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Diagnostics for the Colorado FRC¹ A.D. LIGHT, C.L. ELLISON, S.J. FAHRENHOLTZ, T. MUNSAT, J.M. NUGER, Center for Integrated Plasma Studies, University of Colorado — A collection of fast diagnostics is under development for studies on the Colorado FRC. 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 (≥ 10 MHz). Diagnostics under development include a seven-channel CO₂ quadrature interferometer, a compact, 16-position, three-axis magnetic probe, a localized ion-Doppler spectroscopy instrument, a fast ion gauge for measuring transient gas pressure, and a multi-channel Mach probe array. Details of the instruments and preliminary measurements are presented.

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