Recent Luminosity Increases at the SLC*, N. PHINNEY, SLAC - The SLAC Linear Collider (SLC) luminosity has been increased by more than a factor of three during the 1997-98 run. Improved alignment and emittance tuning techniques throughout the accelerator resulted in minimal emittance growth from the damping rings to the final focus. In particular, a revised strategy for wakefield cancellation using precision beam size measurements at the entrance of the final focus proved effective for optimizing emittance. The final focus lattice was modified to provide stronger demagnification near the interaction point and to remove residual higher-order chromatic aberrations. Beam sizes as small as 1.5 by 0.6 microns were achieved at full beam intensity of 4 10^{10} particles per pulse. With these parameters, the mutual focusing of the beams in collision becomes significant, resulting in a further increase in the luminosity. Recorded SLD data rates are consistent with theoretical calculations of the disruption enhancement which is typically in excess of 50%.

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