

High Power Test of GaAs Photocathode in RF Gun, A.V. ALEKSANDROV, E.S. KONSTANTINOV,
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A.A. STAROSTENKO, BINP - Performance of GaAs photocathode in the S-band RF gun was experimentally investigated. GaAs photocathode activated to negative electron affinity condition, typical Q.E. is 5% with HeNe laser, was installed in 2797 MHz cavity. Accelerating field strength on the cathode was varied in the range 20 - 100 MV/m. Results of dark current and lifetime measurements are presented. Possible reasons of large dark current from NEA surface in high gradient electric field are discussed.