

Abstract Submitted  
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**Giant sawtooth stability and core-localized fluctuations in JET plasmas**<sup>1</sup> G.J. KRAMER, PPPL,USA, M.F.F. NAVE, CFN/IST Lisbon, PT, R. NAZIKIAN, D.S. DARROW, K. HILL, E. MAZZUCATO, PPPL, M.R. DE BAAR, FOM Rijnhuizen, NL, V. KIP-TILY, S.D. PINCHES, S.E. SHARAPOV, UKAEA, UK, E. RACHLEW, VR KTH Stockholm, SE, M. REICH, IPP Garching, DE, S. HACQUIN, F. NABAIS, CFN/IST Lisbon, PT, F.E. CECIL, Col. School of Mines, USA, JET-EFDA COLLABORATION — In ICRF heated plasmas giant sawteeth (ST) can develop with periods larger than one second. At low ICRH power (<3 MW) a well defined ST period that increases with power is observed. At higher powers a large variation in ST periods is observed with a long ST-free period followed by a phase of shorter ST periods. At higher ICRH powers Alfvén eigenmodes (AEs) are also observed. ST are stabilized by the fast-ion pressure inside the  $q=1$  surface but the pressure gradients drive AEs which can lead to fast ion losses and triggering of ST. Other ST trigger candidates are low-frequency MHD activity and broadband turbulence induced transport. Due to the improvement of core diagnostics, especially the X-mode reflectometer, details of the AE activity and of the turbulent fluctuations can be studied in great detail inside the  $q=1$  surface. Experimental results will be shown and compared with modelling results. Evidence will be presented for possible causes of giant ST crashes.

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- Prefer Oral Session  
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