Advanced Multi-D Fluids System Simulation

MOD4x series have the most advanced fluid systems options:
- Models fluids and correlations for Pb-based and Na molten metals, molten salts, non-condensable gases, oil...
- Advanced water properties more accurate for LWR and SCWR applications
- Completely rewritten to FORTRAN 90/95/2000 standards for easier model/code development and maintainability

Analysis of ITER water cooling system

Comprehensive training and technical support options:
- Model development, verification, and assessment
- Training centers and extended training internships available in US, Europe, India
- Regional technical consultants in China, Southeast Asia, Europe, Middle East
- Frequent regional specialized training workshops/seminars
Unique modeling options

MOD3x series have the most advanced fuel and severe accident models and correlations

- Models validated with data from TMI-2 and wide range of integral TH/SA experiments including LOFT, PHEBUS FP, PBF-SFD, CORA, QUENCH, PARAMETER and TMI-2
- Supports the design and analysis of on-going integral experiments in Europe including influence of air-ingression and accident tolerant cladding materials
- Supports the Fukushima Daiichi decommissioning R&D

Unique user options

- Uncertainty analysis
- 3D reactor kinetics options
- Hydrodynamic loads
- Interactive 3D displays
- Desktop training simulator GUIs (GRAPE)
- SAMPSON-based containment and source modules
- CTF and SAMPSON subchannel models and correlations
- User supplied 3D kinetics packages

CTF coupling (IV)

- 3D display:
  - CTF Fluid and rods VTK files are generated to plot in 3D the following data:
  - For fluid channels:
    - PRESSURE
    - Mixture TEMPERATURE
    - Mixture MASS FLOW
    - DENSITY LIQUID, VAPOR
    - ENTALPHY LIQUID, VAPOR
    - VELOCITY LIQUID, VAPOR, DROPLET
    - VOLUME FRACTION LIQUID, VAPOR, ENTRAINED
    - OXIDIZER QUANTITY
    - WITTED PERIMETER
    - CELL FLOW AREA
  - For rods:
    - MAX CLO TEMPERATURE: INSIDE, OUTSIDE
    - MAX FUEL SURFACE TEMPERATURE
    - FUEL CENTERLINE TEMPERATURE
    - CLO DiTE: CLO
    - PB MINIMUM DNBR

Using GRAPE advanced GUI environment to display results of CANDU-6 calculation