

Electron Beam Diagnostics with Visible Synchrotron Light on Siberia-1 Ring. N.A. ARTEMIEV,

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Inst. - Three methods for beam diagnostics using visible synchrotron light were applied to determine electron beam parameters on the Siberia-1 storage ring: an edge radiation based scheme for measuring effective angular divergences of the electron beam (1), a standard scheme of beam profile measurements with focusing lens (2), a "Lloyd's Mirror" interference scheme for transverse beam size measurements (3). In each of the three methods, practically identical experimental equipment was applied, yet absolutely independent experimental data were obtained, since different wave-optics phenomena of synchrotron light were used. The combined approach let us make the resulting data on beam parameters more solid with no additional expenses for the experimental equipment. In the paper to be presented, the methods' comparison is given and the experimental results are discussed.