Date: Jan. 21, 2022
Time: 12:45 - 13:45, 17:30 - 18:45
Shot#: 176968 – 176986, 177044 – 177064 (40 shots)
Prior wall conditioning: None
Divertor pump: Off
Gas puff: H2, D2, Pellet: No
NBI#(1, 2, 3, 4, 5)=gas(H, H, H, H, H)=P(3.9, 4.0, 2.1, 3.8, 3.8)MW
ECH(77GHz)=ant(5.5-U, 2-OUR)=P(0.7, 0.8)MW
Neutron yield integrated over experiment = (1.5E+13)

Topics
1. Investigation of ion cyclotron emission in H beam plasmas (J. Lestz, K. Saito)
Investigation of ion cyclotron emission in H beam plasmas

ICE was investigated in the wide range of plasma parameters with the various combinations of NBIs.

The difference with the experiments on Dec. 8 is the beam species. Deuterium beam (2021.12.08), Hydrogen beam (2022.01.21)

**NBI power**

#1: 3.9MW  #2: 4MW  #3: 2.1MW  #4: 2×1.9MW  #5: 2×1.9MW

**Magnetic field on axis**: 2.75T and 1.375T (CCW, \( R_{ax} = 3.6 \text{m} \))

**Range of line averaged electron density**: 1-6×10^{19} m^{-3}

**Range of \( n_D/(n_H+n_D) \) ratio**: 10%-80%

**Example of ICE**

ICE measured with 5.5U probe (5.5u-pos)

- **Shot**: 176982
  \( (B_0 = -2.75 \text{T}, \bar{n}_e = 6 \times 10^{19} \text{m}^{-3}, n_D / (n_H + n_D) = 0.65) \)

- **ICE originated from NB4 is seen.** \( f = n \times 24 \text{MHz} \)

- **ICEs** will be analyzed in detail in various density, D-H ratio, magnetic field, beam species, probe position, etc.