

# *Initial FSP\_0 Science Driver*

## *Confinement in Tokamak Discharge*

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- FSP should initially focus on an important science driver that would be well suited to combined capabilities of SWIM, FACETS, CPES and PTRANSP
  - For example:
- Demonstrate a self-consistent simulation of
  - heating and corresponding sources, consistent with
  - turbulence and resulting anomalous transport (electron and ion)
  - including neoclassical effects
  - from the deep core
  - through the pedestal and scrape-off-layer
  - under steady state conditions
  - in an H-mode discharge without sawtooth crash or NTMs
  - in either an existing tokamak or ITER
- SWIM, FACETS, CPES and PTRANSP could all contribute to this demonstration within the next two years
  - The scope and depth of this project could be adjusted to fit within the resources that are available