

Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Zero energy Andreev Bound states in odd parity pairing superconductors CHANDAN SETTY, JIANGPING HU, Purdue University, PURDUE CONDENSED MATTER TEAM — We study the properties of zero energy Andreev bound states in SNS junctions. The superconductors on either sides of the normal metal are assumed to have two sub-lattices with either odd or even parity pairing within each sub-lattice. In addition, we add a uniform even parity pairing between the two sub-lattices and study its effect on the Andreev zero energy bound state. In general, we find that the even parity pairing tends to weaken/destroy the zero bias peak (ZBP). We point out the relevance of our results to a recently proposed superconducting ground state in Iron based superconductors (FeSCs) [1].

[1] Jiangping Hu PRX, 3, 031004 (2013)

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Date submitted: 13 Nov 2013

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