Chiral p-wave superconductivity in 2D lattices of magnetic atoms on a superconductor\textsuperscript{1} JIAN LI, BOGDAN BERNEVIG, Department of Physics, Princeton University — We investigate chiral p-wave superconductivity in 2D lattices of magnetic atoms on an s-wave superconductor. We identify criteria of obtaining topologically nontrivial phases in such systems. In particular, we prove that a non-commuting helix pattern along the x and y directions is a necessary condition. When such a condition is satisfied, the system displays a rich phase diagram that generically allows for an arbitrary Chern number.

\textsuperscript{1}We acknowledge Swiss National Science Foundation and NSF.

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Date submitted: 15 Nov 2013