

The LEP Pre-Injector as a Multipurpose Facility,
J.P. POTIER, L. RINOLFI, CERN - The LEP Pre-Injector (LPI) is composed of the LEP Injector Linac (LIL) and the Electron Positron Accumulator (EPA) which provide 500 MeV leptons for LEP. In 1988, the LPI was used for the first time to produce single electrons at 180 MeV in order to calibrate the L3 detector. Since then, a dedicated irradiation area LEA (LIL Experimental Area) has been built downstream of the LIL. This facility uses electron beams with an energy range adjustable from 100 MeV to 700 MeV with an intensity, a pulse duration and a repetition rate which can be varied within wide limits. Some LEP detectors, and almost all future LHC detectors, have already used this facility intensively. In EPA, at 308 MeV, the critical energy of the synchrotron light is 45 eV corresponding to the synchrotron radiation which will be produced in the LHC with 7 TeV protons. A synchrotron light line has been installed to study the crucial issue of desorption in LHC vacuum chamber. In March 1998, a second synchrotron light line will be installed and dedicated to cryogenic studies. This paper reviews the experiments which have been done, the results obtained during the past years and possibilities for the future.