

## SNS Expected Loss & Activation

Item	Controlled loss (fractional)	Uncontrolled loss (fractional)	Beam-off activation [rem/h] (4 h after shut-down; 30 cm)	Beam-on loss/activation [Watt] / [rad/h]
Front end			negligible	
LEBT chopper	0.277		negligible	
LEBT beam recombination		< 0.005	negligible	
RFQ transmission		0.042	negligible	
MEBT chopper	0.042		negligible	
MEBT beam recombination		< 0.005	negligible	
Linac H- stripping		< 1.e-6 ?	negligible	
Linac (warm)		< 2.e-5	< 0.01	< 8 W
Linac (SC RF)		< 4.e-5	< 0.01	< 80 W
HEBT collimators	1.e-3			2000 W
HEBT H- stripping		< 1.e-6 ?		
Ring foil miss	0.02 - 0.1			
Ring foil nuclear scattering		3.e-5		
Ring collimation section	2.e-3	1.4e-4	6.3 - 9.9	4000 W / 100 - 1500 rad/h
Ring extraction section		2.e-5	0.1	40 W
Ring arc section		2.e-5	0.1	40 W
Ring rf section		2.e-5	0.1	40 W
RTBT collimation region				
RTBT (except collimation)				
Target window		4		80,000 W