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Flow and Fluctuations in the Colorado FRC Experiment ADAM LIGHT, MICHAEL SCHMIDT, KELSEY LASZLO, TOBIN MUNSAT, University of Colorado at Boulder — We present the latest results from the Colorado Field-Reversed Configuration (FRC) Experiment. The FRC is formed by merging counter-helicity spheromaks and the diagnostic suite places emphasis on the investigation of fluctuations and flows. Analysis of the fluctuation spectrum using a multi-point (16 positions x 3 axes) magnetic diagnostic is underway. Dispersion relations are extracted for coherent waves by using a cross-spectral density correlation technique. Observations during merging include signatures of magnetosonic, L-mode, and ion-cyclotron waves. In order to highlight flow-driven processes, we have designed and constructed a two-point biasing probe for driving bulk $E \times B$ flows at subsonic to supersonic speeds. We present first results from the use of the biasing probe.

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