

DIVERTOR MATERIALS EVALUATION SYSTEM (DiMES)*

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The Divertor Materials Evaluation System (DiMES) program at General Atomics has been using a sample changer mechanism to expose different ITER relevant materials to the lower divertor of DIII-D to study integrated plasma materials interaction (PMI) effects and to benchmark modeling codes. We continue to provide spatial and temporal PMI data on physical and chemical sputtering and impurity transport at the divertor and first wall locations. Experiments are performed under different plasma configurations and operational regimes, including low and high power discharges, ELMs and disruptions. Both solid surface materials and liquid lithium have been exposed. We are also providing support in the testing of advanced diagnostics. This paper is a status report on what we have learned and what we plan to do in response to the needs for the ITER plasma facing components (PFC) design and the innovative liquid surface option.

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