IA](15:30 ~ 16:45)ECH, NBI Anomaly detection of radiation profile in radiative collapse # Opt. Pol. Rax Bax gamma Bq SC 1 CW 3.75 2.64 1.2538 100.0	Div Cryo	H2, Ar	【Responsible person】M.Isobe / H.Hayashi 【Coordinator#1】M.Nishiura/T.Kawate 【Coordinator#2】T.Kobayashi/M.Goto 【ECH】R.Yanai 【Gas・vacuum・shutter】A/B 【Low temp.】noguchi.hiroki 【LID power】M.Kawai/K.Nagahara 【Coil power】tanoue.hiroyuki 【central ctrl.】nonomura.miki 【data proc.】M.Ohsuna 【EXP LAN】nakamura.osamu	(IA)neon doped hydrogen pellet injection, LID(10:30-12:00) (TC)Realtime-TS, BS (IA)gas puff feed-back control (id:731) Mag. Conf.: Using LID coil (id:748) ECH: off-axis injection (Combined)

LHD project

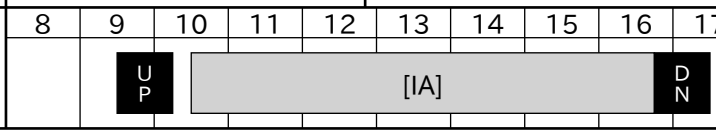
Daily Schedule

Prepared by
N.Tamura

Date	Experimental Subject
2024/3/26(Tue)	Energetic particle distribution in EIC, Degradation of fast-ion confinement, Interplay of fast ions and impurities, Anomaly detection of radiation profile

Exp. No.	Experimental Session Group	Session Coordinator
1337	IA	M.Goto[2290] / R.Seki[2201]

Time Table



Details and Experimental Conditions

[IA](10:30 ～ 16:45) ECH, NBI
10:30-11:30 Understanding Energetic Particle Distribution during Helically-Trapped Energetic-Ion-Driven Resistive Interchange Mode (EIC) in LHD Using Newly Developed Imaging Neutral Particle Analyzer (INPA)
11:30-13:20 Degradation of fast-ion confinement depending on NB power without EP-driven instability
13:20-15:00 Interplay of fast ions and impurities in LHD in hydrogen
15:00-15:30 [Change of Mag. Config.]
15:30-16:45 Anomaly detection of radiation profile in radiative collapse

Sequence:3min

#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled
1		CCW	3.6	2.75	1.2538	100.0	
2		CCW	3.75	2.64	1.2538	100.0	

Gas

H2

Wall Conditioning

GD(Before Exp.): None , GD(After Exp.): He , Cryopump(During Exp.): on

Remarks

(IA)TESPEL, CXS (Ti, nC), FIDA, ICE, MSE, FILD, BES

【Precautions for today's LHD experiments】
(id:723) Impurity pellet/TESPEL

LHD project

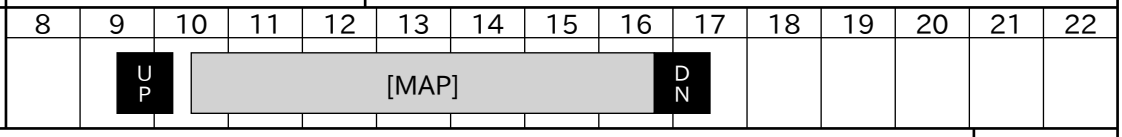
Daily Schedule

Prepared by
C.Suzuki

Date	Experimental Subject
2024/3/27(Wed)	Impurity shielding performance, boron deposition on the divertor plates, spectroscopy of boron hydrides using IPD

Exp. No.	Experimental Session Group	Session Coordinator
1338	MAP	C.Suzuki[2255] / G.Motojima[2142]

Time Table



Details and Experimental Conditions

[MAP](10:30 ～ 16:45) ECH, NBI
10:30-12:15 The investigation of the impurity shielding performance of the LHD peripheral plasma using the Impurity Powder Dropper (M. Shoji)
12:15-14:30 The evaluation of the toroidal uniformity of the boron deposition on the divertor plates for effective real-time boronization using the impurity powder dropper (M. Shoji)
14:30-16:45 Spectroscopic studies of boron hydrides near plasma-facing materials during boron powder dropping experiments (T. Kawate)
Change of Mag. Config. will be done between 10:30 and 12:15.

Sequence:3min

#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled
1		CW	3.75	2.64	1.2538	100.0	
2		CW	3.6	2.75	1.2538	100.0	

Gas

H2,Ar

Wall Conditioning

GD(Before Exp.): He , GD(After Exp.): None , Cryopump(During Exp.): off

Remarks

(MAP)IPD (B, Li, Si), Fast camera (2.5-U), Spectroscopy, CXS, Sample manipulator (4.5-U, 10.5-U)

【Precautions for today's LHD experiments】
(id:724) Impurity gas puff
(id:725) Impurity powder dropper
(id:760) Insertion of sample, etc: Exposure of a material sample to divertor plasma by the manipulators

LHD project

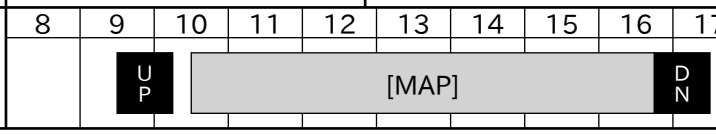
Daily Schedule

Prepared by
N.Tamura

Date	Experimental Subject
2024/3/28(Thu)	Study of edge impurity transport with spectroscopy, Impurity behaviour study in LHD plasmas with W-TESPEL injections

Exp. No.	Experimental Session Group	Session Coordinator
1339	MAP	M.Kobayashi[2169] / K.Mukai[2240]

Time Table



Details and Experimental Conditions

[MAP](10:30 ～ 16:45) ECH, NBI
10:30-14:30 Study of edge impurity transport by utilizing multiple spectroscopy diagnostics (T. Nishizawa)
14:30-16:45 Impurity behaviour study in LHD plasmas using VUV spectroscopy in experiment with W TESPEL injections (T. Fornal, N. Tamura)

Sequence:3min

#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled
1		CW	3.6	2.75	1.2538	100.0	

Gas

H2,N2,Ne,Ar

Wall Conditioning

GD(Before Exp.): None , GD(After Exp.): None , Cryopump(During Exp.): on

Remarks

(MAP)CXS, Visible and VUV/EUV Spectrometers, TESPEL, SOXMOS

【Precautions for today's LHD experiments】
(id:723) Impurity pellet/TESPEL
(id:724) Impurity gas puff

LHD project

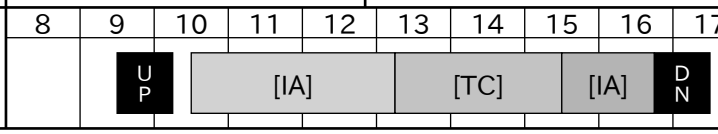
Daily Schedule

Prepared by
M.Nishiura N.Tamura T.Kawate

Date	Experimental Subject
2024/3/29(Fri)	disturbance triggered by neon doped hydrogen pellet injection, pellet fuelling efficiency, Energetic Particle Distribution during EIC Demonstration of real-time ECH plasma control by the data assimilation system ASTI Anomaly detection of radiation profile in radiative collapse

Exp. No.	Experimental Session Group	Session Coordinator
1340	IA/TC	M.Nishiura[2184] / T.Kobayashi[2231] T.Kawate[2256] / M.Goto[2290]

Time Table



Details and Experimental Conditions

Gas: H2,Ar

[IA](10:30 ～ 13:15) ECH, NBI
10:30-12:00 Spatiotemporal structure of disturbance triggered by neon doped hydrogen pellet injection (A. Matsuyama, R. Sakamoto)
10:30-12:00 Study of pellet fuelling efficiency dependence on magnetic configuration (N. Panadero, R. Sakamoto) [Piggy-backed]
12:00-12:10 NBI calibration (3 shots)
12:10-13:10 Energetic Particle Distribution during Helically-Trapped EIC (W. Paenthong, K. Ogawa)

Sequence:3min

#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled
1		CW	3.6	2.75	1.2538	100.0	

Gas: H2

[TC](13:15 ～ 15:30)
13:10-15:10 Demonstration of real-time ECH plasma control by the data assimilation system ASTI(Murakami)
15:10-15:30 [Change of Mag. config.]

Sequence:3min

#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled
1		CW	3.6	2.75	1.2538	100.0	

Gas: H2

[IA](15:30 ～ 16:45) ECH, NBI
15:30-16:45 Anomaly detection of radiation profile in radiative collapse (K. Mukai)

Sequence:3min

#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled
1		CW	3.75	2.64	1.2538	100.0	

Wall Conditioning

GD(Before Exp.): None , Cryopump(During Exp.): on

Remarks

(IA)neon doped hydrogen pellet injection, LID(10:30-12:00)

(TC)Realtime-TS, BS

(IA)gas puff feed-back control

【Precautions for today's LHD experiments】
(id:731) Mag. Conf.: Using LID coil
(id:748) ECH: off-axis injection (Combined)