Setting limits on a new parameter outside of Standard Model muon decay.\textsuperscript{1} KRISTEN WILLIAMS, Cyclotron Institute - Texas A&M University

— This work is a response to predictions concerning a new tensor interaction which is outside of the Michel local interactions of Standard Model muon decay. This interaction is assumed to be parameterized by the addition of a new variable, $\kappa$, to the differential decay probability spectrum. The *TWIST* experiment is measuring the Michel parameters $\rho$, $P_\mu \xi$, and $\delta$ in muon decay to search for deviations from the Standard Model. Our analysis was of the approximate contribution that $\kappa$ would make to the *TWIST* measurements and the sensitivity of this contribution to the fitted momentum range. Efforts were made to set a limit on $\kappa$ in accordance with both past *TWIST* fit ranges and assumed future ones.

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