

LIN S ENERGY STORAGE RING



Do electron storage rings contain RF cavities? However, electron storage rings contain RF cavities to restore the energy lost through synchrotron radiation. But then, we should consider the change in momentum of a particle as it moves through an RF cavity.



What is the emittance ratio of a storage ring? Storage rings typically operate with a vertical emittance that is of order 1% of the horizontal emittance, but many can achieve emittance ratios somewhat smaller than this. ???T. Raubenheimer, SLAC Report 387, p.19 (1991). Quantum effects excite longitudinal emittance as well as transverse emittance.



What is the vertical emittance of a storage ring? In practice, the vertical emittance is dominated by magnet alignment errors. Storage rings typically operate with a vertical emittance that is of order 1% of the horizontal emittance, but many can achieve emittance ratios somewhat smaller than this. ???T. Raubenheimer, SLAC Report 387, p.19 (1991).



What is the equilibrium vertical emittance of a storage ring? In many storage rings, the vertical dispersion in the absence of alignment, steering and coupling errors is zero, so $H_y = 0$. However, the equilibrium vertical emittance is larger than zero, because the vertical opening angle of the radiation excites some vertical betatron oscillations. $13 C_q \text{ ??? } y_{uy} = 1 \text{ ds.}$



The Hefei Advanced Light Facility (HALF) is a soft X-ray and VUV diffraction-limited storage ring light source, and the construction of HALF has just been approved by the Chinese ???



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Application of electron cooling at ion energies above a few GeV has been limited due to reduction of electron cooling efficiency with energy and difficulty in producing and accelerating a high ???



A dual energy storage ring design consists of two loops at markedly different energies. As in a single-energy storage ring, the linear optics in the ring design may be used to determine the damped



? 1/4 ?DLSR? 1/4 ?????,DLSR???, ???