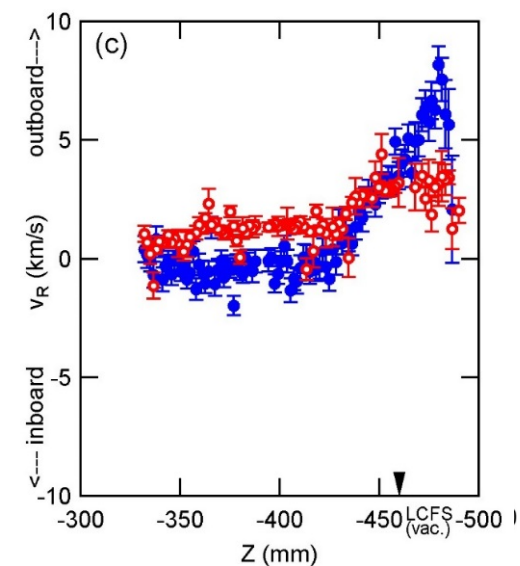
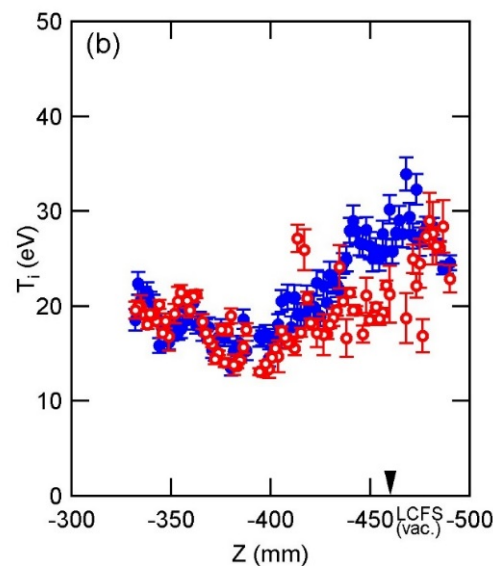
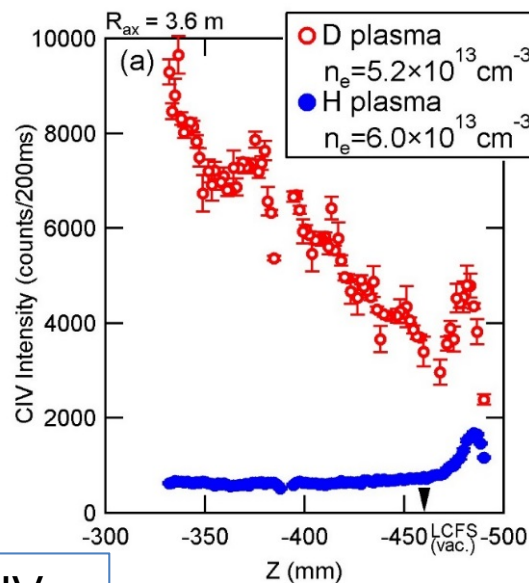
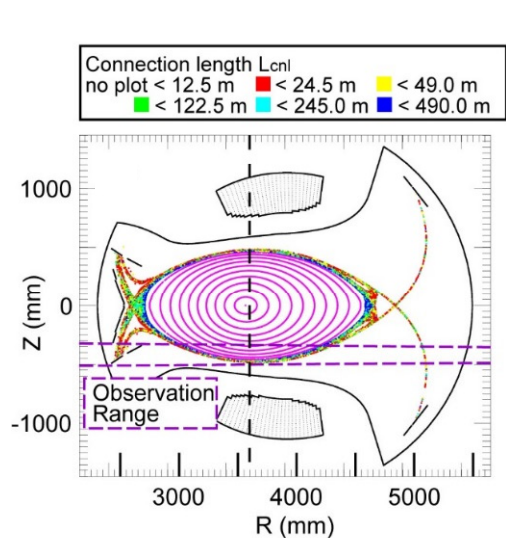


EFFECT OF DEUTERIUM PLASMAS ON CARBON IMPURITY TRANSPORT IN THE EDGE STOCHASTIC MAGNETIC FIELD LAYER OF LARGE HELICAL DEVICE

EX/P3-11: Tetsutarou OISHI (NIFS) *et al.*



- Vertical profiles of VUV lines from impurities emitted in the ergodic layer of LHD were measured by a space-resolved VUV spectroscopy for hydrogen (H) and deuterium (D) plasmas.

- Flows of C^{3+} impurity ions (" v_R " in the figures) were derived by Doppler shift of the CIV spectra with a wavelength of $1548.20 \times 2 \text{ \AA}$.

Results:

- The directions of the carbon flows observed in both H and D plasmas are the same as those of the friction force in the parallel momentum balance on the impurity ions as a driving force of impurity screening effects.
- The maximum value of the carbon flow in the D plasma is smaller than that in the H plasma, demonstrating an isotope effect on the impurity transport.

