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Brian Rice* (brice@math.wisc.edu), University of Wisconsin - Madison, Department of Mathematics, 480 Lincoln Drive, Madison, WI 53706. *The Thin Set Theorem for Pairs implies DNR*. Preliminary report.

Of the Ramsey-like combinatorial principles which have been studied in reverse mathematics, the Thin Set Theorem is among the weakest. The Thin Set Theorem for pairs, $\text{TS}(2)$, states that for any coloring function $f : [\omega]^2 \rightarrow \omega$ of unordered pairs of integers with (up to) countably many colors, there is an infinite *thin set* such that f restricted to pairs from A omits at least one color; that is, an infinite set A such that $f([A]^2) \subsetneq \omega$. This principle is a greatly weakened form of Ramsey's theorem for pairs, and though it is not implied by the base theory RCA_0 , it has acquired something of a reputation for being uselessly weak. Until recently, $\text{TS}(2)$ was not known to imply any "interesting" principles of reverse mathematics. Inspired by a proof that the principle DNR (that for any set A there exists a set diagonally non-computable relative to A) is implied by SRT_2^2 , we show that, in fact, $\text{TS}(2)$ implies DNR over RCA_0 . (Received March 04, 2013)