

**The Next Linear Collider Test Accelerator,**  
R.D. RUTH - The design for the Next Linear Collider at SLAC uses an 11.4 GHz linac operating at an unloaded Acceleration gradient of 50 MV/m increasing to 85 MV/m as the energy is increased from 1/2 TeV to 1 TeV in the centre of mass. During the past several years, there has been tremendous progress on the development of 11.4 GHz (X-band) RF Systems. These developments include klystrons which operate at the required power and pulse length, pulse compression systems that achieve a factor of 4 power multiplication and structures that are specially designed to achieve a reduced long-range wakefield. Together with these developments, we have been constructing a 1/2 GeV test accelerator, the NLC Test Accelerator (NLCTA). The goal of the NLCTA is to bring together all elements of the entire accelerating system by constructing and reliably operating an engineered model of a high gradient linac suitable for the NLC. The NLCTA will serve as a test bed as the design of the NLC evolves. In addition to testing the RF System, the NLCTA is designed to address many questions related to the dynamics of the beam during acceleration. In particular we plan to study multi-bunch beam loading compensation and transverse beam break-up. In this paper we present the status of the construction effort and RF System R & D and also the results of initial commissioning and first tests with beam in the NLCTA.