

Abstract Submitted
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High speed camera studies of tokamak plasmas¹ J.A. SAHA, Hackley School, Y. WEI, J.P. LEVESQUE, A. SAPERSTEIN, I.G. STEWART, Columbia University — High speed cameras have a wide range of uses on experimental tokamaks, including studying various plasma instabilities. The HBT-EP tokamak uses a Phantom v7.1 high-speed camera [1]. This camera picks up light in the visible spectrum, with a frame rate of 66 kfps. It is positioned with a tangential view of the tokamak. By analyzing magnetic and visual data, a correlation could be found between visual light fluctuations and magnetic fluctuations. We use the camera to investigate natural plasma instability behavior, as well as responses from applying nonaxisymmetric magnetic fields. We also study mode behavior when puffing a large amount of gas at the plasma edge while applying strong field perturbations.

[1] S. Angelini *et al.*, Plasma Phys. Contr. Fusion, **57** 045008 (2015).

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