

Experiments	Geometry	Scale	Heating	Simulant	Coolant	Ra'	Pr	Boundary	Investigation emphasis
COPO-I	Semi-elliptical slice Length: 1.77 m Depth: 0.8 m Thickness: 0.1 m	1:2 (VVER-440)	Joule heating	ZnSO ₄ –H ₂ O solution	Water	10^{14} – 10^{16}	≈ 3	Isothermal top and bottom walls	Natural convection heat transfer in homogenously heated pools
COPO-II	-Semi-elliptical slice -Semicircular slice Radius: 1 m Thickness:9.4 cm	1:2 (VVER-440 and AP600)	Joule heating	- Corium: ZnSO ₄ –H ₂ O solution - Metal layer: Distilled water	Liquid nitrogen	10^{14} – 10^{16}	≈ 3	Isothermal top and bottom walls	- Natural convection heat transfer in homogenously heated pools - Effect of crust formation - Effect of layer stratification
UCLA	Hemisphere Radius: 0.2183 m and 0.3005 m	1:10	Magnetron	Freon-113	Water	2×10^{10} – 1.1×10^{14}	8.2–9.5	Isothermal or insulated top wall and isothermal	- Natural convection heat transfer in homogenously heated pools - Effect of different boundary conditions
ACOPO	Hemisphere Radius: 1 m	1:2 (AP 600)	No heating	Water	Water	10^{12} – 2×10^{16}	≈ 7	Isothermal top and bottom walls	- Natural convection heat transfer in homogenously heated pools - Confirmation and extension of mini-ACOPO results
BALI	1/4 circular slice Radius: 2 m Thickness:15 cm	1:1 (French PWR)	Joule heating	Salt water	Organic liquid	10^{13} – 10^{17}	≈ 7	Isothermal top and bottom walls	- Natural convection heat transfer in homogenously heated pools - Effect of viscosity and porosity - Focusing effect of the top metal layer
RASPLAV	Semicircular slice Radius: 0.2 m Thickness:16.7 cm	1:10	SDH DEH	UO ₂ –ZrO ₂ –Zr; NaF–NaBF ₄	NaNO ₂ –NaNO ₃ –KNO ₃	4.7×10^{11} – 1.61×10^{13}	4.56–7.74	Insulated top wall and cooled bottom wall	- Natural convection heat transfer in homogenously heated pools - Prototypical material study - Effect of layer stratification - Effect of existence of non-eutectic mushy zone
SIMECO	Semicircular slice Radius: 0.25 m Thickness:9 cm	1:8 (AP 600)	Cable-type heaters	NaNO ₃ –KNO ₃ ; Paraffin-water-chlorobenzene ^a	Water	9.6×10^{12} – 9.5×10^{13}	–	Isothermal top and bottom walls	- Natural convection heat transfer in homogenously heated pools - Effect of two-layer and three-layer stratification
LIVE	Hemisphere Radius: 0.5 m	1:5 (German PWR)	Cable-type coil heaters	NaNO ₃ –KNO ₃	Water	2×10^{13} – 8×10^{13}	8.1–10.4	Insulated top wall and isothermal bottom wall	- Natural convection heat transfer in homogenously heated pools - Crust growth characteristics - Effect of initial relocation conditions

^a Three-layer experiments in SIMECO program employed paraffin, water and chlorobenzene to simulate upper light metal layer, central oxide pool and lower heavy metal layer respectively.