

(IA) Session Report

May 30, 2024 (K. Ogawa)

Date: May 29, 2024

Time: 14:42 – 16:45

Shot#: 192201 – 192242 (42 shots)

Prior wall conditioning: NONE

Divertor pump: on

Gas puff: H₂

Pellet: None

NBI#(1, 2, 3, 4, 5)=gas(H, H, H, H, H)=P(3.9, 4.1, 4.0, 0.0, 4.0) MW

Topics

1. Phase-space structure of fast-ions interacting with Alfvén waves (K. Nagaoka, M. Matsuoka)

Phase-Space Structure of fast-ions interacting with Alfvén waves

K. Nagaoka, M. Matsuoka

Shot #: 192201-192242

Experimental conditions:

$(R_{ax}, \text{Polarity}, B_t, \gamma, B_q) = (3.60, \text{CCW}, 0.50, 1.2538, 100)$

Background and motivation:

- Understanding nonlinear behaviours of fast ions interacting with AE is crucial to precisely predicting fusion burning plasmas.
- Direct observation of fast ion distribution function in the wave-resting frame with Si-NPA.

Results:

- First data of new line-of-sight of 6T-Si-NPA was successfully obtained.
- Energy calibration data was obtained from NBI calibration shots
- Neutral particles were observed with bursting Alfvén eigenmodes.
- A pileup problem occurred at the NBI startup, which will be fixed by the adjustment of the tunable aperture.
- We will analyse the phase space structure, etc.

