XP High Temperature LLD

Overview

XP LLD Commissioning will start at 205°C. Administrative decision points may allow measurements at higher LLD temperatures (<350°C) depending on the measured thermal response to NBI.

Purpose

- 1. Measure lithium core concentration, neutron production, edge shielding and plasma performance as the sum total lithium pressure on the plasma due to lithium evaporation and sputtering exceeds the deuterium plasma pressure.
- 2. Empty the LLD prior to venting.

Method

This XP will redo the Commissioning XP as the LLD temperature is raised to $400\text{-}500^{\circ}\text{C}$ and operated at this temperature until all lithium is evaporated from the LLD. Use XP-827(2009), High- δ and Low- δ discharges on LLD in the following sequence, and repeat the cycle during the entire run to capture changes

- 3 shots High- δ no LITER
- 3 shots Low- δ <u>no</u> LITER

Required Run Time

- 2 days at end of run as the final XP.

