

The 2.5 GeV Booster Synchrotron for the SOLEIL Project, A. LOULERGUE, J. PAYET, CEA (France); J.L. LACLARE, M.P. LEVEL, SOLEIL (France); M. SOMMER, LURE (France) - The injection system of the Synchrotron Light Source SOLEIL is composed of a 100 MeV electron Linac preaccelerator followed by a 2.5 GeV fast cycling booster synchrotron. Different FODO structures were studied for the booster lattice. A four period FODO structure with missing magnet was selected. This structure allows for a good injection process with a large dynamic aperture at 100 MeV and a small transverse beam size at full energy. The low beam emittance and the 12 Hz cycling frequency ensure a storage ring filling rate of less than 2 minutes for the different operating modes.