

Abstract Submitted  
for the DPP10 Meeting of  
The American Physical Society

**Progress on US ITER Diagnostics**<sup>1</sup> DAVID JOHNSON, RUSS FEDER, Princeton Plasma Physics Lab — There have been significant advances in the design concepts for the 8 ITER diagnostic systems being provided by the US. Concepts for integration of the diagnostics into the port plugs have also evolved. A prerequisite for the signoff of the procurement arrangements for these each diagnostic is a Conceptual Design Review organized by the ITER Organization. US experts under contract with the USIPO have been assisting the IO to prepare for these Reviews. In addition, a design team at PPPL has been working with these experts and designers from other ITER parties to package diagnostic front-ends into the 5 US plugs. Modular diagnostic shield modules are now being considered in order to simplify the interfaces between the diagnostics within each plug. Diagnostic first wall elements are envisioned to be integral with these shield modules. This simplifies the remote handling of the diagnostics and provides flexibility for future removal of one diagnostic minimally affecting others. Front-end configurations will be presented, along with lists of issues needing resolution prior to the start of preliminary design.

<sup>1</sup>Support provided by the USIPO and PPPL under Subcontract No. S008905-A.

David Johnson  
Princeton Plasma Physics Lab

Date submitted: 16 Jul 2010

Electronic form version 1.4