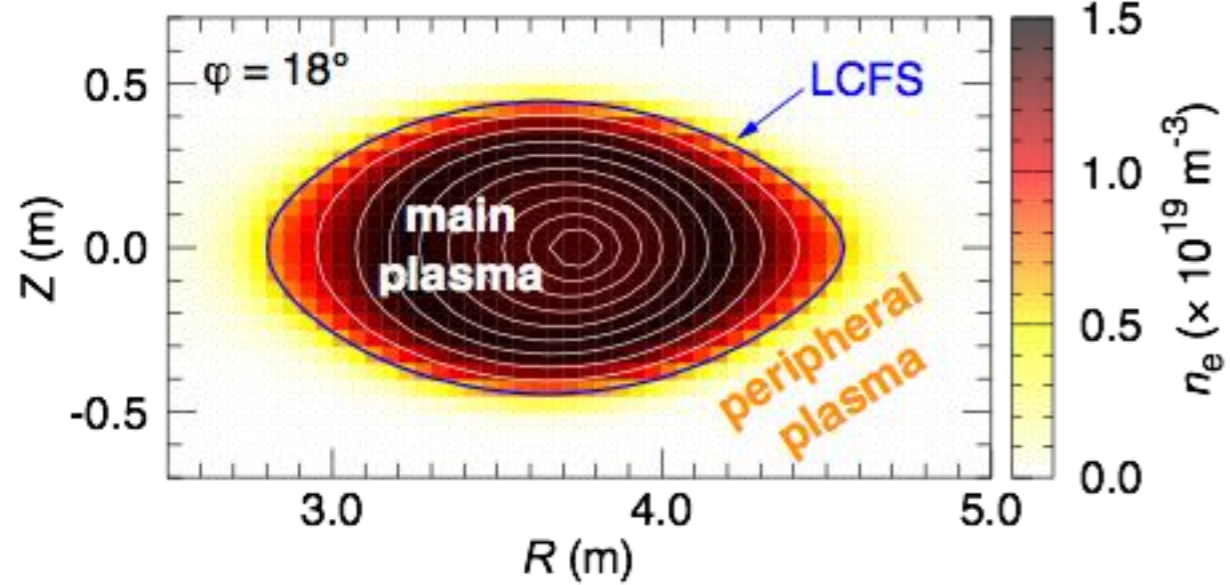


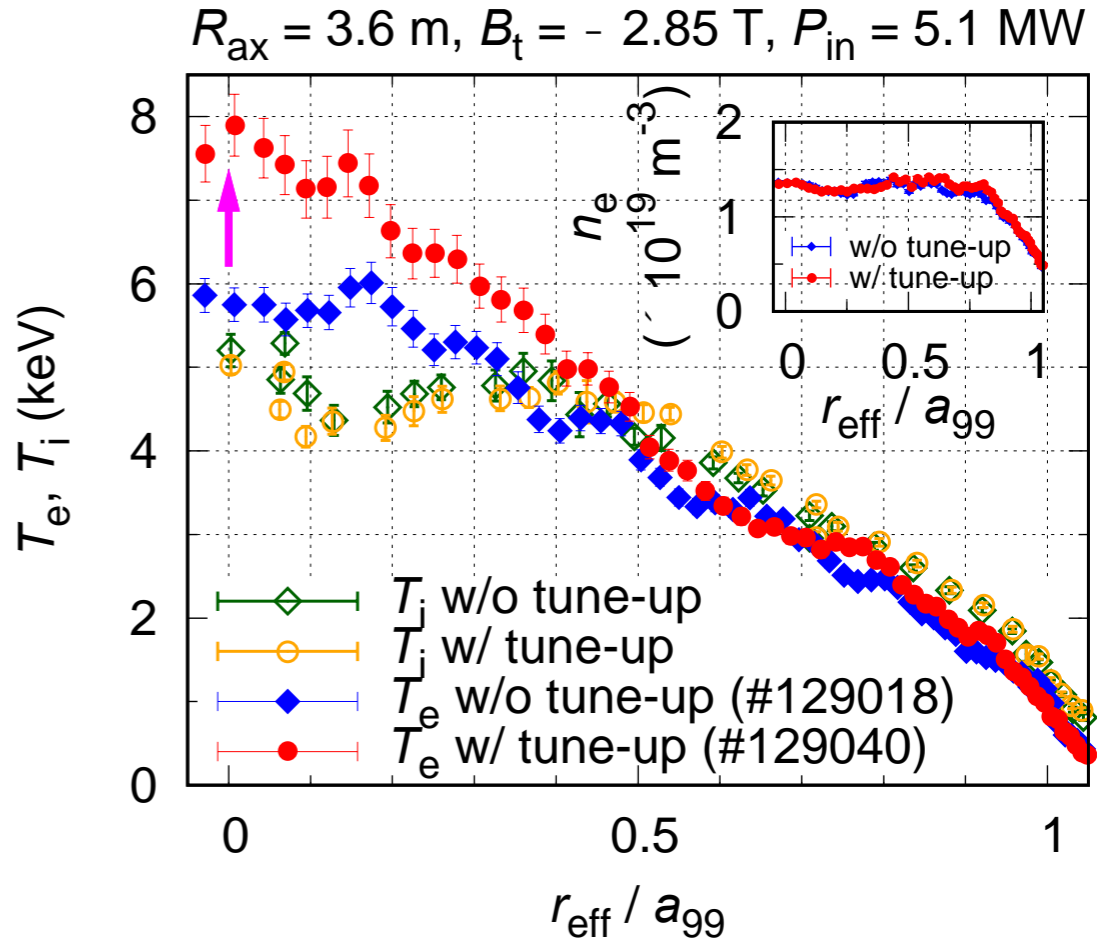
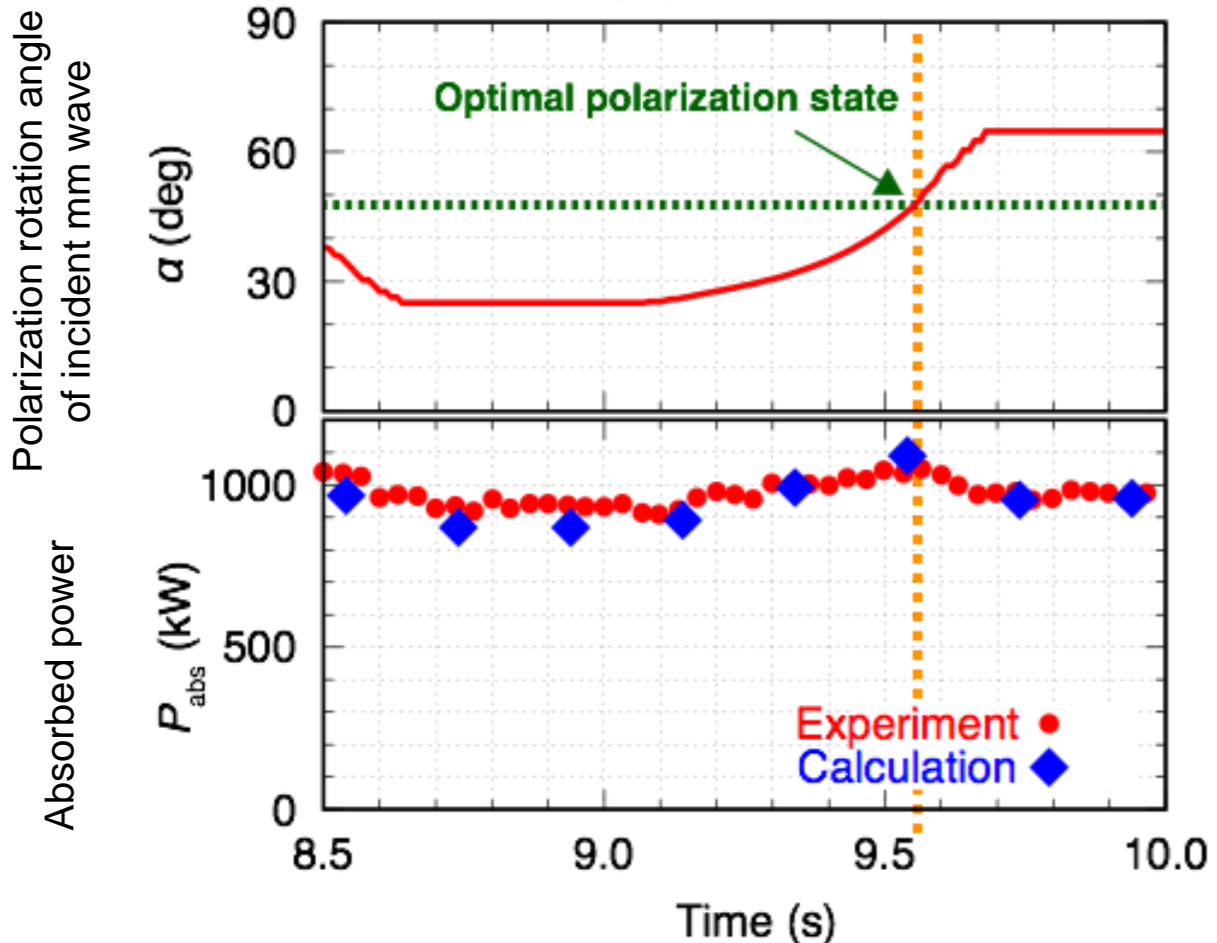
# “Impact of the LHD peripheral region and the magnetic axis shift on optimal on-axis ECRH injection for high- $T_e$ plasmas” by T. Tsujimura (NIFS)

Finite  $n_e$  gradient with strong magnetic shear outside of LCFS in LHD



Optimization of ECRH injection settings using the upgraded ray-tracing code “LHDGauss” :

- I. the rapid-post processing 3D equilibrium mapping calculated during LHD experiments under the Auto Analyzing System
- II. the effect of refraction of rays in the peripheral region
- III. optimization of incident wave polarization by calculating the O/X mode ratio



- Polarization scan experiments with modulated ECH
- O/X mode contents are calculated via 1D full-wave simulation

- **Central  $T_e$  increased**
- **Successful extension of LHD operational regime**