

## Observation of nonlocal transport on J-TEXT

Zhoujun Yang<sup>1</sup>, Xiaoming Pan<sup>1</sup>, Hao Zhou<sup>1</sup>, Yuejiang Shi<sup>2</sup>, Aike Wang<sup>3</sup>, Lizhi Zhu<sup>1</sup>,  
Xiaolong Zhang<sup>1</sup>, Peng Shi<sup>1</sup>

<sup>1</sup> *International Joint Research Laboratory of Magnetic Confinement Fusion and Plasma Physics, School of Electrical and Electronic Engineering, Huazhong University of Science and Technology, Wuhan, 430074, China*

<sup>2</sup> *Department of Nuclear Engineering, Seoul National University, Seoul, Republic of Korea*

<sup>3</sup> *Southwestern Institute of Physics, Chengdu, 610000, China*

Corresponding author: Zhoujun Yang E-mail: yangzj@hust.edu.cn

Nonlocal transport (NLT) induced by supersonic molecular beam injection (SMBI) has been observed on J-TEXT. Besides the anomalous phenomenon on electron temperature profile, acceleration of the core toroidal rotation is also observed during the non-local transport process. The threshold of plasma density above which NLT disappears is also found related with LOC-SOC as other tokamaks. To understand the physic of NLT, some more signals are focused, including the radiation, magnetic fluctuation, temperature fluctuation. They are compared for the discharges with or without NLT, even for LOC and SOC. Some interesting phenomenon have been discovered, especially for the magnetic fluctuation. They may show the potential effect for NLT.