

**Electronics for the TTFL Cavity-Type Beam Position Monitor, R. LORENZ, DESY Zeuthen, Germany; S. SABAH, R. SCHROEDER, TU Berlin, Germany** - Single cylindrical cavities were built to detect the beam displacement inside each TESLA Test Facility Linac cryostat. The amplitude of the TM<sub>110</sub>-mode excited by an off-center beam yields a signal proportional to the beam displacement and to the bunch charge, its starting phase gives the sign of the displacement. This narrowband signal having a center frequency of 1.517 GHz is detected in a homodyne receiver. Two opposite cavity signals are combined in a stripline hybrid to reach the desired resolution of less than 10 microns. After filtering and amplification the output signal of the difference-port is mixed with the filtered sum-signal down to DC. Many of the RF-components were developed in-house. The paper describes the basic concept and most of the receiver components. A calibration procedure is outlined in detail, and first experiences during linac operation are summarized.