

- - complete
- - in progress
- - planned

## SaltProc v1.0 Release demo

- ✓ TAP full core Serpent model
- ✓ Multi-component, realistic fuel processing model
- ✓ 13-year depletion with fixed removal efficiency and geometry
- Variable geometry demo and validation

Stage 1

## SaltProc v0.1 demo

- ✓ Simple demonstration (MSBR)
- ✓ Equilibrium fuel composition search
- ✓ Reactor analysis with fission product removal

Stage 2

## SaltProc with variable xenon removal efficiency

- 60-year depletion with dynamic removal efficiency and variable geometry
- 3-day depletion in load-following regime
- Parametric sweep of input parameters
- Reactor load following analysis across parametric space

Stage 3

## Sparger design bounding

- Determine the range of allowable design parameters to ensure load-following operation
- Establish key design parameters to minimize fuel salt volume
- Determine appropriate sparger geometry to avoid criticality (using MCNP6)

Stage 5

Stage 4

## TAP safety analysis

- Create a model to calculate the axial offset
- Calculate safety parameters for startup, middle-of-life and end-of-life fuel composition
- Calculate safety parameters for various He fractions in the salt