

Light Radiation at the Exit of RFQ and RF-Field Control, A. ARTIMOV, A. SIDORIN, JINR - A high quality of beams and recurrence of their parameters are the important characteristic for RFQ-ion implanters. A qualitative run of the proposed designs depends on operative field control in a RF-cavity. The results of the first stage investigations of light emission at the exit of H and 2H RF-cavities unloaded by a beam are presented. A strong dependence of the intensity of light radiation on the material of the vacuum chamber beyond the exit aperture of the cavities, on the RF-power value and independence of this intensity of vacuum conditions inside and outside the cavities (over a large range of pressure changes) are shown. This radiation generated by the electrons leaving the cavity through the exit aperture can be used for real-time nonperturbative RF-field control.