(SG2, TC) Session Report

April 10, 2024 (T. Kobayashi)

Date: April 9, 2024
Time: 10:30 – 14:30
Shot#: 189103 – 189188 (86 shots)
Prior wall conditioning: He
Divertor pump: On
Gas puff: H_2, He, Ar, CH4
Pellet: Carbon pellet

NBI#(1, 2, 3, 4, 5) = gas(H, H, H, H, H)=P(4.4,4.0,4.2,3.6,5.0) MW
ECH(77GHz) = ant(1.5-Uo, 5.5-U, 2-OUR)=P(-,0.70,0.38) MW
ECH(154GHz) = ant(2-OLL, 2-OUL, 2-OLR)=P(0.71, 0.81, 0.98) MW
ICH(3.5U, 3.5L, 4.5U, 4.5L) = P(-, -, -, -) MW

Topics

1. Transport study in ECRH superposed ion ITB plasma (H. Nakano)

Transport study in ECRH superposed ion ITB plasma (H. Nakano)

Experimental conditions: (R_{ax}, Polarity, B_t, γ, B_q) = (3.60 m, CW, 2.75 T, 1.2538, 100.0%)

Aim:

- Iota profile effect on T_i profile in high Ti discharge with peripheral ECRH in LHD.

Results:

- Co- ($T_f > 0$) and Ctr- ECRH were superposed in high T_i discharge with MSE measurement.
- $T_{i,0}$ did not change (increase in LHD#24) by the peripheral Co-ECRH and decreased by Ctr-ECRH, the same as LHD#24.
- Peripheral T_i increase was observed by peripheral ECRH, the same as LHD#24.
- Fluctuation in 30-150 kHz decreased more largely than that in 3-30 kHz.
- The iota profile effect on the T_i profile and transport will be analyzed.

Red: w/o ECRH
Blue: w/ ECRH at $\rho = 0.6$ ($T_f > 0$, co-CD)
Green: w/ ECRH at $\rho = 0.6$ ($T_f < 0$, ctr-CD)