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Search for High Transverse Momentum Lepton Pairs in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV JANE NACHTMAN, FNAL, MICHAEL SCHMITT, Northwestern University, CDF COLLABORATION — A new signature-based search has been devised, sensitive to an excess of opposite-sign electron or muon pairs at high dilepton transverse momentum (q_T) and moderate di-lepton mass ($M_{\ell\ell}$). Such pairs would be expected in the associated production of $\tilde{\chi}_1^+ \tilde{\chi}_2^0$, for example. The technique is completely new, with several advantages over the classical ‘trilepton’ search, which it complements. The key component is the comparison of events in a given range of $M_{\ell\ell}$ to those in the region of the Z -resonance, as a function of q_T . We have obtained a preliminary result in the di-muon channel, based on approximately 325 pb^{-1} of $p\bar{p}$ collisions recorded with the CDF II detector.

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