

Abstract Submitted
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Upgrade of the HSX Thomson Scattering System¹ K. ZHAI, F.S.B. ANDERSON, D. ANDERSON — At the HSX plasma laboratory, a single-shot 10 channel Thomson scattering system has been implemented and is now operational. A second ECH system permits variation of heating power and location during a plasma discharge. This permits expanded study of internal transport barrier formation and transient thermal conductivity measurements. Efforts to upgrade the current system with multi-shot adjustable time resolution are in progress. The new system will utilize three Nd:YAG lasers, which are 10m along the beam path from the plasma region of measurement. These three laser outputs will be combined to share the same beam path. They will also all use the collection optics and the polychromators of the present system. The integrator digitizers have been upgraded (on loan from the Madison Symmetric Torus group) to accommodate 85 in-memory measurements at intervals down to 65 μ s. Detailed results and progress will be presented at the conference.

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