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**Odd-Frequency Triplet Josephson Current Through an Exchange Spring**[1] ADAM MOKE, THOMAS BAKER, ADAM RICHIE-HALFORD, ANDREAS BILL, CSU Long Beach — The existence of an odd-frequency long range triplet component in the order parameter of a proximity system with singlet superconductors is a recent prediction that has garnered great interest. The experimental fingerprint of this phenomenon is difficult to establish. We investigate a hybrid structure in which the emergence of the long range triplet component may be measured and identified. We consider a superconductor - exchange spring - superconductor Josephson junction as a function of increasing twist of the magnetic domain wall in the exchange spring. We show that as the domain wall is generated the long range triplet component emerges and modifies the current flowing through the Josephson junction. The critical temperature is also affected by the increased twist of the domain wall. The calculations lead us to propose an experiment where the long range triplet component can unequivocally be identified.

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Adam Moke
CSU Long Beach

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