

VEPP-4M Collider: Status and Plans,
V. KISELEV for VEPP-4 staff, BINP Novosibirsk - A start has been made on the performance of physical experiments with the new detector KEDR at the modified storage ring VEPP-4M. The first experimental observation of photon splitting in the strong Coulomb field of nuclei has been carried out on the ROKK-1M facility using the Compton back scattering of laser photons on the high energy electron beam. Now we are looking for a possibilities of measurements the total cross section of annihilation e^+e^- into hadrons in the energy range of 0.7 GeV to 1.8 GeV. This energy range is not typical for the VEPP-4M, so here additional investigations are conducting in order to achieve a reasonable luminosity. In this connection, some peculiarities of the use of "emittance"-wigglers and the intrinsic scattering (Touschek effect) with lowering energy are discussed. Due to large dispersion at the IP on VEPP-4M, the horizontal beam size at the IP is mainly determined by the synchrotron motion. We performed a scan of betatron tunes with the different values of monochromatization parameter, and observed how it affects the various synchro-betatron resonances induced by beam-beam interaction. We continue our study of nonlinear beam dynamics with the goal to increase the dynamic aperture of the collider.