

# (TG1) Multi-ion group report



9 Feb. 2022 (M. Kobayashi)

Date: 8 Feb. 2022

Time: 9:39 – 11:15

Shot#: 178387 – 178419 (33 shots)

Prior wall conditioning: No

Divertor pump: On

Gas puff: H<sub>2</sub> IPD: No

LID: off

NBI#(1, 2, 3, 4, 5)=gas(H, H, H, H, H)=P(1.7, 1.2, 1.8, 2.4/2.4, 1.8/1.9) MW

ECH(77GHz)=ant(5.5-U, 2-OUR)=P(448, 559)kW

ECH(154GHz)=ant(2-OLL, 2-OUL, 2O-LR)=P(-, 484, 482) kW

ECH(116GHz)=ant(2O-LR)=P(-)kW

ECH(56GHz)=ant(1.5-U)=P(-)kW

ICH(3.5U, 3.5L, 4.5U, 4.5L) = P(-, -, -, -) MW

Neutron yield integrated over the experiment =  $2.8 \times 10^{10}$

Topics

1. Influence of energetic particles on the formation of the electric potential profiles and impurity transport  
(T. Ido)

# Influence of energetic particles on the formation of the electric potential profiles

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## Objectives

- To measure the response of the electric potential to the injection of energetic trapped ions.
- To investigate the influence of the change in the electric fields on the particle and heat transport (Ref. H.Yamaguchi, IAEA-CN TH/P6-29 (2018))

## Results

- No potential change was observed during perpendicular NBI under this experimental condition. (Fig.3 (a))
- On the other hand, TESPEL which causes significant density perturbation affected the electric potential.
- Neoclassical transport of bulk plasma seems to be dominant in the electric field formation.

