

Abstract Submitted
for the MAR14 Meeting of
The American Physical Society

Spin texture of topological superconductor surface states PHILIP BRYDON, Condensed Matter Theory Center, University of Maryland, ANDREAS SCHNYDER, Max-Planck-Institut für Festkörperforschung, CARSTEN TIMM, Technische Universität Dresden — Noncentrosymmetric superconductors (NCS), where singlet and triplet pairing coexist, are examples of topologically non-trivial gapless systems, and hence display nondegenerate flat-band surface states at certain surfaces [1]. Using quasiclassical methods, we construct the edge-state wavefunctions and calculate the edge-state spectra [2]. We show that the edge states, in particular the flat bands, generically show strong spin polarization which is odd in the surface momentum [3]. The spin polarization is mostly fixed by the spin-orbit coupling, but also depends upon the relative strength of singlet to triplet pairing. Not only does the spin polarization suppress the effect of impurity scattering, but it also is responsible for strong edge currents at interfaces with ferromagnets [3]. [1] A. P. Schnyder and S. Ryu, Phys. Rev. B **84**, 060504(R) (2011). [2] P. M. R. Brydon, A. P. Schnyder, and C. Timm, Phys. Rev. B **84**, 020501(R) (2011); A. P. Schnyder, P. M. R. Brydon, and C. Timm, Phys. Rev. B **85**, 024522 (2012). [3] A. P. Schnyder, C. Timm, and P. M. R. Brydon, Phys. Rev. Lett. **111**, 077001 (2013).

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Date submitted: 15 Nov 2013

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