

Recent Advances in Insertion Devices,
J CHAVANNE, P ELLEAUME, P VAN
VAERENBERGH, ESRF - The active development of third generation synchrotron radiation sources has resulted in a number of advances in the technology of insertion devices. Multipole and spectrum shimming of the magnetic field has now reached maturity and is routinely applied in a number of facilities. It results in devices having ideal spectral performances as well as minimum interaction with the stored electron beam. The development of phased segmented undulators has greatly simplified the manufacture and implementation of very long undulators. A great effort has been put into the generation of circularly polarised radiation resulting in a number of advanced helical undulators and ellipsoidal wigglers. An important issue is to reduce the magnetic gap. Several directions are being followed including the use of a narrow fixed or variable gap vacuum chamber or the placing of the magnet blocks in vacuum. A number of illustrations will be given of the ESRF Insertion Devices where a number of these recent developments have been pioneered.