Supported by

Higher B_T results from XP-602

Formerly "Long-pulse development at reduced density using EF correction"

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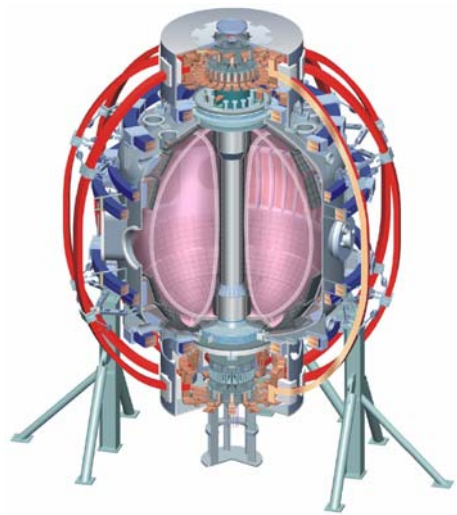

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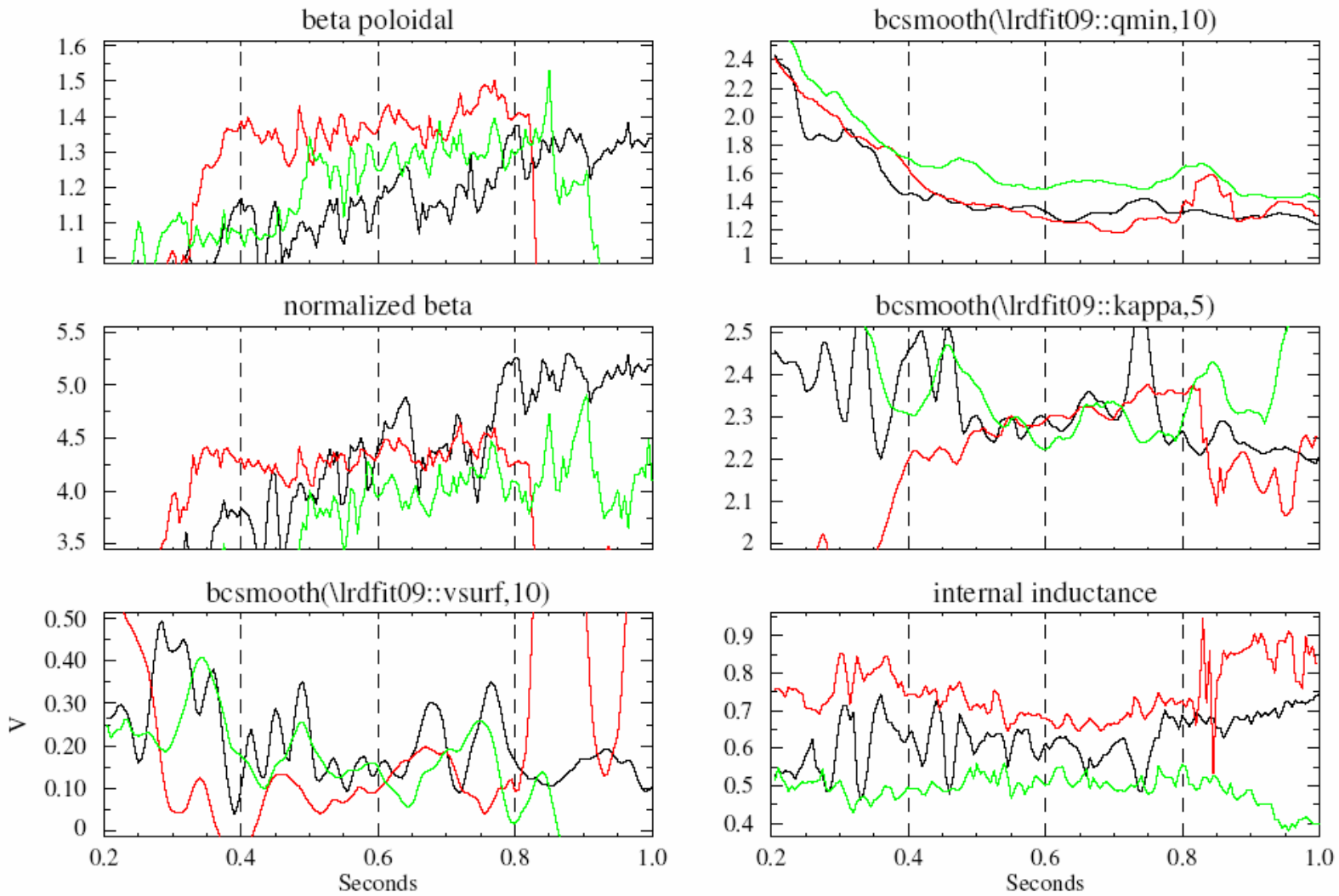
Developed quiescent 700kA shot w/ V_{SURF}=0.1V at 5.2kG

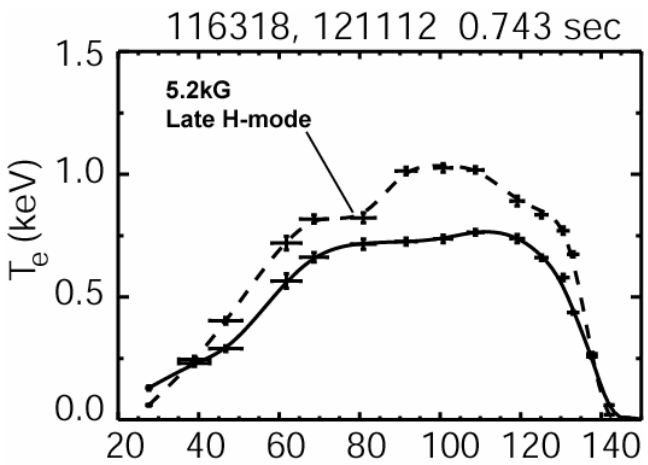
- Achieved higher β_P than 2005 reference, but peak β_N was lower
- 116318 = 4.5 kG, 700kA, 121112 = late H-mode, 121120 = early H-mode

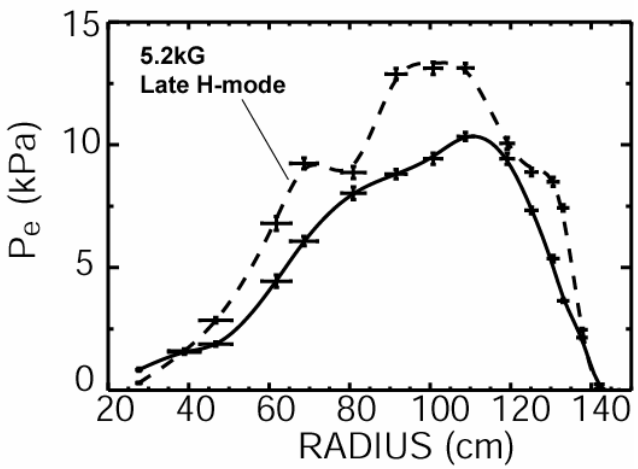
116318
121112
121120

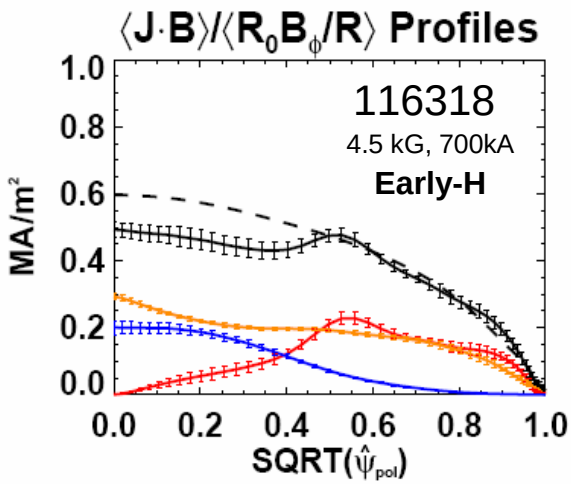


Current profile analysis consistent with modest increase in J_{BS} and NI current fraction – need higher β_P (κ, β_N, B_T)

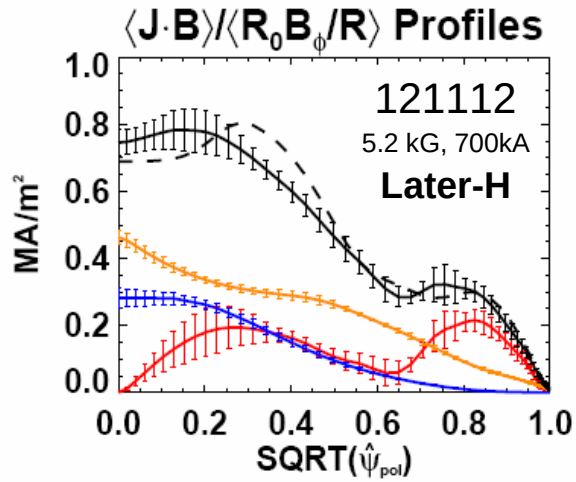
- Late H-mode (5.2kG) has higher central Te, lower ∇p_e at ½ radius from ears + core "barrier"
  $\Rightarrow$ Increased central J_{NBI} and J_{OH}, decreased J_{BS} at ½ radius → contributes to higher li
- Increase in f_{BS} consistent w/ increase in β_P $\Rightarrow$ **need higher β_P for more NICD at this n_e & T_e**







NI Total = 57.8%
BS = 42.2%
NBI = 9.45%
P.S.+Diam. = 6.10%
Ohmic = 41.9%



NI Total = 61.9%
BS = 46.7%
NBI = 10.5%
P.S.+Diam. = 4.77%
Ohmic = 38.0%