RFSP Workshop
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OUTLINE

Introduction

- Input file format
- Defaults
- Use of Direct Access file

How to create an RFSP Model (File "acr700_sample_model.inp")

- Defining the lattice
- Defining the mesh
- Defining the fuel types and reflector
- Defining device positions and cross sections
- Print options
- Examine output (File: "acr700_sample_model.out")

Time Average Calculation (File: "acr700_sample_tav.inp")

- Define the fuelling scheme
- Define the burnup regions and exit irradiation
- Provide a starting flux guess
- Flux solution options
- Device positions
- Xenon concentration options
- *SUMMARY post processing
- Examine output (File: "acr700_sample_tav.out")

Instantaneous Calculation (File: "acr700_sample_instantan.inp")

- Defining channel ages
- Examine output (File: "acr700_sample_instantan.out")

Time Average Equivalent Calculation (File: "acr700_sample_tavequiv.inp")

- Moving data
- Creating snapshot
- Examine output (File: "acr700_sample_tavequiv.out")

Snapshot using Micro-Depletion Method (File: "acr700_sample_sim_localparm.inp")

- Reading WIMS Micro-Depletion Tables
- Defining local parameters
- WIMSHI card
- Burn step with refuelling
- Post processing (*PRTPWR)
- Examine output (File: "acr700_sample_sim_localparm.out")

Kinetics using WIMS Grid-Based Method (File: “acr700_sample_cerberus_loca.inp”)

Reading WIMS Grid-Based Tables
Defining kinetics parameters
Defining themalhydrualic properties
Defining global parameters
Steady State Input – Case 1
Adjoint input – Case 2
Transient input – Case 3 and beyond
Time steps and SOR positions
Examine output (File: “acr700_sample_cerberus_loca.out”)

Calculating Full Core Void (File: “acr700_sample_cvr.inp”)

Redefining fuel types
Time-average “ipreserve” option
Examine output (File: “acr700_sample_cvr.out”)