(MAP) Session Report

Date: Mar. 20, 2024   Mar. 21, 2024 (Y. Hayashi)
Time: 14:27 – 16:42
Shot#: 187845 – 187890 (46 shots)
Prior wall conditioning: None
Divertor pump: Off
Gas puff: H_2

NBI#(1, 2, 3, 4, 5) = gas(H, H, H, -, -)=P(2.7, *.*, 4.0, -, -) 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(0.48, 0.58, -) MW
ICH(3.5U, 3.5L, 4.5U, 4.5L) = P(-, -, -, -) MW

Topics
1.   Effect of impurity seeding for divertor detachment on anomaly detection of radiative collapse (K. Mukai)

Effect of impurity seeding for divertor detachment on anomaly detection of radiative collapse   K. Mukai

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Experimental condition
 - $(R_{ax}, B_t, \gamma, B_q)$ = (3.65 m, -2.71 T, 1.2538, 100%)
 - NBI #1, 2, 3
 - $n_{e, bar}$: 4 x 10^{19} m^{-3}
 - Divertor pumping: OFF
 - Gas: H (5.5-L, FB crtl. by FIR), Ne (5.5-L)

Background and objective
 - In the 24th campaign, radiative collapse in the Ne seeded
   plasmas could be detected from radiation images measured
   with an IRVB at 6.5-U as an increase of abnormality using
   AutoEncoder (AE).
 - To investigate the effect of impurity seeding and error field
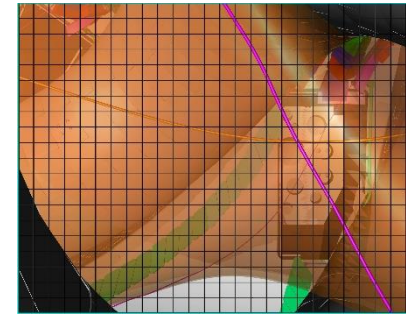   on the radiation structure to trigger radiative collapse

Results
 - 2-D radiation profiles were obtained using IRVBs
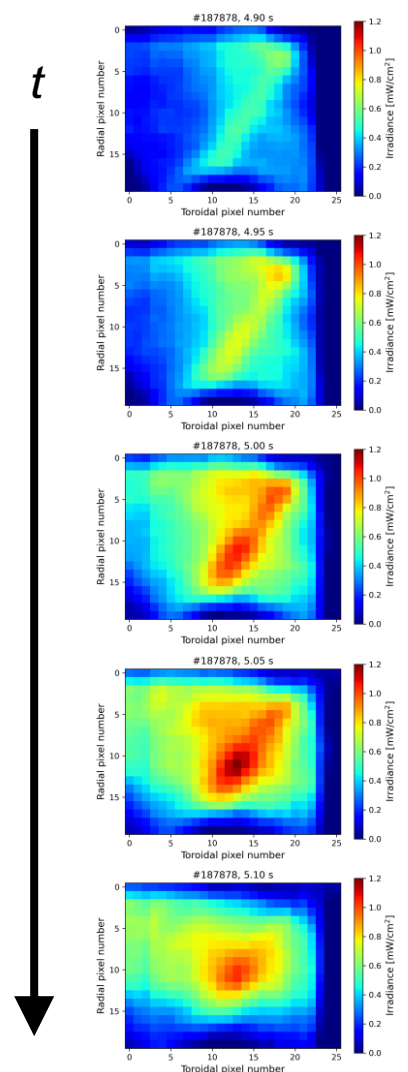   at 6.5-U (100 Hz) and 6.5-L (50 Hz).

	w/o Ne, w/ RC	w/ Ne, w/o RC	w/ Ne, w/ RC
w/ LID (w/o error field)	7	3	1
w/o LID (w/ error field)	3	(24th campaign)	(24th campaign)

 - Anomaly detection will be conducted using AutoEncoder.

FOV of 6.5-U IRVB

w/ Ne #187878 4.90 - 5.05 s

w/o Ne #187871
averaged 3.5 – 5.5 s

t

2