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Solitary perturbations prior to the partial collapse of the edge pedestal in KSTAR H-mode plasmas<sup>1</sup> J.E. LEE, G.S. YUN, M.H. KIM, POSTECH, M. KIM, J. LEE, UNIST, H.K. PARK, UNIST, NFRI, M. CHOI, W.H. KO, NFRI, KSTAR TEAM — Solitary perturbations (SPs), localized both poloidally and radially, are frequently observed on the KSTAR tokamak within ~100  $\mu$ s before the partial collapse of the edge pedestal. The perturbation structure measured by 2D imaging diagnostic [1] is clearly distinguished from the quasi-steady filamentary modes that are routinely observed during the inter-crash period [2, 3]. In particular, the SPs have a low toroidal mode number (typically unity) and smaller pitch angle. The SPs are similar to the irregular mode structure with large amplitude [3] appearing near complete crash. The resemblance suggests that the generation of SPs is strongly connected to the crash mechanism. [1] G.S. Yun *et al*, *Rev. Sci. Instrum.* **81** 10D930 (2010) [2] J.E. Lee *et al*, *Nucl. Fusion* **55** 113035 (2015) [3] G.S. Yun *et al*, *Phys. Plasmas* **19** 056114 (2012)

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