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Initial results from Langmuir probe and thermal desorption spectroscopy (TDS) measurements in the Tritium Plasma Experiment (TPE) MASASHI SHIMADA, PHIL SHARPE, Idaho National Laboratory, ROBERT KO-LASINSKI, RION CAUSEY, Sandia National Laboratories — The Tritium Plasma Experiment (TPE) has been recently relocated from Los Alamos National Laboratory (LANL) to Safety and Tritium Applied Research (STAR) facility in Idaho National Laboratory (INL). The application of a Langmuir probe system, newly designed target holder, and thermal desorption spectroscopy (TDS) system were successfully carried out, and the initial results from Langmuir probe measurements in deuterium plasma and TDS measurements of deuterium retention in tungsten are discussed. TPE is now ready to provide data to the fusion community on the interaction of tritium plasma with plasma facing components, and the future research plan is discussed.

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