(TG1) Multi-ion group report

Nov. 4, 2021 (M. Kobayashi)

Date: Nov. 4, 2021
Time: 13:02 – 15:38
Shot#: 171761 – 171800 (40 shots)

Prior wall conditioning: H2, He
Divertor pump: On
Gas puff: D2 IPD: C, B
LID: No
NBI#(1, 2, 3, 4, 5)=gas(H, H, H, H, H)=P(4.4, 4.4, 4.0, 2.9/3.2, 2.7/2.5)MW
ECH(77GHz)=ant(5.5-U, 2-OUR)=P(703, 792)kW
ECH(154GHz)=ant(2-OLL, 2-OUL, 2O-LR)=P(979, 930, 986)kW
ECH(116GHz)=ant(2O-LR)=P(0.0)kW
ECH(56GHz)=ant(1.5-U)=P(288)kW
ICH(3.5U, 3.5L, 4.5U, 4.5L) = P(0.88, 0.69, 1.0, 0.56) MW
Neutron yield integrated over the experiment = 1.3×10^{15}

Topics

1. Penetration of carbon impurities into the core plasma region by carbon IPD (N. Ashikawa et al.)

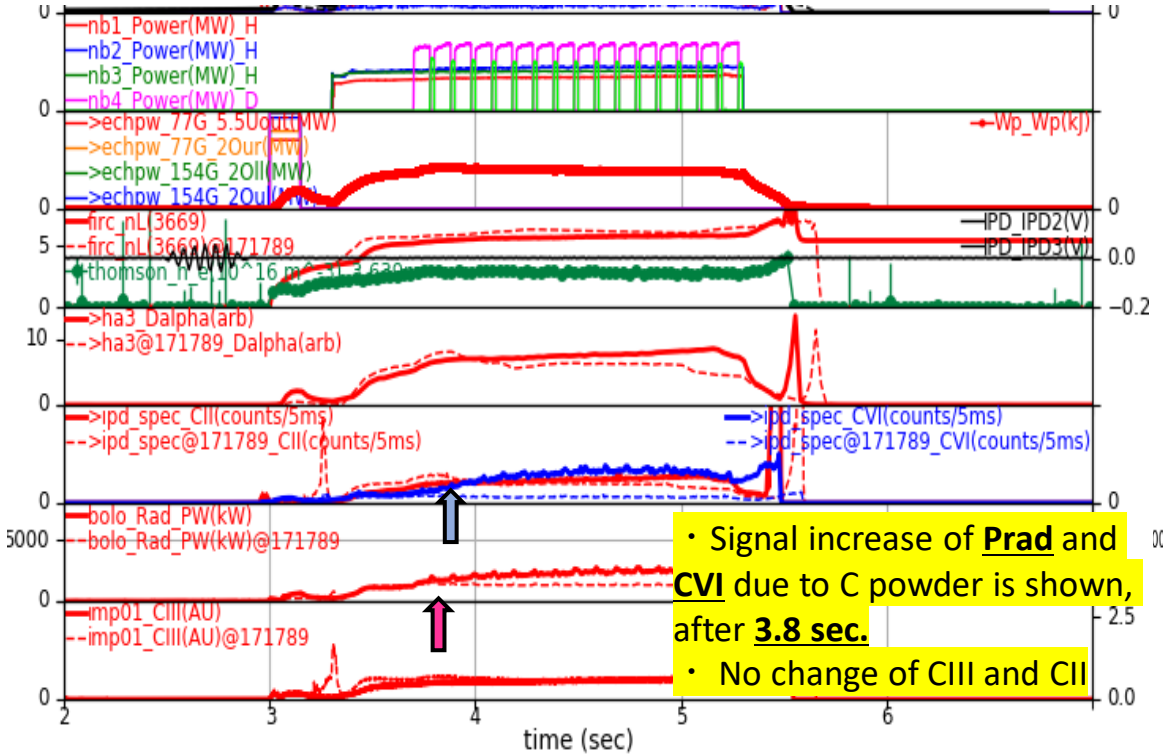
N. Ashikawa, M. Zarnstorff, F. Nespoli, Y. Suzuki, M. Shoji, T. Oishi

Title: Penetration of carbon impurities into the core plasma region using carbon IPD

D plasma, Div. Cryopump: On, 1)#171761-#171788, Rax = 3.55m, B=1.0T, 2)#171789-#171800, Rax = 3.6m, B=2.75T,

First time Carbon powder dropping by IPD was conducted. Obtained data shows that the response time and characteristics of carbon particles with plasmas.

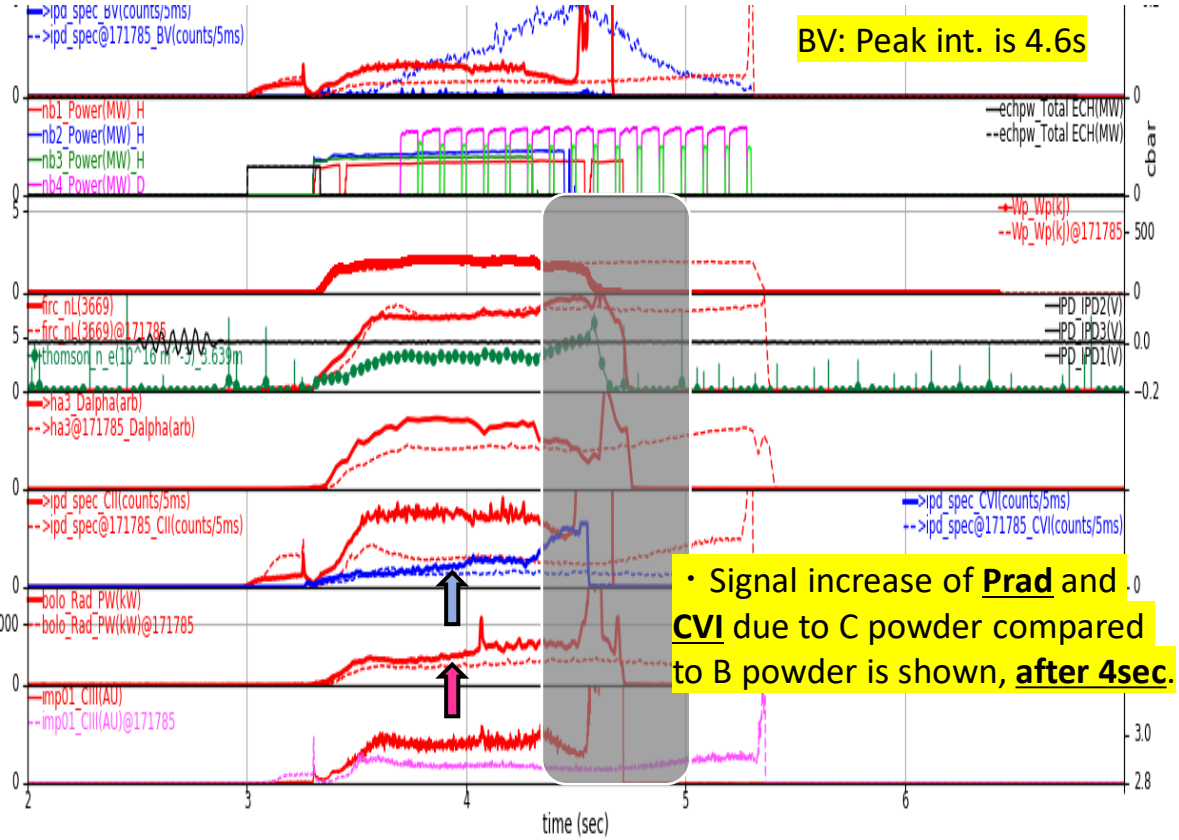
3.6m, 2.75T, #**171789**(w/o), #**171790** (C, 120μm)



・Signal increase of **Prad** and **CVI** due to C powder is shown, after **3.8 sec.**

・ No change of CIII and CII

3.55m, 1T, #**171785**(B), #**171782** (C, 120μm)



・Signal increase of **Prad** and **CVI** due to C powder compared to B powder is shown, **after 4sec**.

Background plasma is aimed at high beta