

Emittance Reduction for AmPS, G. LUIJCKX, R. MAAS, NIKHEF - AmPS is a 900 MeV electron ring. The machine had been originally designed as a Pulse Stretcher, using the extracted beam as a nearly continuous electron source for carrying out (mainly) coincidence electron scattering studies in subatomic physics. Gradually the internal beam is also used for fundamental physics research. The original 2856 MHz RF system has been supplemented by a 476 MHz RF system, allowing storage of beams at energies up to 900 MeV. In the Storage Mode option users are interested in beams with a smaller emittance than provided when using the original Stretcher lattice. For this reason an additional reduced emittance (RE) lattice configuration has been developed, in which the emittance is reduced by a factor of three. This has been accomplished by converting the four-cell structure of the Curves into two achromats. Since the magnet layout remains unchanged in the RE configuration, the original Stretcher operation remains available.