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Recent Analysis of Fast Time Series GPI Data on NSTX KYRON M. WILLIAMS, RICARDO MAQUEDA, STEWART J. ZWEBEN, CHARLES E. BUSH, Princeton Plasma Physics Laboratory — The gas puff imaging diagnostic (GPI) is used to study edge turbulence near the outer midplane of NSTX. The detectors include an ultra-fast camera and an independent array of 13 discrete phototubes, each of which views a 2 cm diameter region of the edge. These discrete detectors produce time series data with a 500 kHz digitization speed over 128 ms during a shot. Edge turbulence measurements were made with these discrete detectors under conditions of varying q-profiles, divertor configurations, NBI or RF heating conditions, plasma densities, and plasma currents. This poster will describe this data set and attempt to identify characteristic turbulence features in each of these conditions.

Kyron M. Williams
Princeton Plasma Physics Laboratory

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