## Abstract Submitted for the DPP98 Meeting of The American Physical Society

Sorting Category: 5.1.1.2 (experimental)

Central Thomson Scattering Diagnostic for DIII–D<sup>1</sup> B. BRAY, T.N. CARLSTROM, C. HSIEH, C.C. MARAKIOU, General Atomics, D. NILSON, Lawrence Livermore National Laboratory — The Thomson diagnostic on DIII-D has eight YAG lasers operating at 20 Hz each and two vertical beam paths covering most of the plasma including the boundary and divertor regions. In certain instances such as high performance discharges with an internal transport barrier, the measurement can miss the plasma center by about 10-20 cm. In order to cover this central region of increasing importance, we plan to install a horizontal beam path with up to 3 lasers diverted from the existing system, a laser dump inside the machine vessel, and a maximum of 12 viewing channels. Most system hardware including lasers and polychromators will be made sharable so the spatial and temporal resolution can be arranged according to the requirements of a specific experiment. Upgrades are also planned for control and data analysis to replace older computer hardware and software. This new software will have more inspection functions to maintain the quality of the data and provide the flexibility that the plasma experiment requires. The plans for the expansion and progress will be presented.

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	B. Bray
Prefer Oral Session	bray@gav.gat.com
X Prefer Poster Session	General Atomics
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Special instructions: DIII–D Poster Session II (divertor physics, dis	sruptions, RF, & diagnostics),
immediately following Ikezi	

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