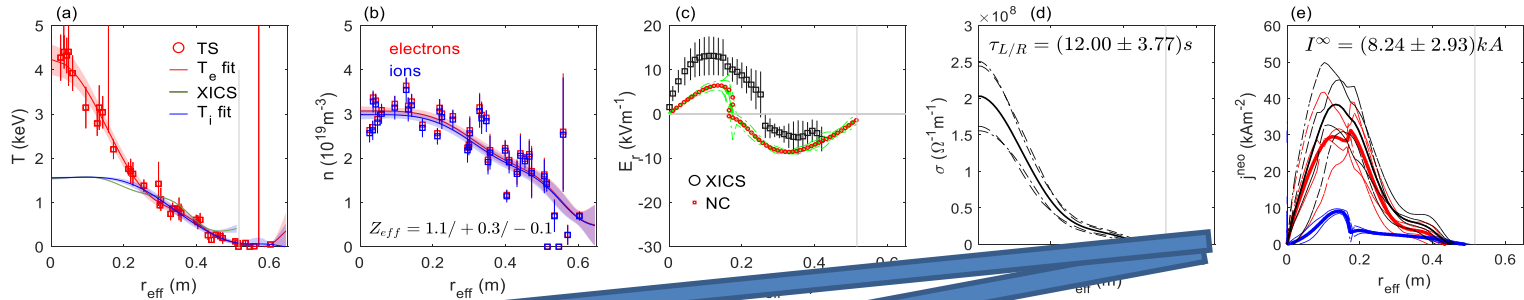


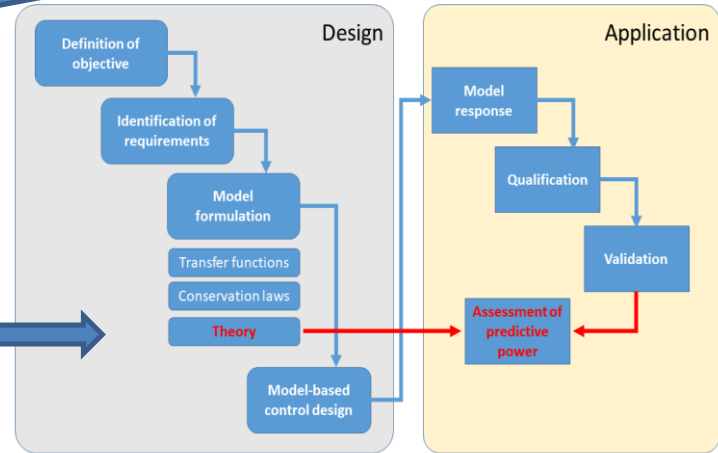
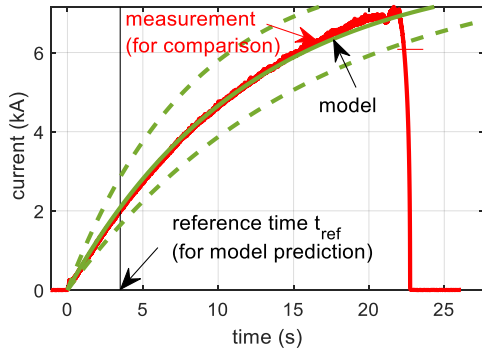


Small plasma currents affect the edge rotational transform:
control required for W7-X divertor for steady-state operation

Concept: calculate parameters of simple current-response-model from neoclassical theory



$$I(t) = IBS \left(1 - \exp\left(-\frac{t}{\tau_{L/R}}\right) \right)$$



Workflow: profiles → bootstrap current/conductivity → response parameters → control model

Theory-based control of W7-X current: validity assessed

→ extrapolation within validity range of theory!