

24th 13th week(12/19/22 - 12/23/22) 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)																		
12/19	Mo.	CCW	[instability](13:45 ~ 16:00)ECH, NBI Isotope dependence of collisionless energy transfer from beam to bulk ions						[turbulence](16:00 ~ 18:45)ECH, NBI isotope effect, ECH realtime control					Sat: None	H2, Ar	[Responsible person]K.Tanaka / Y.Takemura [ECH]H. Igami [NBI]H.Nakano [central ctrl./data proc.]Ohsuna, Yasui / Ohsuna, Ogawa [radiation]H.Hayashi [EXP LAN]Inoue/Watanabe [TGL]K.Nagaoka/Y.Takemura, T.Tokuzawa [SubTGL]R.Seki/N.Kenmochi, A.Shimizu/T.Kobayashi/M.Nishiura /M.Nakata	(instability)CXS6, CXS11 (turbulence)realtime TS, TS(overlap 2-laser) (id:681) Mag. Conf.: 3.55 m =< Rax < 3.6 m										
			# Opt. Pol.	Rax	Bax	gamma	Bq	SC	# Opt. Pol.	Rax	Bax	gamma	Bq	SC													
			1	CCW	3.55	2.7887	1.2538	100.0	1	CCW	3.6	2.75	1.2538	100.0					Sun: None Mon: None Div Cryo								
12/20	Tu.	CW	[turbulence](09:45 ~ 11:45)ECH, NBI GAM eigenmode 2D structure measurements					[instability](11:45 ~ 14:45)ECH, NBI optimization of non-collisional energy transfer, global stability and transport characteristics of a helical plasma with zero rotational-transform layer					[turbulence](14:45 ~ 18:45)ECH, NBI, ICH Effect of injection of different powder materials on plasma turbulence and performance					None Div Cryo	H2, Ne, Ar	[Responsible person]S.Masuzaki / Y.Takemura [ECH]H.Takahashi [NBI]K.Ikeda [central ctrl./data proc.]Ohsuna, Yasui / Ohsuna, Ogawa [radiation]T.Kobuchi [EXP LAN]Inoue/Yamamoto [TGL]T.Tokuzawa, K.Nagaoka/Y.Takemura [SubTGL]A.Shimizu/T.Kobayashi/M.Nishiura/M.Nakata, R.Seki/N.Kenmochi	(turbulence)MSE, HIBP, ECEI, NBI long(5s), LID (instability)Crystal(indispensable), PCI, HIBP, CXS, NBI long(5s) (turbulence)CXS, PCI, IPD, NBI long(5s) (id:677) Impurity gas puff (id:678) Impurity powder dropper (id:685) Mag. Conf.: Using LID coil (id:687) High plasma current exp. (100 kA <= Ip < 150kA) (Combined) (id:691) Mag. Conf.: Subcool conditions (Combined) : Subcool required (id:705) ECH: off-axis injection (Combined) (id:706) ICH: Antennae insertion for plasma heating by ICH : Subcool						
			# Opt. Pol.	Rax	Bax	gamma	Bq	SC	# Opt. Pol.	Rax	Bax	gamma	Bq	SC													
			1	CW	3.75	1.375	1.2538	100.0	1	CW	3.75	1.3	1.2538	100.0	2	CW	3.6					2.75	1.2538	100.0	1	CW	3.6
			2	CW	3.75	1.25	1.2538	100.0	2	CW	3.6	1.3	1.2538	100.0	3	CW	3.75	1.2	1.2538	100.0	2	CW	3.8	2.7	1.2538	100.0	
			3	✓ CW	3.75	1.3	1.2538	100.0	3	✓ CW	3.75	1.2	1.2538	100.0	4	✓ CW	3.75	1.5	1.2538	100.0	3	✓ CW	3.75	1.2	1.2538	100.0	
			4	✓ CW	3.75	1.2	1.2538	100.0	4	✓ CW	3.75	1.5	1.2538	100.0	5	✓ CW	3.6	1.2	1.2538	100.0	4	✓ CW	3.6	1.2	1.2538	100.0	
			5	✓ CW	3.6	1.0	1.2538	100.0	5	✓ CW	3.6	1.2	1.2538	100.0	6	✓ CW	3.6	1.5	1.2538	100.0	5	✓ CW	3.6	1.5	1.2538	100.0	
12/21	We.	CW	[instability](09:30 ~ 18:45)ECH, NBI Radiative collapse, RMP effect on MHD, Topological bifurcation											None	H2, Ar	[Responsible person]K.Tanaka / M.Kobayashi [ECH]R.Yanai [NBI]Y.Kawamoto [central ctrl./data proc.]Ohsuna, Yasui / Ohsuna, Ogawa [radiation]T.Saze [EXP LAN]Inoue/Watanabe [TGL]K.Nagaoka/Y.Takemura [SubTGL]R.Seki/N.Kenmochi	(instability)CXS, PCI, Fast Thomson, LID, DBS, HIBP(Cu) (id:677) Impurity gas puff (id:685) Mag. Conf.: Using LID coil (id:694) Mag. Conf.: Exp. with low gamma (Combined) (id:712) NBI: Injection into the discharges with low fields (id:721) Insertion of sample, etc: Exposure of a material sample to divertor plasma by the manipulators										
			# Opt. Pol.	Rax	Bax	gamma	Bq	SC	# Opt. Pol.	Rax	Bax	gamma	Bq					SC									
			1	CW	3.6	2.75	1.2538	100.0	9	✓ CW	3.7	1.375	1.2538					100.0	10	✓ CW	3.75	1.375	1.2538	100.0			
			2	CW	3.9	2.5384	1.2538	100.0																			
			3	CW	3.75	1.7	1.2538	100.0																			
			4	CW	3.75	1.2	1.2538	100.0																			
			5	CW	3.75	0.75	1.2538	100.0																			
			6	CW	3.6	1.0	1.129	100.0																			
			7	✓ CW	3.6	1.375	1.2538	100.0																			
			8	✓ CW	3.65	1.375	1.2538	100.0																			
12/22	Th.	CCW	[instability](09:00 ~ 18:45)ECH, NBI, ICH Bootstrap / Core and Edge control											H2 GD Div Cryo	H2, N2, Ne, Ar	[Responsible person]K.Ida / M. Goto [ECH]H. Takahashi [NBI]H.Nakano [central ctrl./data proc.]Ohsuna, Yasui / Ohsuna, Ogawa [radiation]M.Kobayashi [EXP LAN]Watanabe/Yamamoto [TGL]K.Nagaoka/Y.Takemura [SubTGL]R.Seki/N.Kenmochi	(instability)MSE, RMP NBI long pulse (up to 5 sec), ECH long pulse (up to 4 sec), ECH boost mode (11Hz modulation), ICH (up to 4 sec) (id:677) Impurity gas puff (id:681) Mag. Conf.: 3.55 m =< Rax < 3.6 m (id:685) Mag. Conf.: Using LID coil (id:705) ECH: off-axis injection (Combined) (id:706) ICH: Antennae insertion for plasma heating by ICH : Subcool required (id:711) Mag. Conf.: Rax = 3.5, 3.53 m (id:721) Insertion of sample, etc: Exposure of a material sample to										
			# Opt. Pol.	Rax	Bax	gamma	Bq	SC	# Opt. Pol.	Rax	Bax	gamma	Bq					SC									
			1	CCW	3.53	2.64	1.2538	100.0																			
			2	CCW	3.75	2.64	1.2538	100.0																			
			3	CCW	3.9	2.5385	1.2538	100.0																			
			4	CCW	3.5	1.375	1.2538	100.0																			
			5	CCW	3.55	1.375	1.2538	100.0																			
			6	✓ CCW	3.5	1.0	1.2538	100.0																			
			7	✓ CCW	3.55	1.0	1.2538	100.0																			
12/23	Fr.	CCW	[spectroscopy](09:45 ~ 15:30)ECH, NBI Effect of edge magnetic islands on particle transport						[multi-ion](15:30 ~ 18:45)ECH, NBI, ICH Impurity powder dropping and material sample exposure to He plasmas					None	H2, Ar, He	[Responsible person]M.Osakabe / K.Nagaoka [ECH]Y.Yoshimura [NBI]K.Tsumori / K.Nagaoka [central ctrl./data proc.]Ohsuna, Yasui / Ohsuna, Ogawa [radiation]M.Tanaka [EXP LAN]Inoue/Yamamoto [TGL]M. Goto, N.Tamura/M.Kobayashi [SubTGL]M.Yoshinuma/T.Oishi/T. Kawate, H.Kasahara/G.Motojima	(spectroscopy)Long pulse NBI (5s), impurity pellets (multi-ion)Long pulse NBI (5s), Spectroscopy, CXS, PCI, ECE (id:676) Impurity pellet/TEPSEL (id:677) Impurity gas puff (id:678) Impurity powder dropper (id:685) Mag. Conf.: Using LID coil (id:704) 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:721) Insertion of sample, etc: Exposure of a material sample to										
			# Opt. Pol.	Rax	Bax	gamma	Bq	SC	# Opt. Pol.	Rax	Bax	gamma	Bq					SC									
			1	CCW	3.75	2.64	1.2538	100.0	1	CCW	3.6	2.75	1.2538					100.0									
			2	CCW	3.8	2.6053	1.2538	100.0																			
			3	CCW	3.85	2.5714	1.2538	100.0																			

Daily Schedule

Prepared by

N.Tamura
M.Nishiura

Date	Experimental Subject																															
2022/12/19(Mon)	Isotope dependence of collisionless energy transfer from beam to bulk ions isotope effect, ECH realtime control																															
Exp. No.	Topical Group					TGL					Sub-TGL																					
1323	instability/turbulence					K.Nagaoka/Y.Takemura T.Tokuzawa [2177/2167, 2217]					R.Seki/N.Kenmochi A.Shimizu/T.Kobayashi/M.Nishiura/M.Nakata [2201/2208, 2454/2231/2184/2276]																					
Time Table	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22																	
						U P	[instability]		[turbulence]		D N																					
Details and Experimental Conditions														Gas																		
[instability Coordinator: R.SEKI](13:45 ~ 16:00) ECH, NBI 13:45-16:00 Isotope dependence of collisionless energy transfer from beam to bulk ions (K. Ida) Maximum number of discharges : 60 Sequence:3min <table><tr><td>#</td><td>Option</td><td>Polarity</td><td>Rax(m)</td><td>Bax(T)</td><td>gamma</td><td>Bq(%)</td><td>Subcooled</td></tr><tr><td>1</td><td></td><td>CCW</td><td>3.55</td><td>2.7887</td><td>1.2538</td><td>100.0</td><td></td></tr></table>														#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled	1		CCW	3.55	2.7887	1.2538	100.0		H2		
#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled																									
1		CCW	3.55	2.7887	1.2538	100.0																										
[turbulence Coordinator: MasakiNishiura](16:00 ~ 18:45) ECH, NBI 16:00-18:45 Demonstration of real-time ECH plasma control by the data assimilation system ASTI(Murakami) Maximum number of discharges : 70 Sequence:3min <table><tr><td>#</td><td>Option</td><td>Polarity</td><td>Rax(m)</td><td>Bax(T)</td><td>gamma</td><td>Bq(%)</td><td>Subcooled</td></tr><tr><td>1</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></table>														#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled	1		CCW	3.6	2.75	1.2538	100.0		H2,Ar		
#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled																									
1		CCW	3.6	2.75	1.2538	100.0																										
Wall Conditioning																																
GD(Before Exp.): Sat:None, Sun:None , GD(After Exp.): None , Cryopump(During Exp.):																																
Remarks																																
(instability)CXS6, CXS11 (turbulence)realtime TS, TS(overlap 2-laser) [Precautions for today's LHD experiments] (id:681) Mag. Conf.: 3.55 m =< Rax < 3.6 m																																

Daily Schedule

Prepared by

A.Shimizu
N.Kenmochi

Date		Experimental Subject																																																																							
2022/12/20(Tue)		GAM eigenmode 2D structure measurements optimization of non-collisional energy transfer, global stability and transport characteristics of a helical plasma with zero rotational-transform layer Effect of injection of different powder materials on plasma turbulence and performance																																																																							
Exp. No.		Topical Group						TGL						Sub-TGL																																																											
1324		turbulence/instability						T.Tokuzawa K.Nagaoka/Y.Takemura [2217, 2177/2167]						A.Shimizu/T.Kobayashi/M.Nishiura/M.Nakata R.Seki/N.Kenmochi [2454/2231/2184/2276, 2201/2208]																																																											
Time Table		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22																																																									
			U P	[turbulence]			[instability]			[turbulence]			D N																																																												
Details and Experimental Conditions															Gas																																																										
[turbulence Coordinator: AkihiroShimizu](09:45 ~ 11:45) ECH, NBI 9:40-11:55 GAM eigenmode 2D structure measurements(Tokuzawa) Maximum number of discharges : 60 Sequence:3min <table><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><tr><td>1</td><td></td><td>CW</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>CW</td><td>3.75</td><td>1.25</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>3</td><td></td><td>CW</td><td>3.75</td><td>1.3</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>4</td><td>✓</td><td>CW</td><td>3.75</td><td>1.2</td><td>1.2538</td><td>100.0</td><td></td></tr></table>															#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled	1		CW	3.75	1.375	1.2538	100.0		2		CW	3.75	1.25	1.2538	100.0		3		CW	3.75	1.3	1.2538	100.0		4	✓	CW	3.75	1.2	1.2538	100.0		H2,Ne,Ar																		
#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled																																																																		
1		CW	3.75	1.375	1.2538	100.0																																																																			
2		CW	3.75	1.25	1.2538	100.0																																																																			
3		CW	3.75	1.3	1.2538	100.0																																																																			
4	✓	CW	3.75	1.2	1.2538	100.0																																																																			
[instability Coordinator: NaokiKenmochi](11:45 ~ 14:45) ECH, NBI 11:55-13:20 Optimization of non-collisional energy transfer from energetic ions to bulk ions in reversed magnetic shear plasmas (K. Toi, K. Ogawa) 13:30-14:45 Studies of global stability and transport characteristics of a helical plasma with zero rotational-transform layer produced by non-inductive counter current drive (K. Toi, S. Ohdachi) Maximum number of discharges : 70 Sequence:3min <table><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><tr><td>1</td><td></td><td>CW</td><td>3.75</td><td>1.3</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>2</td><td></td><td>CW</td><td>3.6</td><td>1.3</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>3</td><td>✓</td><td>CW</td><td>3.75</td><td>1.2</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>4</td><td>✓</td><td>CW</td><td>3.75</td><td>1.5</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>5</td><td>✓</td><td>CW</td><td>3.6</td><td>1.2</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>6</td><td>✓</td><td>CW</td><td>3.6</td><td>1.5</td><td>1.2538</td><td>100.0</td><td></td></tr></table>															#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled	1		CW	3.75	1.3	1.2538	100.0		2		CW	3.6	1.3	1.2538	100.0		3	✓	CW	3.75	1.2	1.2538	100.0		4	✓	CW	3.75	1.5	1.2538	100.0		5	✓	CW	3.6	1.2	1.2538	100.0		6	✓	CW	3.6	1.5	1.2538	100.0		H2,Ne,Ar		
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5	✓	CW	3.6	1.2	1.2538	100.0																																																																			
6	✓	CW	3.6	1.5	1.2538	100.0																																																																			
[turbulence Coordinator: AkihiroShimizu](14:45 ~ 18:45) ECH, NBI, ICH 14:45-14:55 NBI calibration 14:55-15:30 Change magnetic field configuration 15:30-17:50 Effect of injection of different powder materials on plasma turbulence and performance(Nespoli, Masuzaki) 17:50-18:45 Configuration effects of impurity powder injection(Tanaka) Maximum number of discharges : 120 Sequence:3min <table><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><tr><td>1</td><td></td><td>CW</td><td>3.6</td><td>2.75</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>2</td><td></td><td>CW</td><td>3.8</td><td>2.7</td><td>1.2538</td><td>100.0</td><td>✓</td></tr></table>															#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled	1		CW	3.6	2.75	1.2538	100.0		2		CW	3.8	2.7	1.2538	100.0	✓	H2,Ne,Ar																																		
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1		CW	3.6	2.75	1.2538	100.0																																																																			
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(turbulence)MSE, HIBP, ECEI, NBI long(5s), LID (instability)Crystal(indispensable), PCI, HIBP, CXS, NBI long(5s) (turbulence)CXS, PCI, IPD, NBI long(5s) [Precautions for today's LHD experiments] (id:677) Impurity gas puff (id:678) Impurity powder dropper (id:685) Mag. Conf.: Using LID coil (id:687) High plasma current exp. (100 kA =< Ip < 150kA) (Combined) (id:691) Mag. Conf.: Subcool conditions (Combined) : Subcool required (id:705) ECH: off-axis injection (Combined) (id:706) ICH: Antennae insertion for plasma heating by ICH : Subcool required (id:712) NBI: Injection into the discharges with low fields (id:720) Probe: Edge plasma measurement using the fast-scanning Langmuir probes (id:721) Insertion of sample, etc: Exposure of a material sample to divertor plasma by the manipulators (id:722) Insertion of sample, etc: Insertion of water-cooled tungsten divertor test piece																																																																									

Daily Schedule

Prepared by

Y.Takemura

Date	Experimental Subject																																																																																																								
2022/12/21(Wed)	Radiative collapse, RMP effect on MHD, Topological bifurcation																																																																																																								
Exp. No.	Topical Group					TGL					Sub-TGL																																																																																														
1325	instability					K.Nagaoka/Y.Takemura [2177/2167]					R.Seki/N.Kenmochi [2201/2208]																																																																																														
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		U P	[instability]										D N																																																																																												
Details and Experimental Conditions														Gas																																																																																											
[instability Coordinator: Takemura](09:30 ~ 18:45) ECH, NBI 10:00-12:00 Anomaly detection of radiation profile in radiative collapse (Mukai) 12:00-12:30 Change configuration 12:30-16:30 MHD instability suppression by RMP field (Ito) 16:30-17:00 Change configuration 17:00-18:45 Study of topological bifurcation (Suzuki) Maximum number of discharges : 200 Sequence:3min <table><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><tr><td>1</td><td></td><td>CW</td><td>3.6</td><td>2.75</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>2</td><td></td><td>CW</td><td>3.9</td><td>2.5384</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>3</td><td></td><td>CW</td><td>3.75</td><td>1.7</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>4</td><td></td><td>CW</td><td>3.75</td><td>1.2</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>5</td><td></td><td>CW</td><td>3.75</td><td>0.75</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>6</td><td></td><td>CW</td><td>3.6</td><td>1.0</td><td>1.129</td><td>100.0</td><td></td></tr><tr><td>7</td><td>✓</td><td>CW</td><td>3.6</td><td>1.375</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>8</td><td>✓</td><td>CW</td><td>3.65</td><td>1.375</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>9</td><td>✓</td><td>CW</td><td>3.7</td><td>1.375</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>10</td><td>✓</td><td>CW</td><td>3.75</td><td>1.375</td><td>1.2538</td><td>100.0</td><td></td></tr></table>														#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled	1		CW	3.6	2.75	1.2538	100.0		2		CW	3.9	2.5384	1.2538	100.0		3		CW	3.75	1.7	1.2538	100.0		4		CW	3.75	1.2	1.2538	100.0		5		CW	3.75	0.75	1.2538	100.0		6		CW	3.6	1.0	1.129	100.0		7	✓	CW	3.6	1.375	1.2538	100.0		8	✓	CW	3.65	1.375	1.2538	100.0		9	✓	CW	3.7	1.375	1.2538	100.0		10	✓	CW	3.75	1.375	1.2538	100.0		H2,Ar			
#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled																																																																																																		
1		CW	3.6	2.75	1.2538	100.0																																																																																																			
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10	✓	CW	3.75	1.375	1.2538	100.0																																																																																																			
Wall Conditioning		GD(Before Exp.): None , GD(After Exp.): None , Cryopump(During Exp.): off																																																																																																							
Remarks		(instability)CXs, PCI, Fast Thomson, LID, DBS, HIBP(Cu) 【Precautions for today's LHD experiments】 (id:677) Impurity gas puff (id:685) Mag. Conf.: Using LID coil (id:694) Mag. Conf.: Exp. with low gamma (Combined) (id:712) NBI: Injection into the discharges with low fields (id:721) Insertion of sample, etc: Exposure of a material sample to divertor plasma by the manipulators																																																																																																							

Daily Schedule

Prepared by

G.Motojima

Date	Experimental Subject															
2022/12/22(Thu)	Bootstrap / Core and Edge control															
Exp. No.	Topical Group					TGL					Sub-TGL					
1326	instability					K.Nagaoka/Y.Takemura [2177/2167]					R.Seki/N.Kenmochi [2201/2208]					
Time Table	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
		U P	[instability]										D N			
Details and Experimental Conditions														Gas		
[instability Coordinator: K.Nagaoka](09:00 ~ 18:45) ECH, NBI, ICH 9:45 - 13:30 Bootstrap current in the 1/nu and plateau regimes in the inwardly shifted LHD configuration (O. Mitarai, K.Y. Watanabe) 13:50 - 16:00 Feedback control of detachment with ECRH and impurity gas injection (M. Kobayashi) 16:20 - 18:45 Core mode control by ECH/ECCD/NBCD (J. Varela, K.Y. Watanabe, Y. Takemura) Maximum number of discharges : 180 Sequence:3min														H2,N2,Ne,Ar		
#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled									
1		CCW	3.53	2.64	1.2538	100.0										
2		CCW	3.75	2.64	1.2538	100.0										
3		CCW	3.9	2.5385	1.2538	100.0										
4		CCW	3.5	1.375	1.2538	100.0										
5		CCW	3.55	1.375	1.2538	100.0										
6	✓	CCW	3.5	1.0	1.2538	100.0										
7	✓	CCW	3.55	1.0	1.2538	100.0										
Wall Conditioning																
GD(Before Exp.): None , GD(After Exp.): H2 , Cryopump(During Exp.): on																
Remarks																
(instability)MSE, RMP NBI long pulse (up to 5 sec), ECH long pulse (up to 4 sec), ECH boost mode (11Hz modulation), ICH (up to 4 sec) [Precautions for today's LHD experiments] (id:677) Impurity gas puff (id:681) Mag. Conf.: 3.55 m =< Rax < 3.6 m (id:685) Mag. Conf.: Using LID coil (id:705) ECH: off-axis injection (Combined) (id:706) ICH: Antennae insertion for plasma heating by ICH : Subcool required (id:711) Mag. Conf.: Rax = 3.5, 3.53 m (id:721) Insertion of sample, etc: Exposure of a material sample to divertor plasma by the manipulators																

Daily Schedule

Prepared by

N.Tamura

Date	Experimental Subject																																															
2022/12/23(Fri)	Effect of edge magnetic islands on particle transport Impurity powder dropping and material sample exposure to He plasmas																																															
Exp. No.	Topical Group					TGL					Sub-TGL																																					
1327	spectroscopy/multi-ion					M. Goto N.Tamura/M.Kobayashi [2290, 2337/2169]					M.Yoshinuma/T.Oishi/T.Kawate H.Kasahara/G.Motojima [2172/2022/2256, 2203/2142]																																					
Time Table	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22																																	
		U P	[spectroscopy]					[multi-ion]					D N																																			
Details and Experimental Conditions														Gas																																		
[spectroscopy Coordinator: TetsutarouOishi](09:45 ~ 15:30) ECH, NBI 9:45-12:05 An effect of RMP island on density buildup phenomena triggered by heating power reduction (S. Morita) (including magnetic configuration change once or twice) 14:55-15:05 NBI calibration 15:05-15:25 Magnetic configuration change Maximum number of discharges : 120 Sequence:3min <table><tr><td>#</td><td>Option</td><td>Polarity</td><td>Rax(m)</td><td>Bax(T)</td><td>gamma</td><td>Bq(%)</td><td>Subcooled</td></tr><tr><td>1</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>2</td><td></td><td>CCW</td><td>3.8</td><td>2.6053</td><td>1.2538</td><td>100.0</td><td></td></tr><tr><td>3</td><td></td><td>CCW</td><td>3.85</td><td>2.5714</td><td>1.2538</td><td>100.0</td><td></td></tr></table>														#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled	1		CCW	3.75	2.64	1.2538	100.0		2		CCW	3.8	2.6053	1.2538	100.0		3		CCW	3.85	2.5714	1.2538	100.0		H2,Ar		
#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled																																									
1		CCW	3.75	2.64	1.2538	100.0																																										
2		CCW	3.8	2.6053	1.2538	100.0																																										
3		CCW	3.85	2.5714	1.2538	100.0																																										
[multi-ion Coordinator: GenMotojima](15:30 ~ 18:45) ECH, NBI, ICH 15:25-15:30 Data acquisition sequence change (3m -> 3m30s discharge cleaning) 15:30-18:45 Impact of impurity powder dropping on He plasma (S. Masuzaki), Exposure of material samples into the LHD edge plasma by means of the manipulator (C.P. Dhard) Maximum number of discharges : 90 Sequence:3min30s(Wall DC) <table><tr><td>#</td><td>Option</td><td>Polarity</td><td>Rax(m)</td><td>Bax(T)</td><td>gamma</td><td>Bq(%)</td><td>Subcooled</td></tr><tr><td>1</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></table>														#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled	1		CCW	3.6	2.75	1.2538	100.0		H2,He,Ar																		
#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled																																									
1		CCW	3.6	2.75	1.2538	100.0																																										
Wall Conditioning		GD(Before Exp.): H2 , Cryopump(During Exp.): off																																														
Remarks		(spectroscopy)Long pulse NBI (5s), impurity pellets (multi-ion)Long pulse NBI (5s), Spectroscopy, CXS, PCI, ECE 【Precautions for today's LHD experiments】 (id:676) Impurity pellet/TESPEL (id:677) Impurity gas puff (id:678) Impurity powder dropper (id:685) Mag. Conf.: Using LID coil (id:704) 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:721) Insertion of sample, etc: Exposure of a material sample to divertor plasma by the manipulators (id:722) Insertion of sample, etc: Insertion of water-cooled tungsten divertor test piece																																														