

Abstract Submitted
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Observation and Analysis of Fluctuations in an RMF Driven FRC¹ KATY GHANTOUS, SAM COHEN, SASHA LANDSMAN, PPPL — Using electrostatic and capacitive probes, we have observed fluctuations in the divertor and main-plasma scrapeoff-layer regions of the PFRC, an RMF-driven high-beta device. The fluctuations, in the range 10 kHz to 400 MHz, show sharp peaks at the RMF fundamental frequency, 14 MHz, and its harmonics, up to the limit of the detection system. Lower frequency peaks occur near 50 and 175 kHz. Sidebands often occur above and below the RMF harmonics, separated from it by frequencies near the low frequency fluctuations. The low frequency fluctuations and the associated higher frequency sidebands are seen to depend on RMF coupling and penetration. We will present analysis and interpretation of these fluctuations using correlation, FFT and symbolic dynamics techniques.

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