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XP838
Impact of density reduction on long-pulse discharges

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Jon Menard, PPPL

Advanced Scenarios and Control TSG

NSTX Physics Meeting

Princeton Plasma Physics Laboratory

July 7, 2008

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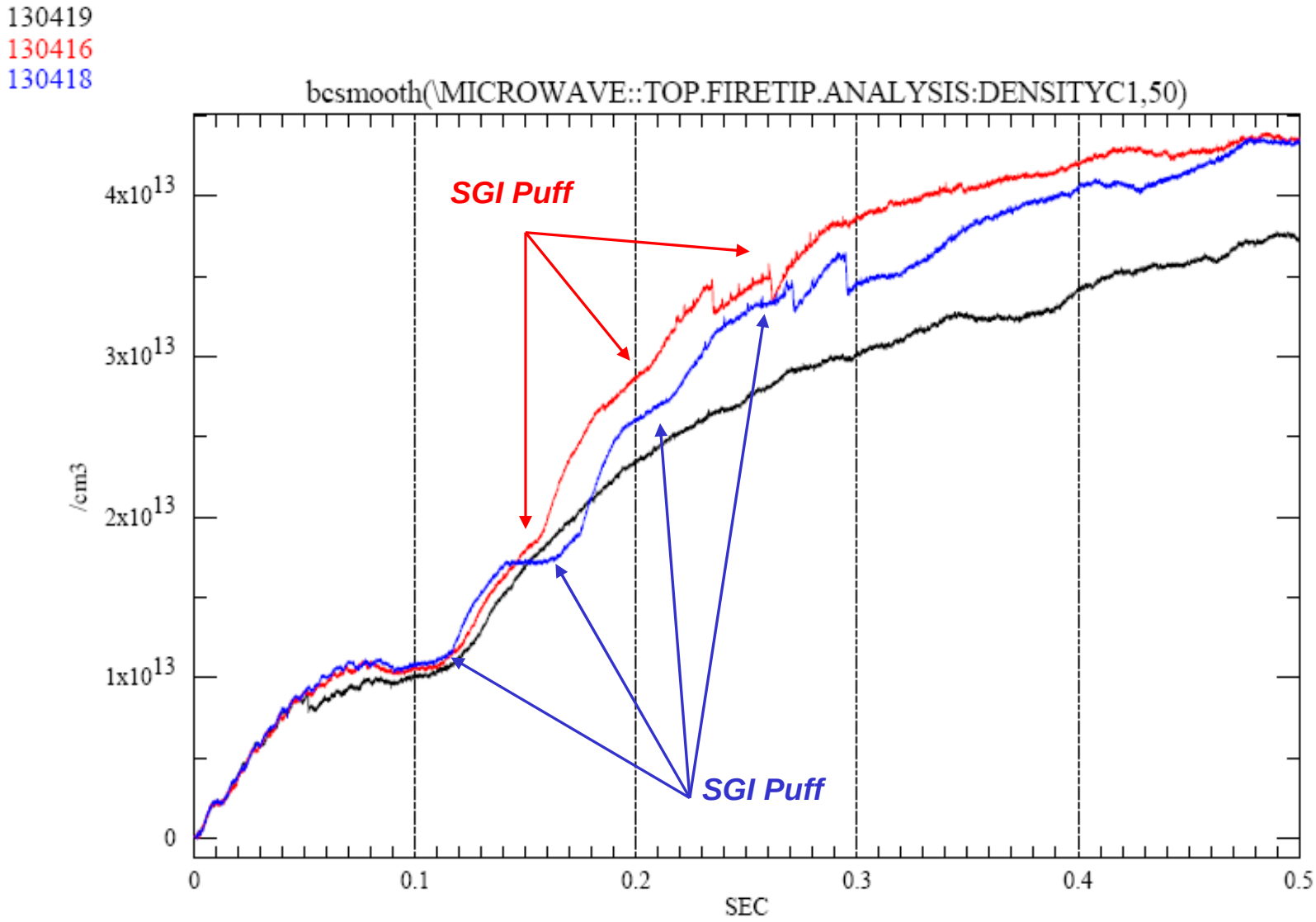
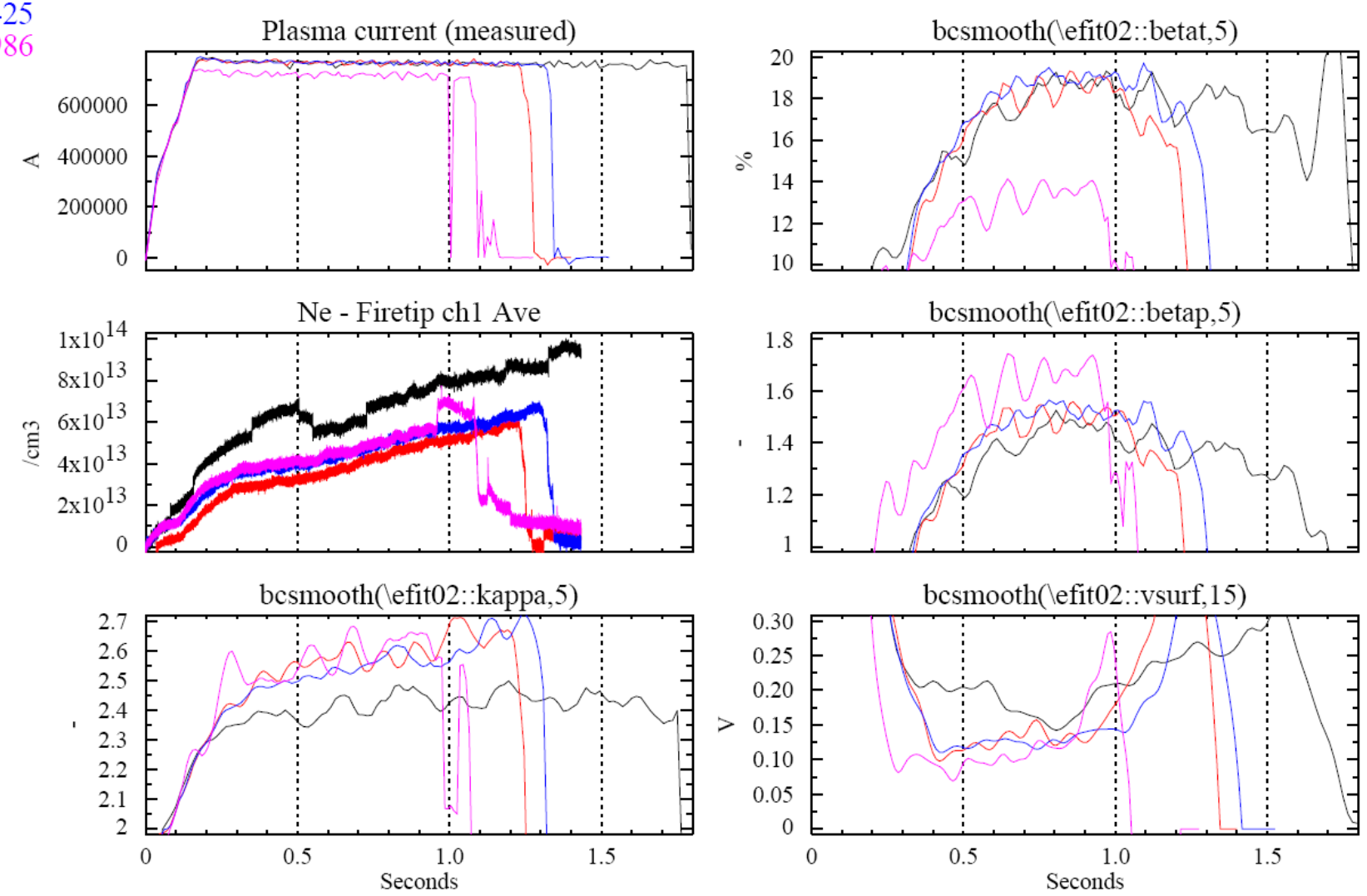
SGI is effective at fueling ramp-up phase of discharges with LITER conditioning (20mg/min)

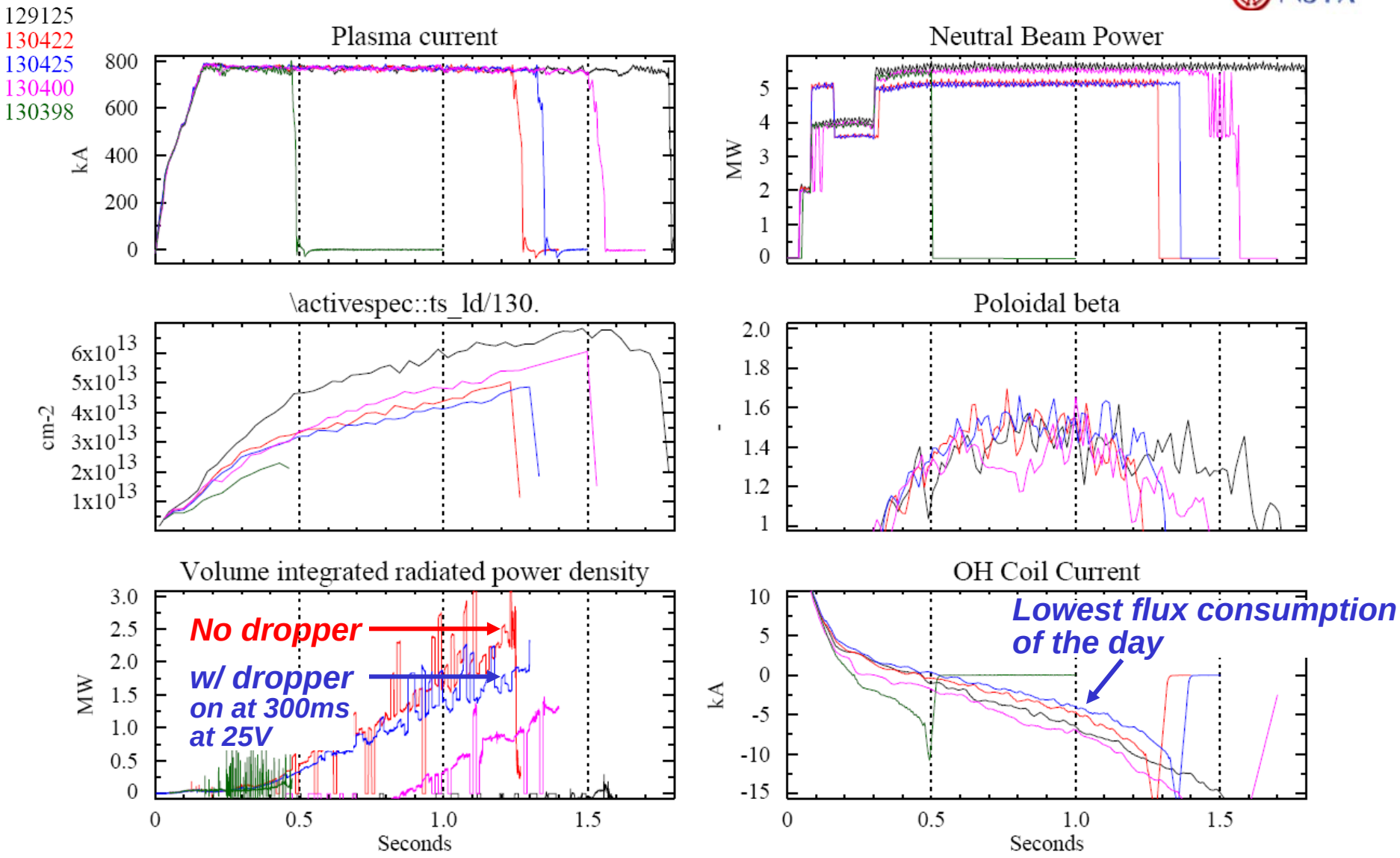


Shots with LITER + reduced HFS + SGI + EFC + Li powder achieve very low surface voltage at higher β_T = 18-20%

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 choked….



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