

Beam Position Monitoring for SBLC Using HOM-Coupler Signals*, P. HÜLSMANN, H. KLEIN, W.F.O. MÜLLER, C. PESCHKE, Inst. F. Angewandtephysik, Frankfurt/Main, Germany - To preserve the required beam quality in the proposed S-Band-Collider it is necessary to have a very precise beam position control at each accelerating structure. To avoid additional insertions the usage of the HOM-coupler signals would be advantageous. We present a conceptual design and the main parameters of the signal processing scheme capable to detect the sign and magnitude of the transversal beam displacement as well as the beam current. The magnitude information is derived from a dipole mode amplitude whereas the sign follows from the phase comparison of the dipole and a monopole HOM. Both signals are taken from a pair of pickups at the waveguide HOM-couplers. The characteristics of the pickups are discussed.

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