LHD project

Daily Schedule

Prepared by
N.Tamura

Date	Experimental Subject
2022/12/7(Wed)	L-H transition Study on real-time boronization using the impurity powder dropper Study of non-Maxwellian distribution of electrons by using Thomson scattering

Exp. No.	Topical Group	TGL	Sub-TGL
1316	turbulence/multi-ion/spectroscopy	T.Tokuzawa N.Tamura/M.Kobayashi M. Goto [2217, 2337/2169, 2290]	A.Shimizu/T.Kobayashi/M.Nishiura/M.Nakata H.Kasahara/G.Motojima M.Yoshinuma/T.Oishi/T.Kawate [2454/2231/2184/2276, 2203/2142, 2172/2022/2256]

Time Table	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
		UP	[turbulence]			[multi-ion]			[spectroscopy]			DN			

Details and Experimental Conditions

Gas

[turbulence Coordinator: T.Tokuzawa](09:30 ～ 12:45) ECH, NBI
9:30-12:45 Measurement of harmonic plasma density fluctuations with L-H mode transition using beam emission spectroscopy systems (W. Hu)

Maximum number of discharges : 80
Sequence:3min

#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled
1		CW	3.55	1.0	1.2538	100.0	
2		CW	3.75	1.0	1.2538	100.0	
3	✓	CW	3.6	1.0	1.2538	100.0	

Gas: H2,Ar

[multi-ion Coordinator: H.Kasahara](12:45 ～ 15:45) ECH, NBI
12:45-13:15 Change in the magnetic config.
13:15-15:45 The evaluation of the toroidal uniformity of the boron deposition on the divertor plates for the real-time boronization using the impurity powder dropper (Shohji)

Maximum number of discharges : 60
Sequence:3min

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

Gas: H2,Ar

[spectroscopy Coordinator: M.Yoshinuma](15:45 ～ 18:45) ECH, NBI
15:45-17:00 Experimental study of the electron temperature anisotropy by using the LHD Thomson scattering system(I.Yamada)
Experimental study of the non-Maxwellian distribution of electrons by using the LHD Thomson scattering system(I.Yamada)
17:00-18:45 Diagnostics of relativistic electrons by Thomson scattering in high electron temperature plasmas(H.Funaba)

Maximum number of discharges : 70
Sequence:3min

#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled
1		CW	3.6	2.75	1.2538	100.0	
2		CW	3.6	2.85	1.2538	100.0	✓

Gas: H2,Ar

Wall Conditioning

GD(Before Exp.): H2 , GD(After Exp.): None , Cryopump(During Exp.): on

Remarks

(turbulence)56GHz(ECH)
(multi-ion)CXS(B profile), 2.5U fast camera, IPD(B,Li), Manupilator(4.5L, 10.5L)
(spectroscopy)CXS, Sub Cool , use Thomson Forward Scattering, Thomson 2 Laser, Fast Thomson

【Precautions for today's LHD experiments】
(id:677) Impurity gas puff
(id:678) Impurity powder dropper
(id:681) Mag. Conf.: 3.55 m =< Rax < 3.6 m
(id:691) Mag. Conf.: Subcool conditions (Combined) : Subcool required
(id:705) ECH: off-axis injection (Combined)
(id:712) NBI: Injection into the discharges with low fields
(id:719) Insertion of sample, etc.: Insertion of samples using manipulator
(id:721) Insertion of sample, etc: Exposure of a material sample to divertor plasma by the manipulators