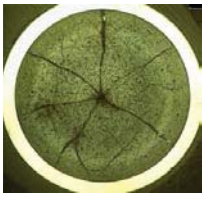
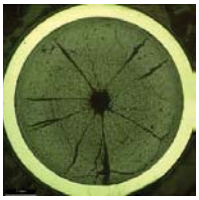
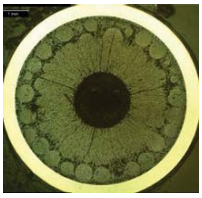
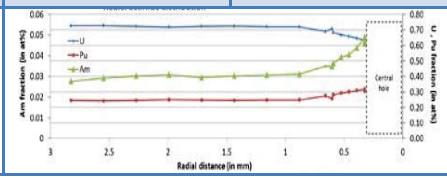
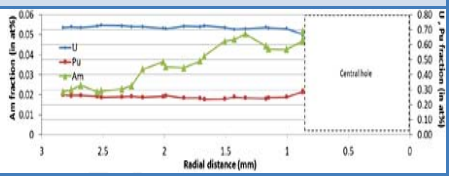
	SPHERE pellet fuel		SPHERE spherepac fuel	
Optical microscopy (+SEM)				
Estimated linear power	~ 290 W/cm	~ 298 W/cm	~ 307 W/cm	~ 322 W/cm
Cracks	6 “big” cracks	8 “big” cracks		
Central hole	Very small Diameter ~ 0.2 mm	Small Diameter ~ 0.65 mm	Diameter ~ 1.86 mm	Diameter ~ 1.74 mm
Restructured region : Columnar grains + equi-axed grains	No columnar grains but elongated grains	Columnar grains Diameter ~ 2.5 mm	Columnar grains Diameter ~ 3.68 mm	Columnar grains Diameter ~ 3.5 mm
For spherepac fuel : sintered/recrystalized ~ solid porous matrix	Equi-axed grains Diameter ~ 4.35 mm	Equi-axed grains Diameter ~ 3.9 mm	Equi-axed grains (gradual) Diameter ~ 4.41 mm	Equi-axed grains (gradual) Diameter ~ 4.2 mm
Microstructure inside restructured region	Increased porosity; pores along grain boundaries		Decreased porosity; pores along grain boundaries	
Microstructure beyond restructured region	~ as fabricated + several large pores		High density of small pores	
Fuel Cladding Mechanical Interaction (FCMI)	No gap closure, No FCMI	FCMI Radial width ~ 25-30 µm	No homogeneous interaction layer but metallic precipitates (iron) + grey colored phase (Al_2O_3)	
Radial actinide distibution (WDS)				

Table 5 : Results of DEs on pellet and spherepac fuels after the SPHERE irradiation