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Bianca L Viray* (bviray@math.berkeley.edu), Department of Mathematics, University of California, Berkeley, Berkeley, CA 94609. *Failure of the Hasse principle for Enriques surfaces*. Preliminary report.

Most counterexamples to the Hasse principle can be explained by an algebraic Brauer–Manin obstruction. We define some of the other possible obstructions and exhibit an Enriques surface where the failure of the Hasse principle is not explained by an algebraic Brauer–Manin obstruction. If time permits we will explain how the transcendental part of the Brauer group can be thought of as a generalization of the Tate-Shafarevich group. (Received September 02, 2009)