Initial Diagnostics and First Experimental Results of the Pulsed High Density (PHD) FRC Experiment

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The source region for the PHD Pulsed High Density (PHD) FRC has been constructed, and FRC plasmas are being produced. The PHD facility includes a_full-vacuum chamber, vacuum vessel, and diagnostic systems. The PHD facility has been assembled and calibrated. Initial testing with plasma light sources is underway. The 14 channel array for the spectrometer and the ion Doppler spectrometer are being commissioned. The ion Doppler spectrometer is being used to look at preionization efficiency and uniformity as well as FRC formation dynamics. The ion Doppler spectrometer is being used to look at preionization efficiency and uniformity as well as FRC formation dynamics. The ion Doppler spectrometer is being used to look at preionization efficiency and uniformity as well as FRC formation dynamics.