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## Final results for the muon decay parameters from TWIST

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Muon decay offers an opportunity to test the Standard Model of particle physics in a purely leptonic situation where more ambiguous strong interaction processes are absent. The TRIUMF Weak Interaction Symmetry Test (TWIST) was designed specifically to improve by an order of magnitude the precision of the decay parameters  $\rho$ ,  $\delta$ , and  $P_\mu \xi$  derived from energy and angle distributions of positrons from polarized positive muon decay. It tests the V-A structure of muon decay by comparing the parameters to those predicted by the Standard Model in an analysis permitting more general Lorentz-invariant local terms.

Data taking was completed in 2007. The subsequent blind analysis has focused on reducing systematic uncertainties, estimating residual biases, and evaluating consistency checks. The results, dominated by the systematic uncertainties, have been further scrutinized for self-consistency.

The talk will describe the experimental apparatus and analysis procedures, with particular attention to the reduction of leading systematic uncertainties. The final results and their uncertainties will be presented along with implications for physics beyond the Standard Model.

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