Plan for first plasmas in LDX


Abstract

Initial requirements for the Edwards Diplec Experiment (EDX) will enable detailed studies of the operational characteristics of plasma experiments. Non-invasive techniques will be used to monitor plasma and antenna performance, and diagnostic sub-systems will be developed. The EDX will provide the opportunity to enhance the operation of the EDX. The EDX will be designed to be scalable to larger facility requirements and to be able to test novel plasma techniques.

Glow Discharge Cleaning will be Used to Maintain Clean Conditions

We will have Magnetic Measurements for Both Equilibrium and Fluctuations

A Microwave Interferometer will Measure the Electron Density

The Plasma will be Heated with Multi-Frequency ECRH

X-ray Diagnostics will Assess the Energy of the Hot Electrons

Electrostatic Diagnostics will Probe Instabilities.

Outline

Operations
- Heating
- Cooling (flexible)
- Multi-frequency ECRH
- Shaping Coil

Diagnostics
- MHD
- Electromagnetic interferometer
- X-ray

What's New:

Installation of all major physics-relevant components is proceeding.

For reprints of this or other LDX posters, visit our website: http://www.psfc.mit.edu/LDX