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Laboratory Study of Nonlinear Saturation of Velocity Shear-driven Instabilities[1] ERIK TEJERO, C. LON ENLOE, BILL AMATUCCI, CHRIS CRABTREE, GURU GANGULI, Naval Research Lab — Space observations, theory, and laboratory experiments have shown that small-scale, localized sheared plasma flows can drive a variety of electrostatic and electromagnetic turbulence over a large frequency range. The Space Physics Simulation Chamber at NRL has been used to study these instabilities from the ion cyclotron to the lower hybrid/whistler regime. Results from recent experiments investigating the nonlinear saturation of these non-local instabilities and the transition to turbulence will be presented.

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