

Recent Developments with Klystrons and Modulators, A. GAMP, DESY

The design goals for new Klystrons are governed by the rf power needs and efficiency requirements of the various linear collider proposals which are presently being evaluated. We review the existing tubes and modulators for each collider project and discuss some of their specific problems and (planned) solutions. Due to the 1.5 ms long pulses required for TESLA the stored energy in the modulator and the size of the pulse transformer are significantly larger than for any other project. The X-band proposals are the other extreme. Here the short Klystron pulse length which is of the order of a μ s calls for modulator pulses of 6-700 kV and a rise time of a few 100 ns. Hence a completely different modulator design is necessary. Future tubes for linear collider upgrades which are in the development stage are also discussed.