

NSTX mid-run assessment

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Guidelines

The following factors are considered when determining whether or not a XP will receive runtime.

General features (required):

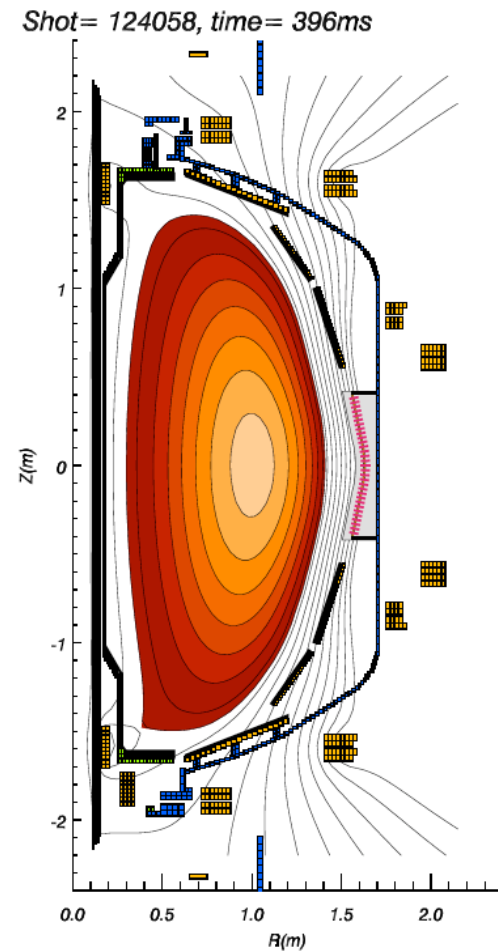
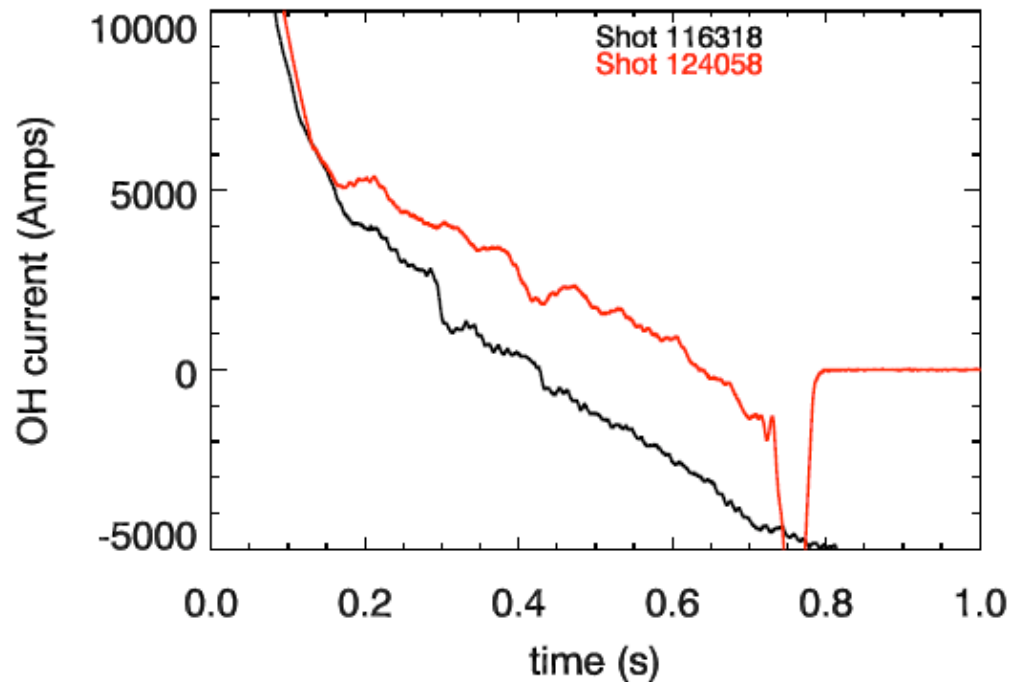
1. Is the experiment well posed? Can all the measurements be made using diagnostics that are available? Can the required plasma conditions be arranged on NSTX?
2. Is the experiment scientifically interesting? Does successful completion of the XP answer an important question? Will the results warrant publication in a major journal?

Specific features (helpful):

1. Direct contribution to project milestones.
2. Participation in ITPA sponsored joint experiments.
3. Contribution to the ST development path.
4. Does it contribute to an invited talk at a major conference.

Results XP-710

- Reduced flux consumption
- Raised elongation to 2.7 and aspect ratio to 1.6 near NHTX requirements
- Has matched highest calculated non-inductive current discharges with less beam power



XP-710 remaining tasks

- Induce earlier H-mode
- Improve confinement (lithium and longer glows)
- Reduce TF to extend pulse
- Employ increased beam power

XP-727

- Made high elongation targets at low TF
- Employed lithium
 - Did not achieve high β
- Early shot development requires a lot of run time...
- Not requesting further time for this run, better suited to a run year with more run time available

XP-737 (P. Ross)

- Modulated beams in MHD free discharge for only 6 shots
- Interesting (and puzzling) data obtained from NPA and sFLIP and fast mirnovs
- Needs at least an additional half day to complete NPA scan