

Abstract Submitted
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Observation of low-n edge harmonics oscillations at high field side in JT-60U QH-mode plasmas KENSAKU KAMIYA, NAOYUKI OYAMA, NOBUYUKI AIBA, National Institutes for Quantum and Radiological Science and Technology, KIMITAKA ITOH, Chubu University, JT-60 TEAM — We found the edge harmonics oscillation (EHO) having dominant toroidal mode number of $n = 1$ at both Low/High Field Side (LFS/HFS) of the tokamak edge region in JT-60U quiescent H-mode (QH-mode) plasmas with counter-NBI heating under the configuration having an optimized-gaps between the plasma and the wall, regardless of a weak ExB (and/or toroidal) flow shear even at its shearing rate of less than 1 MHz at the pedestal collisionality of ~ 0.4). On the other hand, the edge localized modes (ELMs) were not completely suppressed when the EHO can be seen only at LFS under the configuration having a narrower inner-gap (wider outer-gap). This observation provides the first direct experimental evidence for its peeling nature, exhibiting necessary condition for keeping the EHO saturated both at LFS and HFS equally everywhere as possible, and represents a significant challenge of the theory.

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