

Abstract Submitted  
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**Diagnostics for the Colorado FRC Experiment**<sup>1</sup> T. MUNSAT, C.L. ELLISON, A.D. LIGHT, J.M. NUGER, W. WILLCOCKSON, S.E. WURZEL, Center for Integrated Plasma Studies, University of Colorado — A collection of fast diagnostics is under development for studies on the Colorado FRC Experiment. Current and planned instruments emphasize high spatial and time resolution for detailed measurements of fluctuations and bulk flows. All systems are frequency-limited only by the data acquisition rate ( $\geq 10$  MHz). Diagnostics under development include a compact, 16-position, three-axis magnetic probe, a localized ion-Doppler spectroscopy instrument, a fast ion gauge for measuring transient gas pressure, a seven-channel CO<sub>2</sub> quadrature interferometer, a multi-channel Mach probe array, and a multi-frequency reflectometry system. Details of the instruments and preliminary measurements are presented.

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