

Vacuum system for the Swiss Light Source,
G. HEIDENREICH, L. SCHULZ, P. WIEGAND, PSI -
The Swiss Light Source (SLS) is a dedicated high
brightness Synchrotron Radiation Source with a
circumference of 288 m, an electron energy of 2.4 GeV
and a nominal current of 400 mA. A vacuum chamber
design with an antechamber is foreseen with lumped
absorbers and lumped pumps. This will minimize the area
exposed to synchrotron radiation leading to a higher rate of
conditioning and reduce the thermal stress which may lead
to current-dependent chamber movements. The vacuum
chambers will be made of stainless steel. Each magnet
sector (1/12 of the ring) will form a separate vacuum section
with gate valves at both ends of the straight sections. The
vacuum sections are assembled outside the ring, baked at
300° C, and then lifted in place and installed on the girders.
No in situ bakeout and no bellows in the magnet arcs are
foreseen.