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**Michael T Lacey\*** (lacey@math.gatech.edu), Math, Georgia Tech, Atlanta, GA 30332. *Hankel Operators and Commutators in Product Domains*. Preliminary report.

It is shown that product BMO of S.-Y. A Chang and R. Fefferman, defined on the space  $\mathbb{R}^{d_1} \otimes \cdots \otimes \mathbb{R}^{d_t}$ , can be characterized by the multiparameter commutators of Riesz transforms. This extends a classical one-parameter result of R. Coifman, R. Rochberg, and G. Weiss, and at the same time extends the work of M. Lacey and S. Ferguson and M. Lacey and E. Terwilleger, on multiparameter commutators with Hilbert transforms. Joint work with Jill Pipher, Stefanie Petermichl and Brett Wick. (Received September 12, 2006)