

**Abstract Submitted for the 51st Annual Meeting  
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**Initial Operation of an Improved Thomson Scattering System at DIII-D,\*** B.D. Bray, T.M. Deterly, D.M. Ponce, C. Liu, *General Atomics* — A redesigned Thomson scattering data acquisition system has been installed for the eight chord, forty channel divertor Thomson system at DIII-D. The new electronics contain significantly faster and quieter analog components which improve the signal to noise ratio of the system by a factor of three. An internal integration and sample and hold circuit has been added to the new detector modules which replaces aging the digitizers and couples to a standard digitizer used throughout DIII-D. This new design improves the maintainability of the system and replaces unreliable, obsolete components. A description of the system and profiles from the initial year of operation will be presented with status of the upgrade of the complete Thomson system.

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