

Design Study of 15 MeV High Current RF Focused Deuteron Linac for ITEP Neutron Generator, A. BALABIN and G. KROPACHEV, ITEP
- Different structural schemes for medium energy high current deuteron linac are considered. The linac scheme consisting of RFQ and RF crossed lens (RFCL) sections [1] is proposed. A method of ion focusing by decelerating RF quadrupole fields is used in the RFCL sections. The method permits to receive a radial stability region up to 360 deg and independent on particle energy focusing strength. Basic advantages of the proposed scheme are shown to be the high acceleration rate, low transition energy between the RFQ and RFCL sections, and simplicity of the RFQ-RFCL beam matching.