LHD project

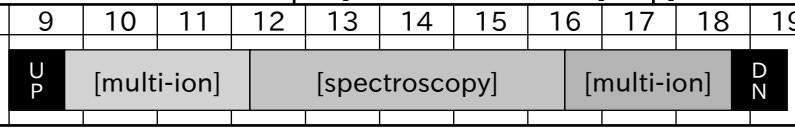
Daily Schedule

Prepared by
N.Tamura

Date	Experimental Subject
2021/10/19(Tue)	Commissioning (ECH, ICH, NBI) Highly-charged tungsten ions spectroscopy, highly-charged rare earth ions spectroscopy Toroidal and poloidal anisotropy of radiation, Wall recycling control

Exp. No.	Topical Group	TGL	Sub-TGL
1218	multi-ion/spectroscopy	N.Tamura/M.Kobayashi M. Goto [2337/2169, 2290]	H.Kasahara/G.Motojima M.Yoshinuma/T.Oishi/T.Kawate [2065/2142, 2172/2022/]

Time Table



Details and Experimental Conditions

Gas

[multi-ion](09:30 ～ 12:15)ECH, NBI, ICH
Checking the incident direction and the heating position of ECH (R. Yanai)
Injection trials and impedance matching to Plasma for ICH (R. Seki)
NBI conditioning (K. Ikeda)
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,He

[spectroscopy](12:15 ～ 16:30)ECH, NBI
- Simultaneous multi-wavelength spectroscopies for validation on atomic data and spectroscopic modelings for highly-charged ions(Murakami)
- Observation of visible forbidden lines from tungsten highly charged ions(Kato)
- Spectroscopy of highly charged rare-earth ions(Koike, Suzuki)

Maximum number of discharges : 90
Sequence:3min

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

Gas: H2,Ne,Ar

[multi-ion](16:30 ～ 18:45)ECH, NBI
-Study of poloidal and toroidal asymmetries during impurity seeding in LHD (B.J. Peterson)
-The radiation enhancement and triggering the island divertor detachment by direct supply of BN powders into the magnetic island in the LHD peripheral plasma using the IPD (M. Shoji).

Maximum number of discharges : 50
Sequence:3min

#	Option	Polarity	Rax(m)	Bax(T)	gamma	Bq(%)	Subcooled
1		CW	3.9	2.5384	1.2538	100.0	

Gas: H2,N2,Ne

Wall Conditioning

GD(Before Exp.): No , Cryopump(During Exp.): No

Remarks

(spectroscopy)Impurity pellet(W, C, Fe, Ni), TESPEL injection(Ce, La, Ho), and impurity gas puffing(He, Ar, Ne, N).
【Precautions for today's LHD experiments】
(id:612) Impurity pellet/TESPEL
(id:613) impurity gas puff
(id:614) Impurity powder dropper
(id:620) ECH: Low absorption condition
(id:626) Mag. Conf.: Using LID coil
(id:638) ECH: Commissioning (alignment, profile check)
(id:654) ECH: Injection from the antenna at Port 1.5Uo
(id:657) ICH: Antennae insertion for plasma heating by ICH