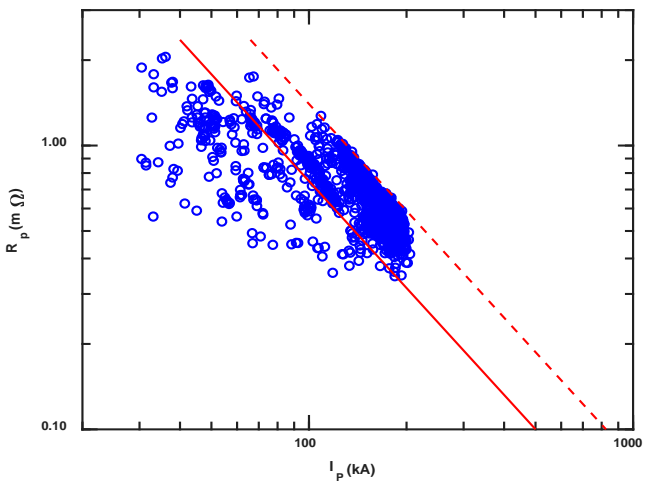


# OVERVIEW OF DIAGNOSTICS UPGRADE AND EXPERIMENT PROGRESS ON KTX

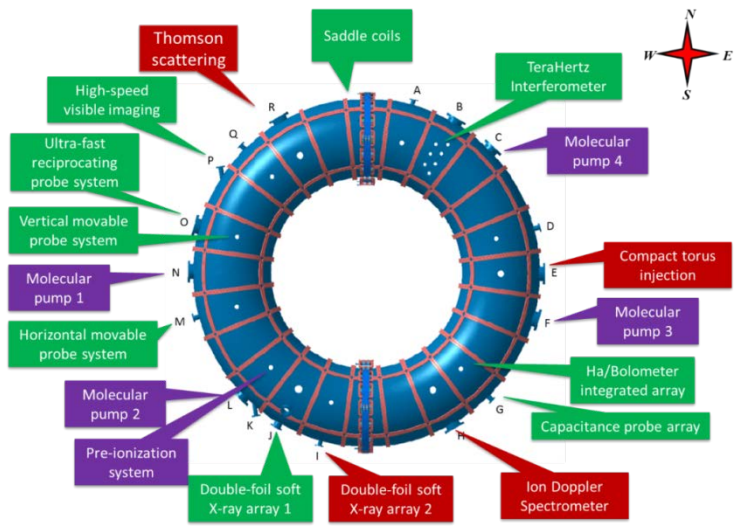
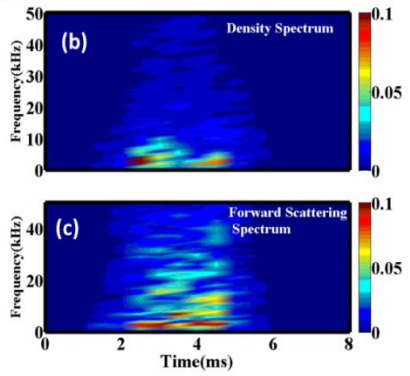
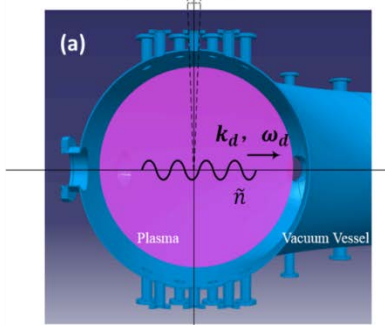
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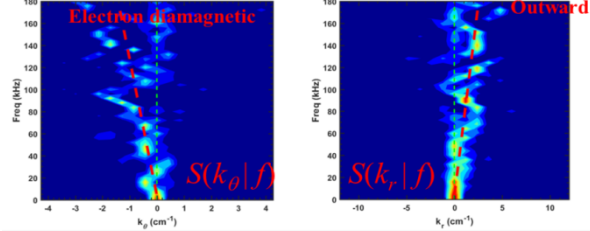


$$\Delta k \approx \pi/d \approx 2.09 \text{ cm}^{-1}$$

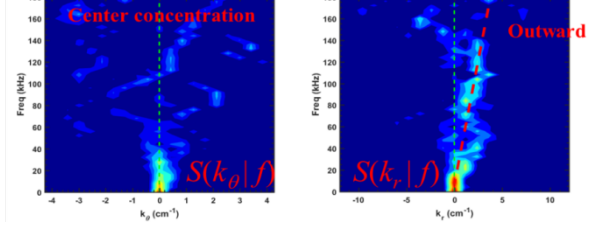
$$k_d \leq k_s = 2k_i \sin(\theta_s/2) \approx 5.08 \text{ cm}^{-1}$$



Ultra low q discharges



Low current tokamak discharges



The Keda Torus eXperiment (KTX) is a new built middle-size reversed field pinch (RFP) device at the University of Science and Technology of China. After the long time conditioning, the favorable wall condition is achieved for implementing experiment on KTX. The diagnostics on KTX has been greatly developed for 3D physics research. After the wall condition improvement and diagnostics upgrade, many early research such as the 3D RFP physics and electromagnetic turbulence, etc., have been conducted on KTX. The forward scattering is observed by the interferometer system which shows the potential for turbulence research. The electromagnetic turbulence is tentatively investigated on KTX. The 3D spectra characters of electromagnetic turbulence are firstly measured with classical two-point technique by the 3D Langmuir probe arrays, particularly in the small wavenumber range. In the next step, higher performance plasma of KTX with larger plasma current, higher temperature and longer energy confinement time is expected with the capacity upgrade in the second phase.