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Characterization of edge fluctuations on JET during the LH transition studies GIANLUCA DE MASI, SILVIA SPAGNOLO, Consorzio RFX (CNR, ENEA, INFN, Università di Padova, Acciaierie Venete SpA), HUGO ARNICHAND, CEA, IRFM, Cadarache, France, JON HILLESHEIM, LUIS MENESES, CCFE, Culham Science Centre, Abingdon, HENDRIK MEYER, Max-Planck-Institut für Plasmaphysik, Garching, Germany, EPHREM DELABIE, COSTANZA MAGGI, CCFE, Culham Science Centre, Abingdon — In this contribution we present an experimental characterization of ELM-related edge fluctuations observed during the LH transition experimental campaign on JET. These fluctuations have been detected in both the fast density measurements obtained by the radial correlation reflectometer and the external magnetic measurements: their typical frequency range (40-100 kHz) and their radial position (pedestal top) have been assessed. Moreover, we investigated the relation of the fluctuations amplitude with the relevant pedestal quantities, such as the temperature gradient. A preliminary attempt to reconstruct their toroidal and poloidal structure is also given. Their physical interpretation is finally discussed: they are found to share some features with the pedestal fluctuations observed in different machines such as Alcator C-mod, DIII-D [1] and EAST [2] and interpreted in terms of kinetic-ballooning modes; however, recent observations [3] on MAST of inter-ELM fluctuations, suggest a possible interpretation in terms of microinstabilities.

[1] A. Diallo et. al., Phys. Rev. Lett., 112 (2014) 115001

[2] H.Q. Wang et al., Nucl. Fusion 54 (2014) 043014

[3] J. C. Hillesheim et al, submitted to PPCF

Gianluca De Masi
Consorzio RFX (CNR, ENEA, INFN, Università di Padova,
Acciaierie Venete SpA)

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