

	SPHERE pellet fuel pin	SPHERE spherepac fuel pin
Neutron radiographies after 1st cycle (~28 EFPD, at 300-320 W/cm linear power); Note: not significantly different at EOI		
	no central hole detected	central hole
	no fuel restructuring detected	fuel restructuring
	cracks	no cracks
Gamma spectrometry scans	no significant elongation	
	non-volatile FP (⁹⁵ Nb, ⁹⁵ Zr) distribution : consistent with axial neutron flux (peaking at the ends) ⇒ axial power profile recalculation	
	¹³⁴ Cs, ¹³⁷ Cs distributions : no pronounced diffusion direction	¹³⁴ Cs, ¹³⁷ Cs distributions : clear diffusion toward the ends
Visual inspection	No significant cladding degradation: no scratches, no dents, no tears	
Profilometry	No significant cladding deformation	
Puncturing results (large uncertainties due to calibration issues)	Consistent with 100% He release	
	Consistent with ~90% Xe (and Kr) release	

Table 4 : Results of NDEs on pellet and spherepac fuel pins after the SPHERE irradiation