

“Early and Surgical” Injection of Li Powder to Kill the Low-Density Locked Mode Before it Kills the Discharge

- Breakdown in lean mixture of D_2 gas and Li powder localized on the center stack

Not much gas, not much Li

Li pumps out onto center stack

Li powder has big effect early in the discharge, but will not delay H-Mode

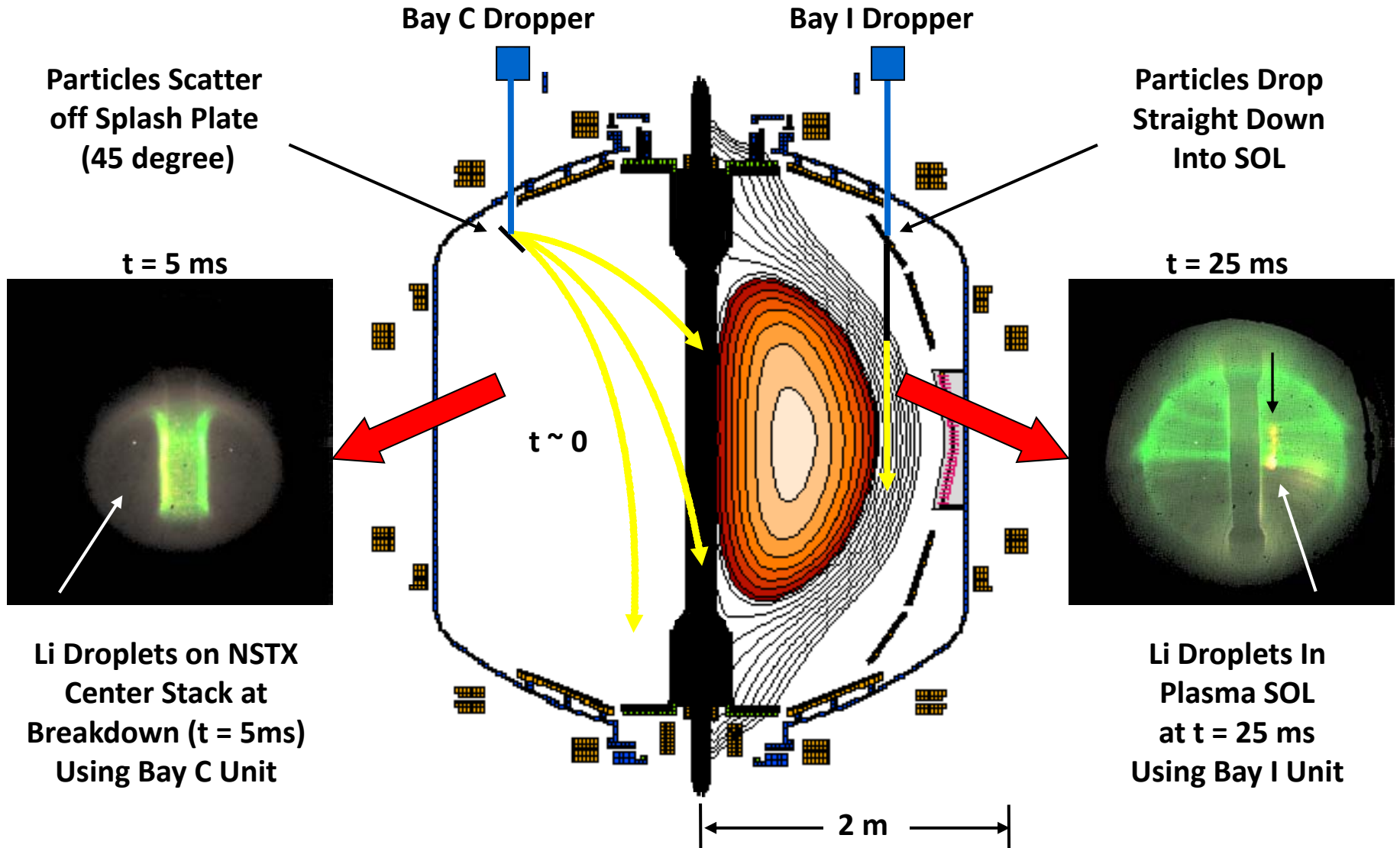
- Plasma expands while Li influx decreases

H-Mode shows up as planned just after I_p flat top

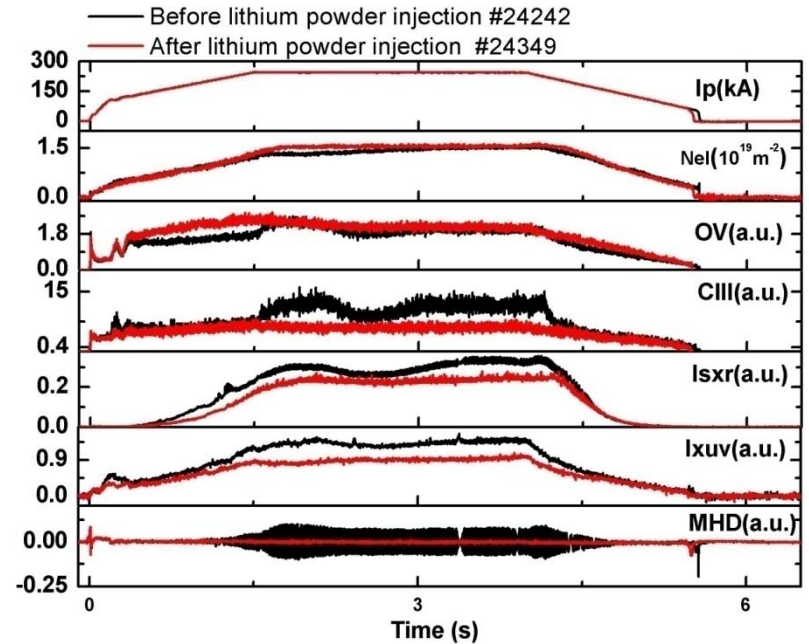
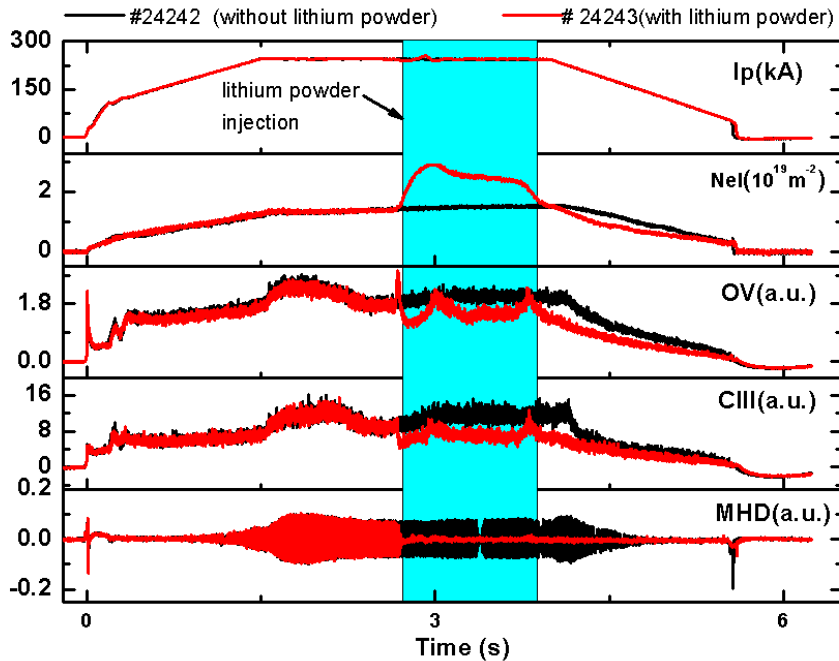
- Look for signs of improved low density behavior

Do locked modes survive this radically different breakdown?

The Center Stack Can be Encircled with Dispersed Li Powder at Breakdown Using the Bay C Dropper Early



Results of Lithium Powder Injection on EAST



➤ Lithium powder injection is very effective in **suppressing MHD** (spring campaign in 2010 on EAST).

A Few Arbitrary Waveforms and Associated Laser Signals at Resonance (2.25 kHz)

