

高速カメラと複合プローブによるヘリオトロン J 周辺プラズマ揺動の同時計測 Simultaneous measurement of Heliotron-J peripheral plasma turbulence by fast cameras and hybrid probe system **Heliotron J**

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Intermittent blob (or filament) is very important role of energy/particle confinement, and this phenomenon has been intensively studying at many experimental devices [1-10]. In Heliotron J a combination of a fast camera, a gas puffing and a hybrid probe system (Langmuir/Magnetic probes) was installed for peripheral turbulence/fluctuation study [7,9]. In this meeting we will report mainly observation results of filament images with/without SMBI in ECH+NBI plasma in Heliotron J. Typical waveforms of Heliotron J plasma in this experiment is shown in Fig.1.

Both of camera images and probe signals showed that MHD activities were seen in these shots from 10kHz to over 100kHz frequency range. It is thought to be GAE (or EPM). On the other hand, the fluctuation due to intermittent blob (it should be lower frequency range) were examined. Signals of two IS tips (distance=4mm, shown in Fig. 2) are examined by the conditional average method [9]. Time-delay between intermittent peaks (>2s of IS1) of two IS(each top figure) can be seen from +4mm to -10mm (shown in Fig.3), however, it is not clear from -15mm.

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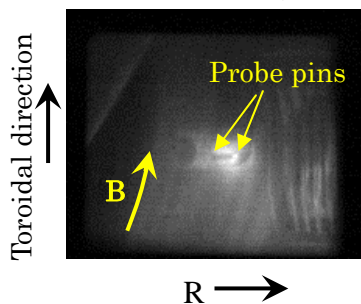


Fig.2 Field of view of fast camera

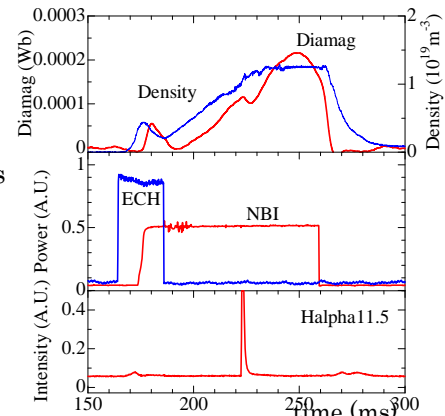


Fig. 1 Typical waveforms

Fig.3 Is and Er of intermittent blob

