

NSTX Weekly Report (July 6, 2007)

FY 2007 NSTX plasma operations completed on June 22, 2007.

Planned: 12 weeks

Completed: 12.63 weeks with 1,879 plasma discharges

- The paper “A 'multi-colour' SXR diagnostic for time and space-resolved measurements of electron temperature, MHD activity and particle transport in MCF plasmas” has been published in Plasma Physics and Controlled Fusion (Vol. 49 (2007), pp. 1245 – 1257). The first author is Luis Delgado-Aparicio, a graduate student from the Johns Hopkins University who is doing his dissertation research on NSTX. (R. Kaita)

Engineering Operations (A. von Halle, C. Neumeyer)

The NSTX outage began this holiday shortened week after pumping and purging, and then venting the NSTX vacuum vessel to air. The vessel was first vented to nitrogen in order to remove and bag in argon several diagnostic windows to evaluate the nature of window surface coatings after the plasma operations in particular the use of lithium evaporator during this run. An air purge of the vessel will continue until next week when the neutral beam duct will be removed to provide vessel access.

The NSTX test cell will be in unrestricted (card reader) access this coming week.

Research Operations (M. Bell)

Boundary Physics Operations (H. Kugel)

- LLD Work Planning #1382 has been obtained. An LLD NEPA Form has been submitted for review. An LLD, resource loaded, linked schedule has been submitted for inclusion in the Rollover Schedule.

Diagnostic Operations (R. Kaita)

- Windows for the electron Bernstein wave (EBW) diagnostic, the visible bremsstrahlung (VB) detector, and an infrared camera were removed during the vent of the vacuum vessel to dry nitrogen. They were sealed in argon-filled plastic bags, so they can be tested later for changes in transmission from coatings deposited during lithium evaporation.