

In-Vacuum Undulators in European Light Sources

	number	length [m]	min. gap [mm]	gap at top-up [mm]	pre-cautions / surveying
ESRF	12	2	6	7.5 now later no restriction	as a 'decay' ring, with 4, 8 or 12hr refill period only, the 7.5mm restriction on gap was so far imposed, various scrapers are available, and soon in top-up mode (20min) these will be used, with both theor. models and data from BLDs confirming their effectiveness (without a too strong effect on lifetime & inj efficiency)
DLS	15		5	no restriction	hor. and vert. scrapers (inj zone), at 7mm (vert ?) Pin-diode BLDs at exit, at top & bottom of vessel helpful for alignment, and survey of un-usual changes
SOLEIL	9		typ. 5.5	no restriction	scrapers at a fixed aperature dosimetry done in 2009 (on 4 units) , conclusion : the levels are not dangerous for the magnets
ALBA	2		typ. 6	no restriction	hor. and vert. scrapers (inj zone) vert. set at 9mm
PETRA-3	2 are planned		12	no restriction	2 ID-sections equiped with vert. collimator Pin-diode BLDs at entrance & exit and TLDs extensive reports on degradation of ID-magnets