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Thomson Scattering Measurements on the ZaP Experiment R.P. GOLINGO, U. SHUMLAK, B.A. NELSON, D.J. DEN HARTOG, University of Washington, THE ZAP TEAM — The ZaP Flow Z-Pinch Experiment is presently studying the effect of sheared flow on gross plasma stability. During a quiescent period in the magnetic mode activity, a dense Z-pinch with a sheared flow is observed on the axis of the machine. The velocity shear agrees with the threshold predicted by linear theory. A better comparison can be made once the pressure profile is known. A single point Thomson scattering system has been installed on the machine to directly measure the local electron temperature in the Z-pinch. The system has a 3 mm radial resolution and can collect scattered light up to 4 cm off of the axis of the machine. (The Z-pinch has a 1 cm characteristic radius.) The design and hardware allow for multipoint measurements that would measure the pressure profile of the Z-pinch. Initial testing showed the charge on the MCP was being depleted. Amplifiers for the MCP have been designed and are being characterized. The design of the system and initial results will be presented.

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