

High Brightness Electron Linac with RF Gun and Accelerating Structure on Backward Wave,

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L.V. REPRINTZEV, D.L. STEPIN, National Science Center, Kharkov Institute of Physics & Technology (KFTI) - Present report is dedicated to description of the Laser Injector Complex facility. The predestination of this linac is production a high brightness electron beam that we will utilise for study acceleration and focusing beams in plasma and for other experiments, like beam - crystal interaction and an infrared FEL driving. The LIC can be operated with both microsecond and nanosecond duration of pulse current and energy of electrons of 13-20 MeV. The linac consists of multipurpose RF gun and backward wave acceleration structure. According to our previous simulation and experiments this combination gives possibility to obtain high brightness electron beams. Recent developments of the accelerator and results of the experimental study are discussed.