

Vacuum Performance of a 5 m-long Pump Free Insertion Device Vacuum Chamber for ELETTRA,
J. MIERTUSOVA, ELETTRA, Sincrotrone Trieste - A 5 m long insertion device (ID) vacuum chamber pumped only on both ends by two 120 l/s sputter-ion pumps has been installed in the ELETTRA storage ring. The chamber has an elliptical cross section and is fabricated from the stainless steel ESR AISI 316 LN. The specific outgassing rate of the ID vacuum chamber was measured before mounting into the storage ring as well as during commissioning. Mass spectra were scanned at different currents and energies. The rapid dynamic pressure decrease allowed to store high beam currents (over 200 mA at 2 GeV) immediately. Requested lifetime of 16 hours at 250 mA@2 GeV, has been achieved after about 35 A hours of conditioning. Results of residual gas analysis, desorption yield and wall pumping will also be discussed.