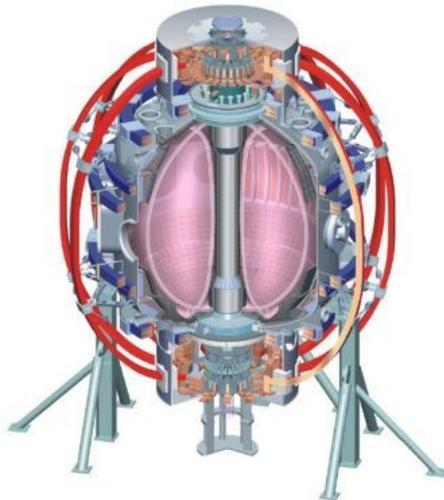


XP838 - Impact of density reduction on long-pulse discharges

Jon Menard, PPPL

For the NSTX Research Team

**NSTX Results Review
LSB B318 - PPPL
August 6-7, 2008**

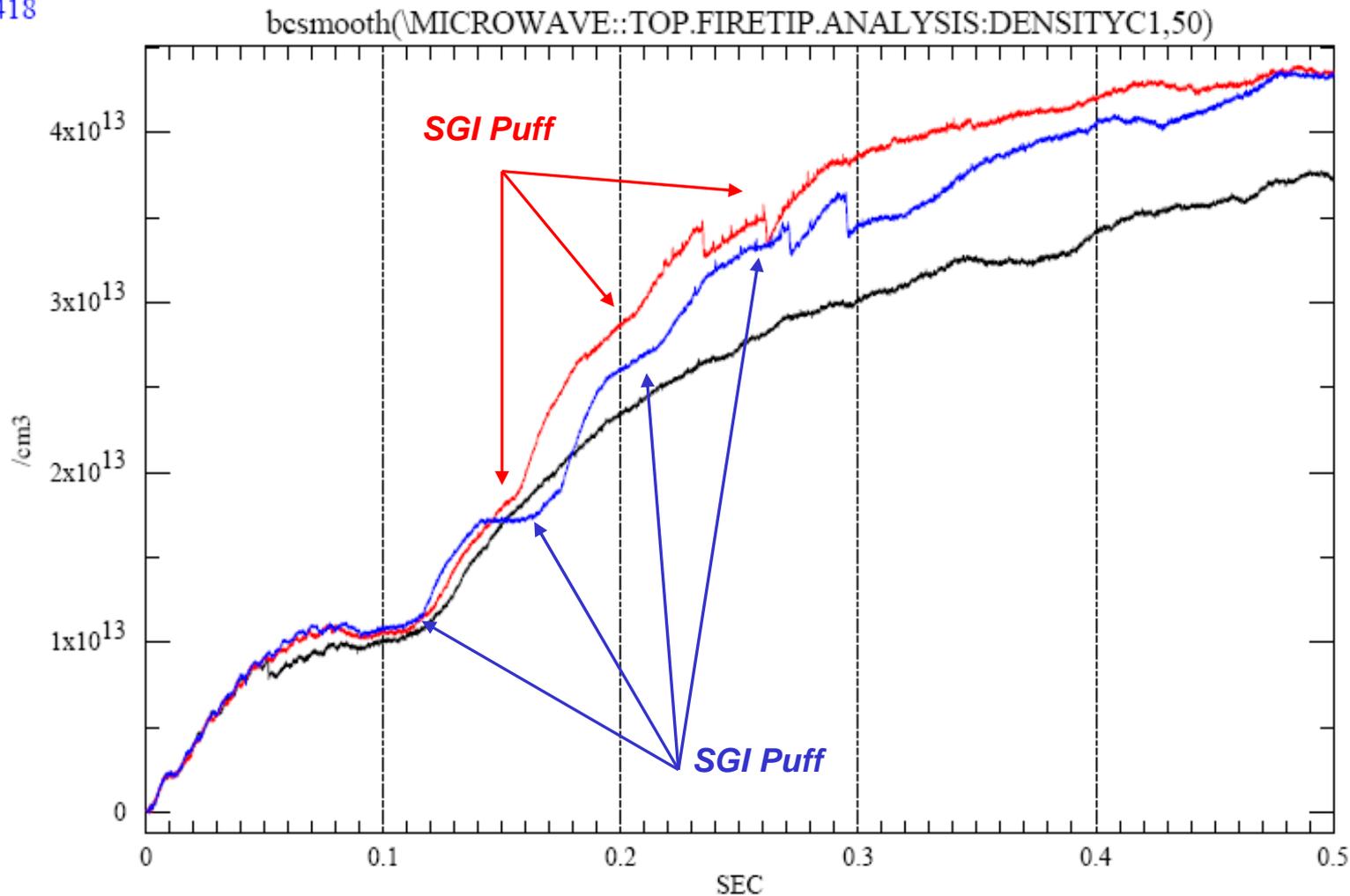


College W&M
 Colorado Sch Mines
 Columbia U
 Comp-X
 General Atomics
 INEL
 Johns Hopkins U
 LANL
 LLNL
 Lodestar
 MIT
 Nova Photonics
 New York U
 Old Dominion U
 ORNL
 PPPL
 PSI
 Princeton U
 SNL
 Think Tank, Inc.
 UC Davis
 UC Irvine
 UCLA
 UCSD
 U Colorado
 U Maryland
 U Rochester
 U Washington
 U Wisconsin

Culham Sci Ctr
 U St. Andrews
 York U
 Chubu U
 Fukui U
 Hiroshima U
 Hyogo U
 Kyoto U
 Kyushu U
 Kyushu Tokai U
 NIFS
 Niigata U
 U Tokyo
 JAEA
 Hebrew U
 Ioffe Inst
 RRC Kurchatov Inst
 TRINITY
 KBSI
 KAIST
 POSTECH
 ASIPP
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 IPP, Jülich
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 ASCR, Czech Rep
 U Quebec

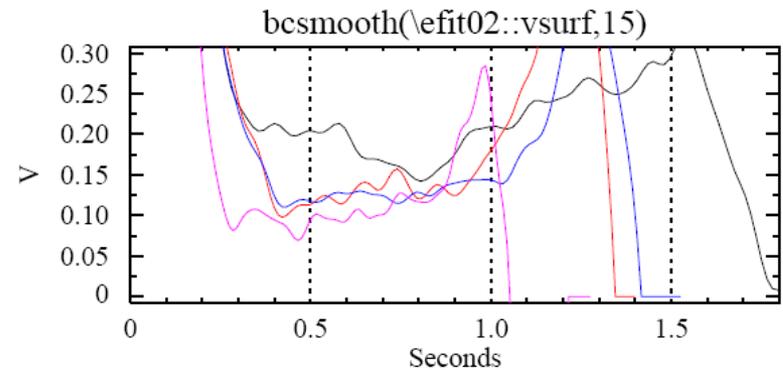
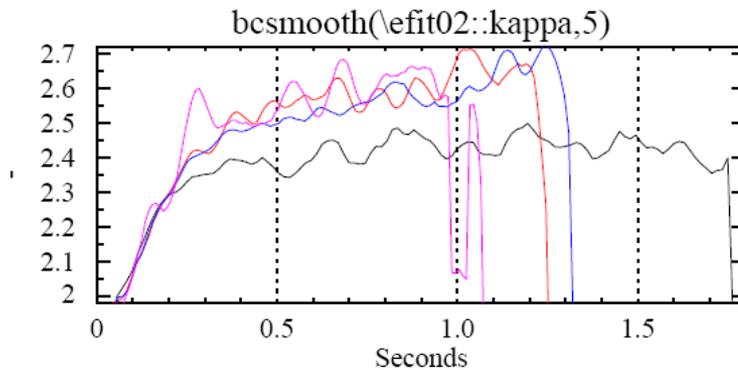
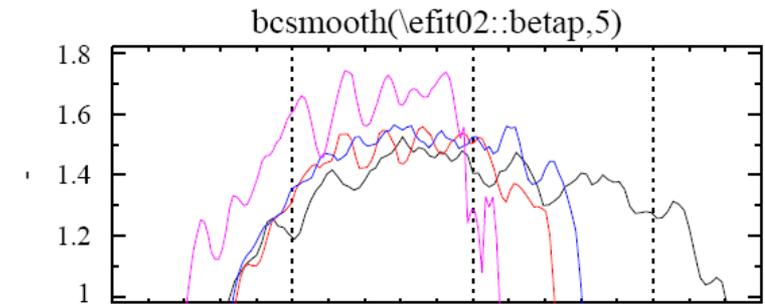
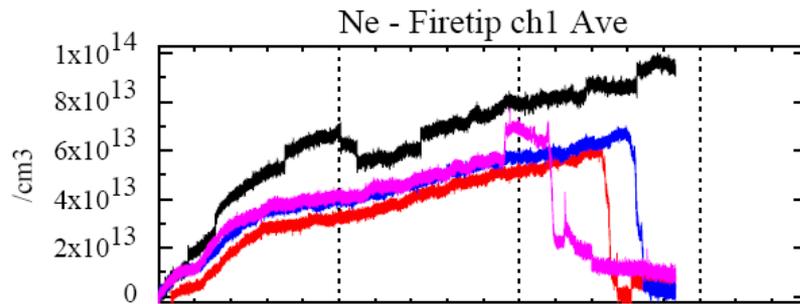
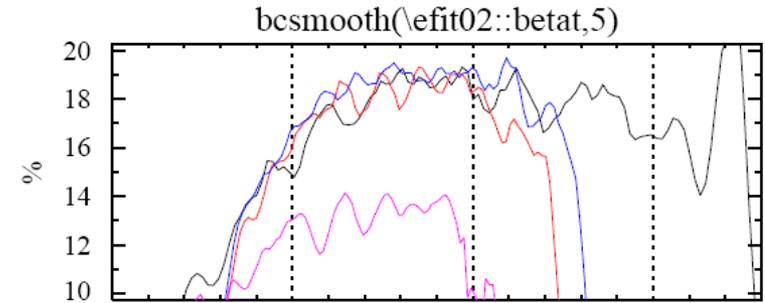
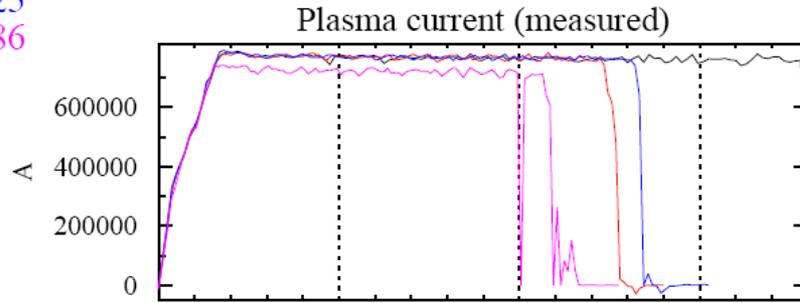
SGI is effective at fueling ramp-up phase of discharges with LITER conditioning (20mg/min)

130419
130416
130418



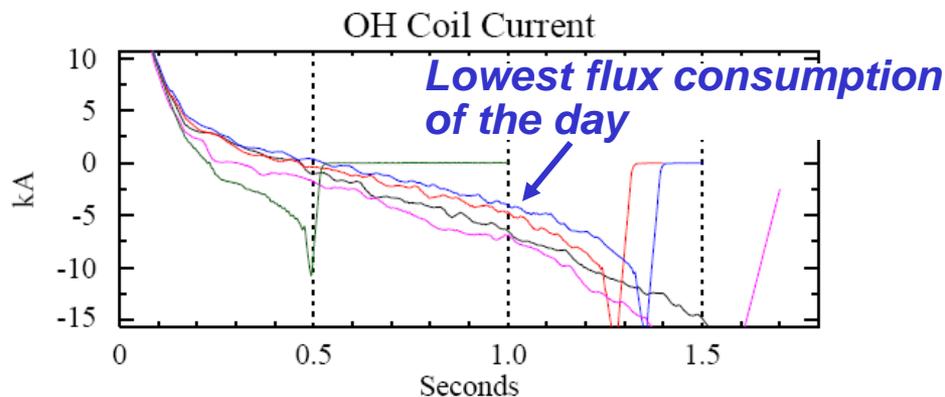
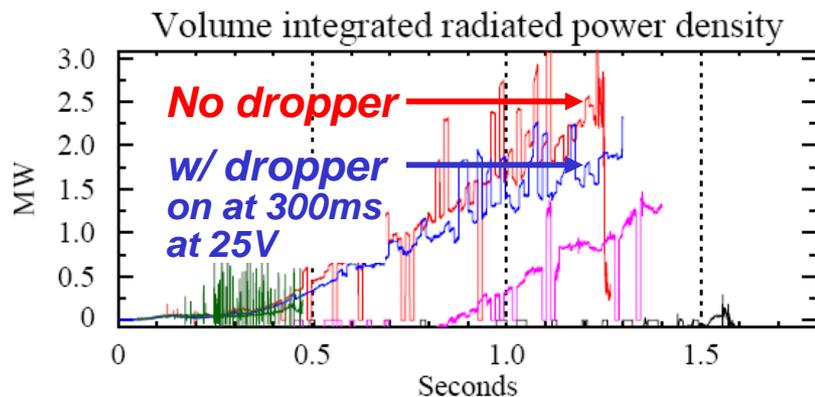
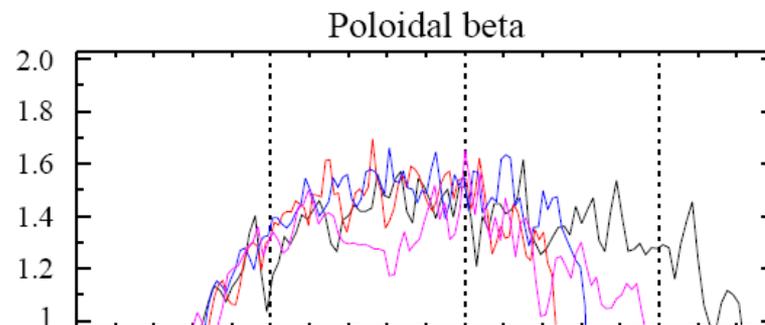
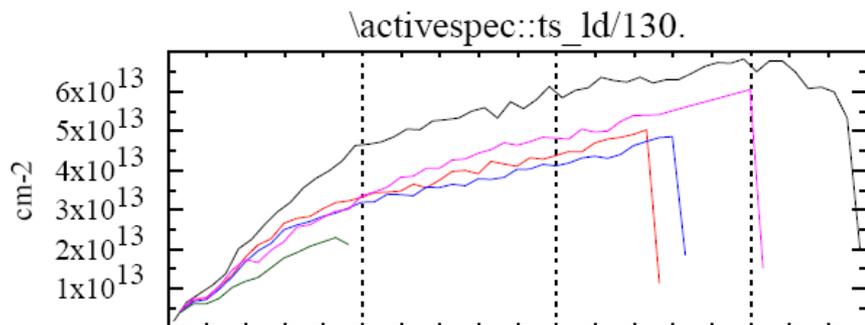
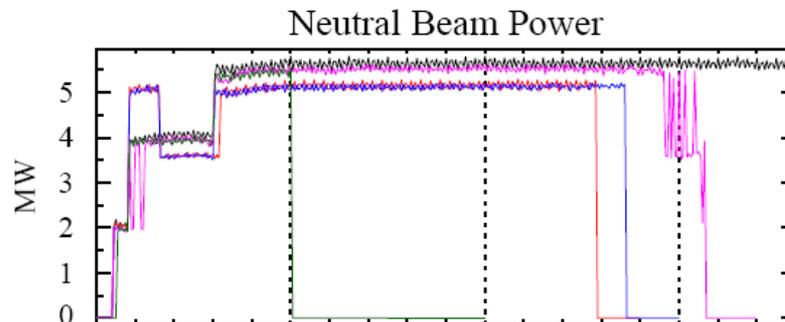
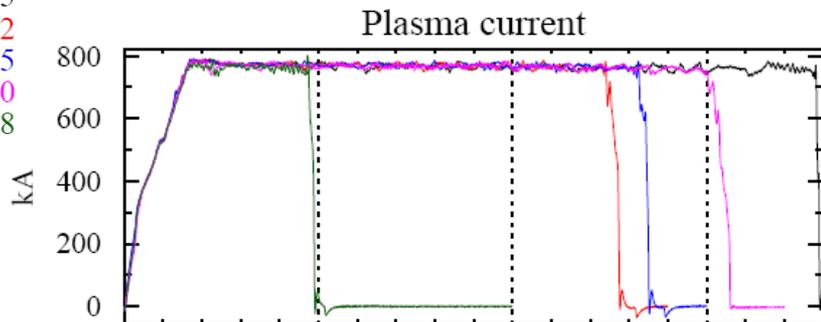
Shots with LITER + reduced HFS + SGI + EFC + Li powder achieve very low surface voltage at higher $\beta_T = 18-20\%$

129125
 130422
 130425
 129986



Shots with LITER are ELM-free and suffer from high P_{rad} , but Li powder reduced n_e (slightly) and P_{RAD} (then dropper broke...)

129125
130422
130425
130400
130398



XP838 (and XP823) discharges have extended the duration of sustained high beta

