Abstract Submitted
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ELM control by edge ECH on TCV[1] J.X. ROSSEL, F. FELICI, J.-M. MORET, T.P. GOODMAN, O. SAUTER, S. CODA, B.P. DUVAL, D. TESTA, Y. MARTIN, CRPP-EPFL, TCV (ERPP-EPFL) TEAM — The control of ELMs is a crucial requirement for future Tokamak reactors. The possibility to achieve ELM pacing using ECH locally deposited near the pressure pedestal has been explored on TCV. With constant power, the frequency of type I ELMs was observed to increase by a factor 1.5 to 2 when the deposition region was moved towards the edge, despite the decreased absorption. Power modulation synchronized with the ELM cycle was also used for a real-time control of individual ELM occurrence as well as ELM frequency and regularity, measured by the standard deviation of their period. An ad-hoc 0-D model for the ELM cycle is proposed in support to these observations.

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S. Coda
CRPP-EPFL

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