

Abstract Submitted  
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**Proximity-induced triplet superconductivity in Rashba materials**<sup>1</sup> CHRISTOPHER REEG, SAURABH MAITI, DMITRII MASLOV, Univ of Florida - Gainesville — We study a proximity junction between a conventional *s*-wave superconductor and a conductor with Rashba spin-orbit coupling. Our specific focus is on the spin structure of the induced pairing in the Rashba conductor, where the mixing of spin-up and spin-down states converts the purely spin-singlet Cooper pairs of the superconductor into a mixture of spin-singlet and spin-triplet pairs. Because the induced triplet component of the pairing is generated entirely by a singlet order parameter and a single-particle spin-orbit term that preserves time-reversal symmetry, the triplet component is expected to persist even in the presence of disorder. We also propose an experimental setup to verify the triplet nature of the induced pairing.

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