

**First Bunch Length Studies in the SLC South Final Focus**, K. BANE, P. EMMA, S. HORTON-SMITH, D. MCCORMICK, A. MENEGAT, M. MINTY, C. NG, D. WHITTUM, G. YOCKY, F. ZIMMERMANN, SLAC - We report the first studies of bunch length in collision in an operating linear collider, making use of a new rf bunch length monitor that was installed in the SLC South Final Focus prior to the 1997/98 luminosity run. The theoretical and measured monitor responses to linac injection phase and bunch-compressor voltage are described. Comparisons with beamstrahlung, arc wakefields, luminosity and other machine observables are summarized. Implications for beamline instrumentation on the NLC are discussed.