

**Influence of Various Integrated Ion Getter Pump
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The spontaneous reduction of the lifetime in electron storage rings is a well known problem and may be severe for B-Factories. Experience with the HERA electron ring indicates that the lifetime is affected by the ion getter pumps. In order to investigate the role of such pumps different types have been installed in PETRA dipoles. Their effect on the lifetime of both electrons and positrons was studied by provoking lifetime disruptions by increasing the pumping voltage. These disruptions were then investigated using loss monitors which detect the lost electrons and a lead glass shower counter to detect bremsstrahlung coming from the interaction of electrons or positrons with a target in the machine. The results indicate that conventional dipole pumps which have an anode with high electrical potential and a grounded cathode cause both spontaneous and provoked lifetime reductions. The effects of installing a metallic screen between anode and pumping holes so that while the pumping efficiency is hardly affected there exists no direct path for ions to reach the vacuum chamber and of inverting the potential of anode and cathode have been investigated.