

# 24th 8th week(11/14/22 - 11/18/22) schedule for LHD experiment

Weekly report : H.Takahashi

Date	Day of the week	Bt direction	Schedule of the day										Wall	Gas	Experiment implementation system	Remark		
			Morning (~ 12:15)					Afternoon (12:15 ~ 18:45)										
11/14	M.O.												Sat: None					
11/15	Tu.W.	C	[turbulence](09:45 ~ 18:45)ECH, NBI, ICH Turbulence transport, non-local transport	# Opt. Pol.	Rax	Bax	gamma	Bq	SC	1 CW	3.55	1.375	1.2538	100.0	None	H2, D2, He, Ar	[Responsible person]R.Sakamoto / T.Tokuzawa [ECH]H.Igami [NBI]H.Nakano [central ctrl./data proc.]Ohsuna, Yokota / Ohsuna, Maeno [radiation]H.Hayashi [EXP LAN]Inoue/Yamamoto [TGL]T.Tokuzawa [SubTGL]A.Shimizu/T.Kobayashi /M.Nishiura/M.Nakata	[turbulence)LID>1920A (id:676) Impurity pellet/TESPEL (id:677) Impurity gas puff (id:685) Mag. Conf.: Using LID coil (id:706) ICH: Antennae insertion for plasma heating by ICH : Subcool required (id:720) Probe: Edge plasma measurement using the fast-scanning Langmuir probes (id:722) Insertion of sample, etc: Insertion of water-cooled tungsten divertor test piece
11/16	We.W.	C	[instability](09:00 ~ 18:45)ECH, NBI AE control, NBCD modeling	# Opt. Pol.	Rax	Bax	gamma	Bq	SC	1 CCW	3.75	1.375	1.2538	100.0	D2 GD	H2, D2, Ar	[Responsible person]M.Isobe / N.Tamura [ECH]R.Yanai [NBI]H.Nakano [central ctrl./data proc.]Ohsuna, Yokota / Ohsuna, Maeno [radiation]T.Kobuchi [EXP LAN]Nakamura/Watanabe [TGL]K.Nagaoka/Y.Takemura [SubTGL]R.Seki/N.Kenmochi	(instability)ECCD, MSE, FIDA, bulk CXS Beam energy of 133keV for NBI#1, #3 (id:705) ECH: off-axis injection (Combined) (id:720) Probe: Edge plasma measurement using the fast-scanning Langmuir probes (id:722) Insertion of sample, etc: Insertion of water-cooled tungsten divertor test piece
11/17	Th.W.	C	[spectroscopy](09:45 ~ 16:15)ECH, NBI, ICH Fast ion diagnostics and physics research	# Opt. Pol.	Rax	Bax	gamma	Bq	SC	1 CCW	3.6	2.75	1.2538	100.0	None	D2, He, Ar	[Responsible person]S.Masuzaki / Y.Takemura [ECH]N.Kenmochi [NBI]Y.Kawamoto [central ctrl./data proc.]Ohsuna, Yokota / Ohsuna, Maeno [radiation]M.Kobayashi [EXP LAN]Inoue/Nakamura [TGL]M. Goto, K.Nagaoka/Y.Takemura [SubTGL]M.Yoshinuma/T.Oishi/ T.Kawate, R.Seki/N.Kenmochi	[spectroscopy]Data acquisition sequence starts from 3 min 30 sec discharge cleaning mode), C pellets, FIDA, CXS, CTS, NPA, BNC, DBS, PCI, magnetics, FILD (instability)C pellets, FIDA, FTS, CXS (id:676) Impurity pellet/TESPEL (id:677) Impurity gas puff (id:681) Mag. Conf.: 3.55 m =< Rax < 3.6 m (id:686) Probe: Insertion of Fast Ion Loss Diagnostics (8-O) (id:702) ECH: Collective Thomson Scattering (CTS) measurement (id:706) ICH: Antennae insertion for plasma heating by ICH : Subcool required (id:720) Probe: Edge plasma
11/18	Fr.W.	C	[instability](09:45 ~ 13:15)ECH, NBI Measuring the dependence of ICE on fast ion density and energy	# Opt. Pol.	Rax	Bax	gamma	Bq	SC	1 CCW	3.6	2.75	1.2538	100.0	None	D2, Ar, He	[Responsible person]K.Tanaka / M. Goto [ECH]Y.Yoshimura [NBI]K.Tsumori / K.Nagaoka [central ctrl./data proc.]Ohsuna, Yokota / Ohsuna, Maeno [radiation]M.Tanaka [EXP LAN]Inoue/Yamamoto [TGL]K.Nagaoka/Y.Takemura, N.Tamura/M.Kobayashi [SubTGL]R.Seki/N.Kenmochi, H.Kasahara/G.Motojima	[multi-ion]He beam (id:676) Impurity pellet/TESPEL (id:677) Impurity gas puff (id:685) Mag. Conf.: Using LID coil (id:686) Probe: Insertion of Fast Ion Loss Diagnostics (8-O) (id:702) ECH: EC wave injection for more than 10 s (Combined) (id:706) ICH: Antennae insertion for plasma heating by ICH : Subcool required (id:720) Probe: Edge plasma measurement using the fast-scanning Langmuir probes (id:722) Insertion of sample, etc: Insertion of water-cooled tungsten divertor test piece

## Daily Schedule

Prepared by

N.Tamura

## Daily Schedule

Prepared by

K.Nagaoka

Date	Experimental Subject																		
Exp. No.	Topical Group				TGL				Sub-TGL										
2022/11/16(Wed)	AE control, NBCD modeling				K.Nagaoka/Y.Takemura [2177/2167]				R.Seki/N.Kenmochi [2201/2208]										
1304	instability				8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Time Table	U P	[instability]										D N							

### Details and Experimental Conditions

Gas

[instability Coordinator: K.Nagaoka](09:00 ~ 18:45) ECH, NBI 10:00-12:00 ECCD effects on saturated EP profile with AE active regime (K. Nagaoka) 12:10-15:50 Excitation and damping of energetic-particle-driven MHD instabilities by external actuators (K. Nagasaki / K. Nagaoka) 16:20-18:45 Validation of NBCD numerical estimation/B-B interactions (H. Nuga) Maximum number of discharges : 180 Sequence:3min	H2,D2,Ar																																																																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>#</th><th>Option</th><th>Polarity</th><th>Rax(m)</th><th>Bax(T)</th><th>gamma</th><th>Bq(%)</th><th>Subcooled</th></tr> </thead> <tbody> <tr><td>1</td><td></td><td>CCW</td><td>3.75</td><td>1.375</td><td>1.2538</td><td>100.0</td><td></td></tr> <tr><td>2</td><td></td><td>CCW</td><td>3.6</td><td>1.277</td><td>1.2538</td><td>100.0</td><td></td></tr> <tr><td>3</td><td></td><td>CCW</td><td>3.6</td><td>1.49</td><td>1.2538</td><td>100.0</td><td></td></tr> <tr><td>4</td><td></td><td>CCW</td><td>3.6</td><td>2.75</td><td>1.2538</td><td>100.0</td><td></td></tr> <tr><td>5</td><td>✓</td><td>CCW</td><td>3.6</td><td>1.375</td><td>1.2538</td><td>100.0</td><td></td></tr> <tr><td>6</td><td>✓</td><td>CCW</td><td>3.9</td><td>1.375</td><td>1.2538</td><td>100.0</td><td></td></tr> <tr><td>7</td><td>✓</td><td>CCW</td><td>3.75</td><td>2.64</td><td>1.2538</td><td>100.0</td><td></td></tr> <tr><td>8</td><td>✓</td><td>CCW</td><td>3.9</td><td>2.5385</td><td>1.2538</td><td>100.0</td><td></td></tr> </tbody> </table>	#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled	1		CCW	3.75	1.375	1.2538	100.0		2		CCW	3.6	1.277	1.2538	100.0		3		CCW	3.6	1.49	1.2538	100.0		4		CCW	3.6	2.75	1.2538	100.0		5	✓	CCW	3.6	1.375	1.2538	100.0		6	✓	CCW	3.9	1.375	1.2538	100.0		7	✓	CCW	3.75	2.64	1.2538	100.0		8	✓	CCW	3.9	2.5385	1.2538	100.0		
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Wall Conditioning

GD(Before Exp.): None , GD(After Exp.): D2 , Cryopump(During Exp.): on

Remarks

(instability)ECCD, MSE, FIDA, bulk CXS  
Beam energy of 133keV for NBI#1, #3

【Precautions for today's LHD experiments】

(id:705) ECH: off-axis injection (Combined)

(id:720) Probe: Edge plasma measurement using the fast-scanning Langmuir probes

(id:722) Insertion of sample, etc: Insertion of water-cooled tungsten divertor test piece

LHD project

## Daily Schedule

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Prepared by

T.Oishi  
K.Nagaoka

LHD project

## Daily Schedule

Prepared by

S.Masuzaki  
N.Tamura