

Double rake probe related bibliography

Sarancha et al.: Remote Plasma Physics Research and Teaching by Example of Turbulence Study at the University-Scale Tokamak GOLEM **Sarancha-2023-FST**

G. Sarancha et al. “Remote Plasma Physics Research and Teaching by Example of Turbulence Study at the University-Scale Tokamak GOLEM”. In: *Fusion Science and Technology* 79.4 (2023), pp. 432–445. DOI: 10.1080/15361055.2022.2148842. eprint: <https://doi.org/10.1080/15361055.2022.2148842>. URL: <https://doi.org/10.1080/15361055.2022.2148842>.

Abstract: AbstractThe university-scale tokamak GOLEM provides a unique opportunity to perform remote thermonuclear experiments [V. Svoboda, J. Fusion Energy, Vol. 38, Part 2, p. 253 (2019)]. Undergraduate plasma physics students from three universities—Moscow Institute of Physics and Technology (National Research University), RUDN University, and National Research Nuclear University MEPhI—carried out joint remote experiments to train in tokamak operation and to study topics relevant for mainstream fusion research such as plasma start-up, comparison of hydrogen versus helium plasma characteristics, electrostatic and electromagnetic turbulence, long-range correlations, etc. New observations of the long-range correlations between low-frequency ($\lesssim 50$ kHz) quasi-coherent electrostatic and magnetic oscillations identified as $m = 2$ mode with several techniques were done, as well as of the broadband ($\gtrsim 250$ kHz) magnetic oscillations resolved in frequency and wave vector in helium and hydrogen plasmas. The presence of broadband electrostatic and broadband magnetic turbulence has also been established at the plasma edge.