Subject area: A5. Boundary physics (SOL, particle & impurity control, etc.)

Title:_First Results with the NSTX Fast Divertor Camera

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Abstract

Filamentary structures correlated with ELM's in NSTX plasmas were observed by the divertor fast camera. Filamentations always occurred with ELM's in the visible light emission in the divertor region. These filamentations seem to be along the magnetic field. It was found that the filamentary structures were spiral pattern and toroidal/poloidal asymmetric in the divertor region. Strong and numerous filamentations were observed with giant ELM's, while grassy ELM's occurred with weak filamentations. From our measurements, ELM's can be distinguished by the number and strength of the filamentations.